Application of Round Robin Brainstorming *Type Cooperative Learning Model* to Improve Learning Outcomes of Grade 3 Students of Tunas Daud Christian Elementary School

[1]Usniati, [2]Intan Dwi Hastuti, dan [3]Dian Yanuartri
Sekolah Dasar Kristen Tunas David,Program Pendidikan Profesi Guru Universitas Muhammadiyah Mataram,SDN 13 Ampenan
Email: usniatiarman321@gmail.com

Abstract

The motivation of this classroom action research is the low value and activeness of students in class during thematic learning, especially in mathematics learning. In the pre-cycle stage, it is known that student learning outcomes are still low, which is only 59.5 with a completion percentage of 33%. Therefore, this research was conducted by using a Round Robin Brainstorming type cooperative learning model in thematic learning for grade 3 students of SDK Tunas Daud for the 2022/2023 academic year. Classroom Action Research (PTK) is carried out in two cycles, namely on August 9, 2022 and September 13, 2022. The results of the study showed that in cycle 1 the average score of students' formative test results was 71.8 with a passing percentage of 55%, while in cycle 2 the average score of students' formative test results was 83.5% with a passing percentage of 80%. Through APKG 1 and APKG 2 sheets, there was also an increase. In cycle 1, the average value of APKG 1 is 4.05 with a percentage of 81% and APKG 2 is 4.27 with a percentage of 85.4%. In cycle 2, the average value of APKG 1 was 4.78 with a percentage of 95.6% and APKG 2 was 4.70 with a percentage of 94%. Thus, this shows that teacher performance in cycle II has reached the performance indicators set in lesson planning. So the Round Robin Brainstorming type cooperative learning model succeeded in improving the learning outcomes of grade 3 students of SDK Tunas David.

Keywords: *Round Robin Brainstorming; math learning; learning outcomes*

Abstrak

Motivasi penelitian tindakan kelas ini adalah rendahnya nilai dan keaktifan siswa di kelas saat pembelajaran tematik, khususnya pada pembelajaran matematika. Pada tahap pra siklus diketahui bahwa hasil belajar siswa masih rendah, yaitu hanya sebesar 59,5 dengan persentase ketuntasan 33%. Maka dari itu, penelitian ini dilakukan dengan menggunaan model pembelajaran kooperatif tipe Round Robin Brainstorming pada pembelajaran tematik siswa kelas 3 SDK Tunas Daud Tahun Pelajaran 2022/2023. Penelitian Tindakan Kelas (PTK) dilaksanakan dalam dua siklus yaitu pada tanggal 9 Agustus 2022 dan tanggal 13 September 2022. Hasil dari penelitian menunjukkan pada siklus 1 nilai rata-rata hasil tes formatif siswa yaitu 71,8 dengan persentasi kelulusan 55%, sedangkan pada siklus 2 nilai rata-rata hasil tes formatif siswa yaitu 83, 5 % dengan persentasi kelulusan 80 %. Melalui lembar APKG 1 dan APKG 2 juga terjadi peningkatan. Pada siklus 1 nilai rata-rata APKG 1 yaitu 4,05 dengan persentasi 81% dan APKG 2 yaitu 4,27 dengan persentasi 85,4%. Pada siklus 2 nilai rata-rata APKG 1 yaitu 4,78 dengan persentasi 95,6% dan APKG 2 yaitu 4,70 dengan persentasi 94%. Dengan demikian hal ini menunjukkan bahwa kinerja guru pada siklus II telah mencapai indikator kinerja yang ditetapkan dalam perencanaan pembelajaran. Maka model pembelajaran kooperatif tipe Round Robin Brainstorming berhasil meningkatkan hasil belajar siswa kelas 3 SDK Tunas Daud.

Kata Kunci: *Round Robin Brainstorming; pembelajaran matematika; hasil belajar*

INTRODUCTION

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation and state (Government Regulation of the Republic of Indonesia Number 57 of 2021 concerning the National Education System Article 1 Paragraph 1).

Education is basically an effort to improve and improve the activities of teachers and students. The success of education is determined by the teacher's ability to manage learning in the classroom so as to create an active and fun learning atmosphere.

Teachers need to design all learning components well and with quality so that learning objectives can be achieved. Teachers are said to be successful if in the learning process they are not only able to transfer knowledge but

are able to learn students and guide students in the learning process

Cooperative learning needs to be created and developed by a teacher in order to maximize student understanding when learning Cooperative learning is a learning activity carried out in groups (*teams*) to create an ethos of cooperation in achieving common goals. Cooperative learning helps students understand and find a difficult concept because it is done by discussing with their group mates.

In the book written by Huda (2011), Johnson and Johnson mentioned that cooperative learning is a form of learning activities for all group members in working together to achieve the group's goals. This is in line with Fatmawati (2014) who states that student activity can be done by including and honing the skills of each student. One way out that can be used is to create learning activities that are more innovative and can stimulate student curiosity in learning. One of the learning activities that can be done is to apply the Round Robin Brainstorming learning method.

The Round Robin Brainstorming *type cooperative learning model* was first created by Spancer Kagan and his wife. This learning model applies a method where students learn learning concepts in groups and advance one by one writing answers on the paper provided, then the teacher will provide an assessment by observing student activeness and enthusiasm as achievements in the learning process (Reeve, 2012), so that the learning atmosphere becomes pleasant, and students are expected to work together. According to Sherman in Sharan's book (2009) explains *Round Robin Brainstorming* learning is a technique used to promote group formation by actively listening, thinking, and engaging in the activities carried out.

Based on observations made in grade 3 SDK Tunas Daud, it was found that there were still many students who had scores below the minimum completeness criteria (KKM). Based on these results, the researcher believes that it is necessary to hold learning activities that are able to improve student learning outcomes so that they can be above the KKM set by the school, which is 75, especially in thematic mathematics learning.

From these problems, there are 3 (three) important problems that will be overcome, namely: (a) Students do not participate in the learning process because the teacher uses learning strategies that are able to activate students. (b) Teachers do not use the types of learning tools and media that students want and need and (c) The acquisition of student learning outcomes is less than the KKM standard. These three things if not immediately addressed will have an even worse impact on students in the future, namely by being marked by lower student achievement and lower quality of learning. Therefore, it is necessary to design learning so that students play an active role, where students are learning subjects in a learning.

In the learning process, there must be a reciprocal relationship between students and teachers in line so that learning objectives are achieved (Ulfaira, Jamaludin, &; Septiwiharti, 2014). The way that can be used is to apply cooperative learning type "Round Robin Brainstorming".

This type of learning is applied by the way students are asked to study certain topics in groups by building pleasant learning conditions and building good cooperation between students. In addition, this type of learning is also believed to be able to shape student learning activity because the *Round Robin Brainstorming* type cooperative learning model aims to provide opportunities for all students to convey their ideas, give opinions with confidence, and train passive students to be more active in learning activities so that the balance of learning in class can run (Ayu, Yusmin, &; BS., 2019).

Based on the background of the problem, the researcher formulated the following problem: How can the use of the *Round Robin Brainstorming type cooperative learning model* improve thematic learning outcomes in grade 3 SDK Tunas Daud for the 2022/2023 academic year?

The purpose of this learning improvement research is that the use of a *Round Robin Brainstorming type cooperative learning model* can improve student learning outcomes in thematic lessons, especially mathematics lessons in grade 3 SDK Tunas Daud for the 2022/2023 academic year.

METHOD

Inside research this, method which used to review result learn students class 3 on

learning Thematic payload mathematics is with apply method learning cooperative type *Round Robin Brainstorming* Subject inside research this is students class 3 SDK. Shoots David with amount students 18 people which consisted of 10 students male and 8 female students.

This research was conducted in 2 (two) cycles carried out from August 9 to September 20, 2022, where qualitative and quantitative data became the source of information for this research. Qualitative data is obtained from observations of the implementation of learning and journals owned by the research team, while for quantitative data, researchers have conducted *post tests* and teacher performance, so that the values obtained can be used as research data. In quantitative data, the indicators used in the *post test* of teacher performance are student learning achievement, completeness in completing the Learning Implementation Plan and completeness in implementing learning.

Data collection techniques are taken through learning outcomes tests and observation sheets**.** Learning outcomes tests are carried out by providing evaluations to find out the level of student understanding in a learning material after the application of the learning system using the *Round Robin Brainstorming* learning type. Observation sheets are records of observations made by researchers to describe the stages of the teaching and learning process carried out by teachers and students during the *round robin brainstorming* learning model applied in mathematics thematic learning.

In determining student learning outcomes, the calculation method used by researchers is to use the formula:

$$NA = \frac{Sp}{Sm} \times \text{question weight}$$

Information:

NA = Final Value

Sp = Score earned

Bc = Max score

Problem Weights = Weight of the overall question

To determine the average grade of the class is by the formula:

$$NR = \frac{\sum NA}{Sn}$$

Information:

NR = Average Value

$\sum$ NA = Number of Final Grades

Sn = Number of students

The formula used in determining the level of classical learning completeness is:

$$TK = X\ 100\% \frac{N\ (NILAI \geq 75)}{Sn}$$

Information:

KINDERGARTEN = Complete classical learning

N (≥ 75) = Many students scored greater or the same with 75

(Zainal Aqib, et al, 2009: 40)

RESULTS AND DISCUSSION

From the recording results, it shows that there are 18 students in grade 3, there are 11 students who do not understand fractional material worth or have not reached KKM (Minimum *Completeness* Criteria). In the initial observations carried out by researchers, information was obtained that students still have weak learning motivation in thematic learning of mathematical content because students still consider the learning too difficult to understand. Guided by the competency standards for mathematics subjects, teachers develop a thematic learning process of mathematical content using a cooperative learning model of the *Round Robin Brainstorming type.*

Before carrying out Classroom Action Research by applying the *Round Robin Brainstorming* type cooperative learning model, researchers conducted observations or pre-cycles to identify obstacles faced by students and teachers during learning in grade 3 SDK Tunas David. Based on the results of observation or pre-cycle, the following results are obtained:

Table 1. Development of Pre-Cycle Student Learning Outcomes

Criterion	***Average rating***	***Percentage***
Pre Cycle Value	*59, 5*	*33 %*
APKG 1	*3,54*	*70,8 %*
APKG 2	*3,26*	*65*

At this stage, researchers observe student learning achievement through tests and teacher performance using observation sheets that have been prepared. Based on observations made by researchers about student learning outcomes in learning activities in cycle 1, the following data were obtained:

Table 2. Observation of Student Learning Outcomes Cycle 1

No	Completeness Aspect	Number of Students	Percentage	Information
1	Complete	6	35 %	Grade≥ 75
2	Unfinished	12	65 %	Rated < 75
Sum		18	100 %	

While the observations made by researchers on teacher performance in learning activities in cycle 1 obtained the following data:

Table 3. Cycle 1 Teacher Performance Observation

No	Assessment Tools	Average	Percentage	Performance indicators
1	APKG 1	4,05	81 %	≥4.60
2	APKG 2	4,27	85,4 %	≥ 4.55.

At this stage, researchers conduct research on student learning achievement through tests and teacher performance using observation sheets that have been compiled. Based on observations made by researchers about student learning outcomes in learning activities in cycle 2, the following data were obtained:

Table 4. Observation of Student Learning Outcomes Cycle 2

No	Completeness Aspect	Number of Students	Percentage	Information
1	Complete	14	80 %	Grade≥ 75
2	Unfinished	4	20 %	Rated < 75
Sum		18	100 %	

Likewise, observations made by researchers on teacher performance in learning activities in cycle 2 obtained the following data:

Table 5. Cycle 2 Teacher Performance Observation

No	Assessment Tools	Average	Percentage	Performance indicators
1	APKG 1	4,78	95,6 %	≥4.60
2	APKG 2	4,70	94 %	≥ 4.55.

Based on the research objectives that have been prepared is to improve the learning outcomes of grade 3 students of SDK Tunas Daud Cakranegara through a cooperative learning model of *Round Robin Brainstorming type*. The summary results of student learning outcomes and teacher performance from the precycle, cycles 1 and 2 can be seen in the following table:

Table 6. Development of Student Learning Outcomes

Stages	Student Grade Point Average	Percentage of Students Graduating
Pre cycle	59, 5	33 %
Cycle 1	71,8	55%
Cycle 2	83,5	80 %

Table 7. Teacher Performance Development

Stages	APKG Average 1	Average APKG 2	APKG Percentage 1	APKG Percentage 2
Pre cycle	3,54	3.26	70,8 %	65 %
Cycle 1	4.05	4.27	81 %	85,4 %
Cycle 2	4,78	4,70	95,6 %	

Based on the data in the table, it can be seen that learning activities in cycle 1 have not been optimal and maximized. Causative factors arise from students and teachers. These factors such as during learning take place teachers must motivate students before learning and during learning so that students remain enthusiastic in carrying out learning, In addition, in explaining fractional material worth teachers must accompany examples of more detailed problem work to help students understand the material.

In cycle 2 the teacher makes improvements from cycle 1, this is because of the improvement of the learning process carried out by the teacher. The teacher has motivated students before learning and as learning progresses. The teacher has explained the fraction value accompanied by examples of working on the question in more detail and the teacher has made the question cards and answer cards *in the Round Robin Brainstorming* game more interesting so that it

motivates students more, so as to improve student learning outcomes in thematic learning of mathematical content with fractional material worth grade 3 in SDK Tunas Daud.

CONCLUSION

Based on the results of the research and observations above, we can draw conclusions that the use of the *Round* Robin *Brainstorming cooperative learning model* can improve student learning outcomes in thematic lessons of mathematics content in grade 3 SDK Tunas Daud for the 2022/2023 academic year.

SUGGESTION

The suggestions given by the author in this study are as follows:

1. For Teachers
   a. Teachers can apply the *Round Robin Brainstorming* type cooperative learning model in designing thematic learning, especially on mathematical content.
   b. Teachers in the learning process can involve students actively so that there is interaction between teachers and students.
   c. Teachers should always motivate their students whose learning results have not been completed through enthusiasm and innovative learning methods.
2. For Schools

   The school can provide direction for teachers to use the *Round Robin Brainstorming type cooperative learning model in* order to achieve improvements in student learning outcomes in thematic lessons of mathematics content

ACKNOWLEDGMENTS

Acknowledgments are primarily addressed to research funders or donors. Acknowledgments can also be conveyed to parties who helped carry out the research.

BIBLIOGRAPHY

Aliwanto. (2017). Analisis Aktivitas Belajar. Jurnal Konseling, 3(1), 64–71.

Ayu, N. M., Yusmin, E., & BS, D. (2019). Penerapan Model Pembelajaran Kooperatif Tipe Round Robin Pada Materi Bangun Datar Segi Empat di SMP Negeri 3 Pontianak. Jurnal Pendidikan Dan Pembelajaran Khatulistiwa, 8(6), 1-6.

Fatmahwati, T. (2014). Peningkatan Kualitas Pembelajaran Matematika Melalui Pendekatan Pmri Berbantuan Media Grafis. Joyful Learning Journal, 3(1), 17–23.

Huda, Miftahul (2011). Cooperatif Learning. Yogyakarta: Pustaka Pelajar.

Muthia, N., Yusmin, E., & Ahmad, D. PENERAPAN MODEL PEMBELAJARAN KOOPERATIF TIPE ROUND ROBIN PADA MATERI BANGUN DATAR SEGI EMPAT DI SMP NEGERI 3 PONTIANAK. Jurnal Pendidikan dan Pembelajaran Khatulistiwa, 8(6).

Rahmayanti, V. (2016). Pengaruh minat belajar siswa dan persepsi atas upaya guru dalam memotivasi belajar siswa terhadap prestasi belajar bahasa Indonesia siswa SMP di Depok. SAP (Susunan Artikel Pendidikan), 1(2).

Reeve, J. (2012). A self-determination theory perspective on student engagement. In Handbook of research on student engagement (pp. 149-172). Springer, Boston, MA.

Republik Indonesia. 2021. Peraturan Pemerintah Nomor 57 Tahun 2021 tentang Sistem Pendidikan Nasional. Jakarta.

Sharan, Sholomon. (2009). Handbook of Cooperatif Learning. Yogyakarta: Impremium.

Ulfaira, J. Septiwiharti. (2014). Meningkatkan Aktivitas Belajar Pada Siswa Kelas III di SD Inpres Marantale Dalam Pembelajaran Pkn Melalui Penerapan Metode Pembelajaran Role Playing. Jurnal Kreatif Tadulako Online, 3(3), 125-142.