

Improved Learning Outcomes of Integer Mixed Count Operations Through Cooperative Think Pair Share Model

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Abstract

This study aims to examine the extent to which the learning outcomes of class VI students at SD Negeri 2 Belikurip have increased after the application of the Think Pair Share Cooperative learning model in mixed arithmetic operations with positive and negative integers. This research is a Classroom Action Research (CAR). The subjects of this study were 11 fourth grade students at SD Negeri 2 Belikurip. This research was conducted in 2 cycles, each cycle held 2 meetings. the first meeting used the Think Pair Share model with group techniques, the second meeting used group techniques by giving rewards to active groups. The results of this study concluded that with the demonstration method it can be concluded: (1) learning activeness of up to 6 students or 100% in the good category; (2) The learning outcomes reach 100% or as many as 6 students have scores in the good category, with an average score of 89.3 (very good category); (3). The learning outcomes reached 83.3% 5 students had grades in the good category, with an average score of 87.5 or in the good category (B).

Keywords: Think Pair Share Cooperative Model, Learning Activity, Learning Outcomes, Mixed Arithmetic Operations



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INTRODUCTION

Considering that the material on arithmetic operations on mixed positive and negative integers is very essential and difficult, the teacher has tried to convey this material by providing the clearest explanation to students, providing the widest possible opportunity for students to ask questions about things that are felt to be lacking. clear or poorly understood, the teacher often repeats explaining the subject matter with the aim that students really understand the subject matter delivered by the teacher. The teacher is always friendly and open and patient, so that students are not afraid of the teacher whether to ask or answer questions, the teacher even shows props in front of students, so that students understand the material more easily. At the end of the lesson the teacher always gives a number of questions or quizzes to deepen student material both to be done in groups and individually.

The low student learning outcomes in this material can be presented from the best results from several tests, namely: (1). Learning outcomes in KD 3.2. of the 6 grade VI students of SD Negeri 2 Belikurip, only 2 students or 33% were categorized as good, as many as 1 student or 17% were in the sufficient category and 3 students or 50% were still in the less category or needed guidance. The highest score is 80 (good). and the lowest value is 35 (less) while the average value is 59.2 or in the less category. Likewise learning outcomes in KD 4.2: only 1 student or 17% achieved grades in the good category, as many as 5 or 83% were still in the less category or needed guidance, with the highest score of 80 (good) and the lowest score of 15 (poor). While the average value is 50.8 or in the less category.

From the results of reflection, the Think Pair Share learning model is considered to be able to overcome this problem, because: (1), this learning model includes a new learning model for students so that students will be interested, happy and excited; (2). This learning model is carried out in groups or in pairs so that it can train students to interact with their friends and

eliminate fear of expressing opinions; (3). can train students to think critically and inspire because students must be able to convey their ideas or opinions to other friends, therefore students will get used to being more thorough, careful and trying to find the right answer, before expressing their opinion in front of the class or to another friend. This is in accordance with the opinion of Trianto (2012) which states: "Think Pair Share is a type of cooperative learning designed to influence student interaction patterns. Think Pair Share is well used in training students' thinking frameworks well, for this learning model emphasizes increasing students' reasoning power, students' critical power, students' imagination power, and analysis power of a problem".

It is hoped that after the learning process is carried out using the think pair share type learning model, the learning atmosphere will be enjoyable so that students will become more enthusiastic and more active in participating in the learning process, students will easily understand the material, and not easily forget it. so that learning outcomes increase and can even apply it in everyday life. In this study the data collection techniques used documents, observation and written tests. This research was conducted in 2 cycles where each cycle was held in 2 meetings. Cycle I meeting 1 used the Think Pair Share model with group techniques, the 2nd meeting used group techniques by giving rewards to active groups. Cycle II of the 1st meeting used the Think Pair Share model with the pair technique of the 2nd meeting with the paired technique which was competed.

RESEARCH METHODS

This study used the Classroom Action Research method. The research was carried out for 3 months starting from September to November 2022 in semester I of the 2022/2023 Academic Year. Details are explained in the following table:

Table 1. Research Schedule

No	Activity	September 2022					October 2022					November 2022				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1	Analysis of learning outcomes		x	x												
2	Proposal preparation				x											
3	Application for Research Permit					x										
3	Implementation of cyclical actions I						x	x								
4	Analysis								x							
5	Implementation of cycle II actions									x	x					
6	Analysis											x				
7	Preparation of reports												x	x	x	
8	Attestation of the report															x

The location of this research was at Belikurip 2 Public Elementary School, Baturetno District, Wonogiri Regency for the following reasons: 1). This research is an effort for teachers as researchers to improve the learning process that has been done; 2). The researcher is a class VI teacher at Belikurip 2 Public Elementary School, Baturetno District, Wonogiri Regency, the academic year is running so that it facilitates the research process. The learning process data comes from observational data, while the learning outcome data comes from the test results of class VI students at SD Negeri 2 Belikurip in semester I of the 2022/2023 school year. Observations were taken when students took part in the learning process and did assignments from the teacher during the learning process.

Data Collection Technique

In research data collection techniques using documents, observations, and tests. 1). Documents, namely collecting data on learning outcomes and students' abilities to work on mixed arithmetic operations with positive and negative integers when no action has been taken (initial conditions) supported by complete administration of learning including curriculum, lesson plans and grade VI Semester I SDN 2 Belikurip Baturetno District, Wonogiri Regency, for the 2022/2023 Academic Year. 2). Observation is collecting data by observing student activities in participating in learning in each cycle. 3). Test results in the form of written test results to measure student learning outcomes in completing mixed integer arithmetic operations in each cycle.

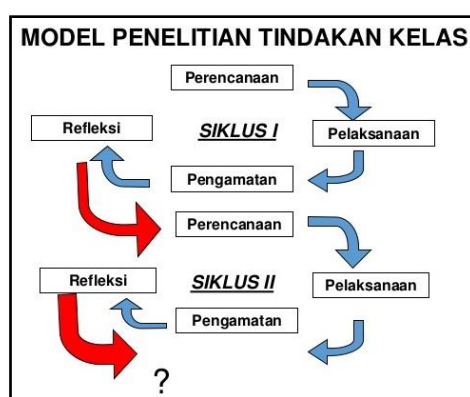


Figure 1. Implementation of Actions in Two Cycles

The implementation of cycle I actions is carried out in the 2nd and 4th weeks of October 2022, because it adjusts to the learning material for semester I for the 2022/2023 Academic Year contained in the semester program regarding KD material 3.2 Explain and carry out the operations of addition, subtraction, multiplication and division that includes negative integers. And KD 4.2 Solving problems related to addition, subtraction, multiplication and division operations involving negative integers in everyday life.

Activities in cycle II continue activities in cycle I with the same material, namely KD.3.2 and KD 4.2. The learning process at the 1st meeting was carried out using Think Paire Share. in pairs of two, at the second meeting the learning process was carried out using Think Paire Share in pairs of two and competed between pairs.

RESEARCH RESULTS AND DISCUSSION

Description of the Pracycle

In the initial conditions, the learning process regarding the material for mixed arithmetic operations with positive and negative integers was carried out using the lecture method to convey the subject matter. The teacher gave an explanation of the material as clearly as possible to students, giving students the opportunity to ask questions about things they did not understand. The teacher also often repeats explaining the subject matter and even the teacher also shows props in front of the students, so that students understand the material more easily. This can be shown through the data presented in the table and its description below.

Table 2. Data on KD Learning Outcomes 4.2 Pre-cycle

No.	Interval	Total Students	Percentage (%)	Category
1.	$88 < A \leq 100$	0	0 %	Excellent
2.	$76 < B \leq 88$	1	16,7 %	Good
3.	$66 \leq C \leq 76$	0	0 %	Enough

4.	D < 66	5	83,3 %	Less
Total		6	100%	
Average		50,8		Less (D)

Based on table 2, it can be seen that in the pre-cycle, 0 students or 0% scored in the very good category (A). A total of 1 student or 16.7% of students scored in the good category (B). As many as 0 students or 0% of students scored in the sufficient category (C) and 5 students or 83.3% scored in the less category or needed guidance (D). While the average value of learning outcomes is 50.8 or in the less category (D).

Description of Cycle I

Cycle I actions were carried out in 2 meetings. The first meeting carried out the learning process using the Think Pair Share learning model in groups. The 2nd meeting of the learning process was carried out using Think Paire Share. in groups by giving rewards to groups that are more active.

Table 3. Data on KD Learning Outcomes 4.2 Cycle I

No.	Interval	Total Students	Percentage (%)	Category
1.	88 < A ≤ 100	2	33,3%	Excellent
2.	76 < B ≤ 88	1	16,7 %	Good
3.	66 ≤ C ≤ 76	2	33,3%	Enough
4.	D < 66	1	16,7 %	Less
Total		6	100%	
Average		75,0		Enough (C)

From the table it can be seen that in cycle I the number of students who scored in the very good category (A) was 2 students or 33.3%, who scored in the good category (B) were 1 student or 16.7%; who reached the sufficient category (C) as many as 2 students or 33.3%; and students scored in the less category or needed guidance (D) as much as 1 student or 16.7%. While the average value of student learning outcomes is 75.0 or in the sufficient category (C).

From the reflection results it can be concluded that: 1). The learning process in cycle I using the think pair share learning model as a group has succeeded in increasing student learning activity up to 4 students or 66.7% achieving learning activity in the good category with an average score of 2.00 or in the good category (B). 2). The results of the first cycle test on KD 3.2 showed that the number of students who scored in the good category was 3 students or 50% with an average score of 78.3 or in the good category (B). 3). The results of the first cycle test on KD 4.2 showed that the number of students who scored in the good category was 3 students or 50% with an average score of 75.0 or in the sufficient category (C). When compared with the targeted indicators of performance success, the results of the first cycle of action proved to have not reached the targeted indicators.

Based on these reflections, this research will proceed to cycle II. In cycle II it will be carried out using the pairing technique by considering students who are smart and who are not smart enough to be paired with the hope that students who are good at being able to lead those who are not smart enough, and each pair will be able to do sharing.

Description of Cycle II

Based on these findings or constraints, in cycle II the learning process was carried out using the Think Pair Share learning model but with a competitive pairing technique.

Table 4. Comparison of Learning Outcomes KD.4.2 Pre-cycle to Cycle I and Cycle II

No.	Interval	Precyclical	Cycle I	Cycle II	Increase
1.	$88 < A \leq 100$	0 (0%)	2 (33,3%)	3 (50%)	3 (50%)
2.	$76 < B \leq 88$	1 (16,7%)	1 (16,7%)	2 (33,3%)	1 (16,7%)
3.	$66 \leq C \leq 76$	0 (0%)	2 (33,3%)	1 (16,7%)	
4.	$D < 66$	5 (83,3%)	1 (16,7%)	0 (0%)	
Increase in the number of students who have good categories					4 Students (66,7%)
Average		50,8	75,0	87,5	26,7
Category		Less	Enough	Good	

Based on the test results from pre-cycle to cycle II, it can be seen that there is an increase in learning outcomes in KD 4.2, namely the number of students whose learning outcomes achieve grades in the good category are 4 students or 66.7%, from 1 student or 16.7% in pre-cycle to 3 students or 50% in cycle I. and in cycle II it becomes 5 students or 83.3%. The mean value has increased by 26.7, from 50.8 in pre-cycle to 75.0 in cycle I and in cycle II to 87.5 or from less category (D) to good (B).

Discussion

From the results of the discussion between cycles it can be summarized as a whole that learning this material is by providing the clearest explanation to students, providing the widest possible opportunity for students to ask about things that are felt to be unclear or poorly understood, the teacher often repeats in explaining the subject matter with the aim that students really understand the subject matter delivered by the teacher is less effective, especially the attitude of students in participating in the learning process, the majority of students appear passive, no students have the initiative to ask about their difficulties, or are inspired to convey their ideas. After entering cycle I, the learning process was carried out using the Think Pair Share learning model in groups. After the cycle 1 process was carried out, the results turned out to be lacking. So that research needs to continue its research into cycle II by applying a different Think Pair Share learning model, which is carried out with a pair technique by considering students who are smart and who are not smart are made into pairs with the hope that students who are competent will be able to lead those who are not smart, and each pair will capable of sharing.

CONCLUSION

Referring to the results of the research and discussion, it can be concluded that the Think Pair Share learning model can be used to increase student activity and learning outcomes in material arithmetic operations mixed with positive and negative integers.

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