Improving Learning Outcomes Through Direct Learning Models Using Concrete Image Media

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ABSTRACT
The acquisition of mathematical knowledge in Public Primary School 2 Sumber Mukti encountered several obstacles, namely the lack of student motivation in the following lessons. The lack of enthusiasm and apathy shown by students during the learning process had a negative impact on their academic achievement. To overcome this problem, a direct learning strategy was used by utilizing concrete visual media. This study aims to improve student learning outcomes and describe learning activities related to the concept of addition and subtraction. This study is a classroom action research (CAR) conducted in class II of Public Primary School 2 Sumber Mukti, with 9 students. The research methodology was carried out in two cycles, with each cycle consisting of four stages: planning, implementation, observation, and reflection. Data collected on student learning outcomes through written evaluations were then examined qualitatively in a descriptive manner, emphasizing the extent of student achievement. The study showed that the use of concrete visual media improved student learning outcomes. In Cycle I, out of 9 students, 4 students achieved learning completion, while 5 students did not, so the percentage of completion was 40%, which was still below the minimum threshold for classical completion. In Cycle II, the number of students who completed the program increased to 7 students, while 2 students still had not completed it, so the completion percentage was 70%, thus meeting the minimum threshold for classical completion.

Keywords: Learning outcomes; Direct Learning; Concrete Image Media

INTRODUCTION

Education is a process that involves humans in various situations with the aim of improving their abilities. (Rahman et al., 2022). According to (Rais & Neviyarni, 2024) Education covers all aspects of life that influence how individuals think and act. The main difficulty in formal education is the limited ability of students to absorb information (Syaadah et al., 2023). It can be seen from the average academic achievement of students that it is still very low (Umar & Widodo, 2022). This condition indicates that conventional learning methods have not optimally touched on essential aspects of the student learning process (Prameswara & Pius X, 2023).

Mathematics is a subject in elementary school and is very important for improving students' reasoning skills. (Muhalimah et al., 2023). Regarding mathematics learning, there are various different views regarding the meaning of mathematics, which are influenced by individual knowledge and experience. (Lestari et al., 2015). So far, mathematics learning has often only focused on the application of concepts. (Budi'ani & Thohir, 2022) explains that the main challenge in elementary mathematics education is the difficulty of teachers in conveying abstract mathematical concepts to students, especially in a virtual environment. In educational institutions, students are usually only given instructions in theory or definitions, supplemented with examples and exercises. This results in a lack of understanding of mathematical topics for students, which causes difficulties in mathematics lessons. (Tauhid et al., 2024) emphasized that mathematics should be taught to children from elementary school to foster logical, analytical, systematic, critical, and creative thinking skills, as well as collaboration.

Teaching activities are interactive activities between students and teachers. An important element in the teaching process is to stimulate and direct students to want to learn. Teaching not only includes the delivery of knowledge, skills, attitudes, ideas, and appreciation but also emphasizes changes in student behavior and development. (Qomarudin et al., 2021) emphasizes that teaching is a process of educators and learners fostering an environment that supports productive learning activities. This process involves collecting a set of values and beliefs that shape their perspectives on events around them.

Learning as defined (Susilana & Riyana, 2008) can be understood briefly as an effort to teach an individual or a group through various strategies, methods, approaches, or learning models to achieve learning outcomes. (Harahap et al., 2023). Learning is an activity planned to create conditions that enable a person or group to learn effectively. The main elements of learning are students and teachers.

As stated (Utomo, 2023) Learning is an interactive process that involves students, educators, and various learning sources or media that aims to achieve certain competencies, either through direct or indirect educational activities. In short, learning is an activity that includes the process of teaching and learning, intentionally or unintentionally, with the aim of achieving optimal educational outcomes. This process takes place inside and outside the classroom, including student and teacher interactions to meet the learning objectives set.

The direct learning model is a strategy that emphasizes the active role of teachers as mediators, motivators, and facilitators. The selection of the right learning model depends on the subject matter because not all models can be applied to every type of content. Therefore, teachers need to analyze the material carefully and choose the appropriate learning model.

According to (Mei & Gusmaneli, 2024) The advantage of direct learning is that teachers can organize the sequence and scope of the material in a systematic way so that they can monitor the extent to which students understand the material. Students can gain knowledge directly through oral explanations, and this method is also effective in classes with many students.

Direct Learning is a pedagogical approach that aims to facilitate the gradual acquisition of basic skills and knowledge, as stated (Puspitasari & Mahmudah, n.d.). Direct learning methodology aims to facilitate the mastery of basic skills and the progressive acquisition of knowledge by students. This strategy enhances students' understanding of structured procedural and declarative knowledge. (Fitri et al., n.d.). This is in accordance with the explanation (Carin & Robert, n.d.), which emphasizes that direct learning systematically guides students and enables them to identify the learning objectives achieved at each stage of the educational process. (Lase & Tangkin, 2022).

Learning outcomes are student competencies after following the educational process, as explained (Nomor & Tahun, 2021). Furthermore, learning outcomes are the achievement of competencies or abilities of students after participating in the education process, including abilities in the cognitive, emotional, and psychomotor domains, as stated. (Selegi & Hartono, 2019).

As stated (Eppendi et al., 2024), Learning outcomes are student achievements that are assessed through assessments that are in accordance with the curriculum standards of educational institutions. In short, learning outcomes are the results of an effective teaching and learning process, which includes cognitive, emotional, and psychomotor dimensions, supported by assessments that are in accordance with the curriculum. (Chotimah, Umi., Kurnisar., Ermanovida., 2021) stated, Learning achievement is closely related to changes in knowledge, understanding, attitudes, and behavior of individuals resulting from the learning process they experience. Therefore, changes resulting from growth are not considered learning achievement.

Student success in learning does not only depend on the ability to think creatively; it is also influenced by emotional factors, such as autonomy in learning. This independence allows students to choose appropriate learning strategies and overcome challenges alone or together, motivated by their intrinsic drive. (Rahma & Aldila, 2017). This can inspire students to remain actively involved in the learning process.

Based on existing experience, inadequate student learning outcomes are caused by the prevalence of traditional learning approaches. This learning approach is characterized by a teacher-centered classroom climate, resulting in passive student involvement. However, many educators choose this method because it does not require instruments or practical materials; this method is sufficient to explain the concepts presented in the textbook. At Public Primary School 2 Sumber Mukti, mathematics teaching for grade II mostly uses conventional methods, especially in the areas of addition and subtraction. Educators often provide one-way teaching and rarely provide opportunities for students to realize their full potential. As a result, students are less motivated and appear unenthusiastic in participating in

learning activities, which has an impact on their activeness. This affects the achievement of student learning outcomes, which should be achieved more optimally if learning is carried out more interactively.

METHOD

This research uses the Classroom Action Research (CAR) methodology. (Nurhayani, 2017), Classroom Action Research (CAR) is a systematic investigation process of educational activities that include certain actions that are created and implemented together in the classroom. Through self-reflection and continuous improvement, it is hoped that it can improve standards both in the learning process and its results. This research was conducted in Class II of Public Primary School 2 Sumber Mukti. This research was conducted in mid-November 2024. The research participants were nine class II students of Public Primary School 2 Sumber Mukti who received the intervention, while the researcher acted as the homeroom teacher who implemented the intervention. The research used a data collection approach that included observations and tests carried out in each cycle. The method used is direct observation, namely observation of phenomena or processes that occur in the context of real learning. The assessment in this study includes a series of questions or tasks intended to assess students' competence, knowledge, intelligence, capabilities, and cognitive processes, as explained by (Magdalena et al., 2020). Qualitative descriptive analysis was used to examine the data. This strategy, as suggested by (Suryantika et al., 2024), attempts to investigate something in its natural state and collect comprehensive and meaningful data, which is then evaluated to explain the ongoing learning process.

Planning, implementing, observing, and reflecting are the 4 key components of Kemmis and McTaggart's reflective action paradigm, in this study. The procedure takes place in two educational cycles. At the end of each cycle, students undergo an assessment to measure their learning achievement. The first final test is conducted after cycle I, aiming to measure the level of learning success and provide a basis for improvement in the next cycle. After cycle II, students take the second final test to evaluate final achievement and compare the results between the two cycles. The level of student learning completion is determined by dividing students who meet the completion criteria by the total number of students. This approach aims to improve learning success through the use of real visual media.

Teknik Analisis Data

Data analysis in the field after the completion of data collection in this study. Data analysis, as explained (Agama et al., 2022), is the act of managing and organizing data into patterns, classifications, and fundamental descriptive units. The goal is to understand key themes and develop working hypotheses that are consistent with the data obtained. This expression indicates that data analysis attempts to organize the data obtained. This data can be very varied and abundant, including field notes, researcher observations, drawings, photographs, and reports such as papers. The purpose of data analysis is to organize, sort, group, code, and categorize data. The results of learning observations are examined and explained through references to literature reviews and educator experiences. Simultaneously, student learning outcomes are assessed according to standards set to evaluate academic achievement. The study used qualitative descriptive analysis for data examination. Clarification of qualitative descriptive analysis, in particular: With formative assessment or daily test scores, qualitative descriptive analysis can be applied to test learning outcomes over several cycles. This study provides a written test after each action to assess the achievement of competencies taught by students. The assessment aims to evaluate students' understanding of the subjects studied. The test results are then analyzed using a specific formula, which is designed to evaluate the level of understanding and learning achievement of students. The formula used in assessing the effectiveness of learning and determining the completeness of learning outcomes is as follows:

RESULT AND DISCUSSION

Description of Research Results The Classroom Action Research (CAR) Learning Improvement sought to improve students' learning outcomes in addition and subtraction using a direct learning model that utilizes concrete visual aids, based on activities carried out during two cycles. The research results and discussion were presented in detail for each cycle, describing the process, findings, and improvements achieved from the first cycle to the next. This report provided a clear picture of the steps in each of the following cycles.

Before the implementation of cycle I in Mathematics learning, only 4 out of 9 students, or around 40%, had mastered the material, while the remaining 60% had not achieved completion. These data indicated that learning in this competency was not optimal and required improvement. Therefore, intervention through Classroom Action Research (CAR) was important to improve students' learning outcomes and improve deficiencies in subject mastery.

After the improvement in Mathematics teaching during Cycle I, 5 out of 9 students continued to score below 65. This indicated an improvement in exam results compared to previous performance. However, certain deficiencies require improvement. Improvements in learning would continue into Cycle II to ensure a more substantial and uniform improvement in academic performance among all students.

After the implementation of Cycle II improvements, 7 out of 9 students managed to achieve scores above 65. This improvement was influenced by the effective use of concrete image media, allowing teachers to provide repeated explanations in an interesting and fun way. This improved the learning process for students so that they could understand and interpret the content more effectively. The results of the study showed that the direct learning paradigm using concrete image media greatly improved student learning outcomes.

This was explicitly shown in the next cycle of the research report and discussion.

1. Cycle I

a. Planning

Observation results showed that the expected learning is active, creative, fun, and meaningful, so it had a positive impact as evidenced by increased students' motivation during the learning process. Increased Mathematics scores.

b. Implementation

Students were more motivated to learn when the actions of teachers and classmates were recorded on observation sheets or other tools used during class. This could be seen from the increase in students' activity in asking questions and collaborating, reaching 70%. The increase in motivation could be attributed to improvements made in learning activities by teachers, such as the use of more interactive learning strategies and media and approaches that encouraged active student participation, namely:

• The teacher's explanation of the subject matter was clear.
• The quantity of questions and answers between teachers and students was adequate.
• The teacher had used learning media according to the subject matter.
• The teacher had been able to arouse student motivation in following the learning process.
• Students felt happy and interested in the learning process.

c. Observation

At the end of cycle I, a test would be conducted to measure the increase in students learning outcomes from 40% to 70%, this increase occurred due to the questions and answers that had been recorded by the observer and using concrete image media.

d. Reflection

Analysis of the observations and tests above concluded that general learning could improve teachers' creativity and students' involvement; however, it was still necessary to improve activities that were still lacking and increase the average score of students' learning outcomes using a direct learning model that utilizes concrete visual media.

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2. Cycle II

a. Planning

Observation results showed good planning, supported by the availability of complete tools and materials, encouraging the creation of an active and orderly learning atmosphere. Fair group division also ensured that each student had the opportunity to participate. These factors encouraged teachers to be more creative in teaching so that learning took place more enjoyable and effective for students.

b. Implementation

From the results of observations on the student activity process, a picture of student activity was obtained with an increase from 40% to 70%. And an increase in student learning outcomes from 40% to 70%.

c. Observation

At the end of cycle II, a test would be conducted on student mastery of the material. So that students' learning outcomes would increase to 70%. This increase was the impact of using a direct learning model through concrete image media.

d. Reflection

After reviewing the commendable learning outcomes of students, many responses were recorded:

1) The teacher asked the reason behind the high test results, and many students answered the following:
• Learning became more enjoyable.
• Already using concrete image media and ice cream sticks.
• Students could be involved in the learning process to enhance the meaning of their education.

2) The teacher asked students' views on the direct learning model using concrete visual media in Cycle II. The responses from students were as follows:
• The educational experience became interesting, fun, and meaningful for students.
• The teacher was able to control the class so that all students were involved in learning.
• Students felt enthusiastic and happy in the learning process.

Pembahasan Hasil Penelitian Perbaikan Pembelajaran

The results of the actions in the Classroom Action Research (CAR) are explained in full in the discussion of this report. The victories and challenges faced in each phase of the Classroom Action Research (CAR) were described according to each cycle. Each cycle required an assessment of improvement, a review of results, and steps taken to overcome challenges, as follows:

1. Cycle I

a. Planning

Observation results showed that the learning design was active, creative, fun, and meaningful. Education that emphasized student involvement, encouraged curiosity and examined important insights gained from students' learning activities. Educators involve students in the learning process by implementing a more stimulating and enjoyable educational experience, utilizing interesting and useful visual media for learning materials.

b. Implementation

From the results of the observation, in the apperception the teachers had asked things related to the material being carried out, all children's activities began to be active and looked fun in this learning, students participated and were interested and enthusiastic in carrying out this learning.

During the implementation of learning improvements in Cycle I, there were positive changes in student behavior during the learning process. Students began to show more attention to the teacher's explanation, dared to answer questions, and actively asked several questions to the teacher. In addition, students' mastery of the subject matter began to show improvement. This reflects an increase in student involvement in the learning process.

Researchers and colleagues found several things about teacher teaching behavior in the learning process, namely regarding the teacher's explanation of the subject matter which was adequate, the teacher had also used a direct learning model through concrete image media and the teacher had been able to motivate students in following the learning process.

The cause of the suboptimal learning outcomes of students, according to discussions between researchers and colleagues, was the teacher's mistake in choosing learning media that did not match the subject matter.

c. Observation

The results of learning observations showed that the application of a direct learning model with concrete image media made students actively involved and enthusiastic in learning.

d. Reflection

From the results of teacher learning observations, it could be seen that students' activity could increase, so that students' learning outcomes increase. However, some students did not obtain optimal learning outcomes because they were not used to direct learning methods using concrete visual media.

2. Cycle II
a. Planning

Observation results showed that the designed learning was active, creative, fun, and meaningful. Education that emphasized student involvement, encourages exploration and gains important insights from the results of students' learning activities. Educators could involve students in the learning process, facilitate a more interesting and enjoyable educational experience, and utilize interesting visual elements to enhance learning materials.

b. Implementation

Based on the results of observations during apperception, educators could ask questions that were relevant to the subject matter being taught. In the core activity, all children began to be active and were seen to be able to follow this learning well. Students participated and were interested and enthusiastic in making improvements to learning. The learning process began with apperception which is able to foster students' enthusiasm. Students would be involved in the main activities, which lead to a deeper and easier-to-understand understanding of the subject matter. In the closing task, students could summarize the learning material accurately because of their understanding of the content. Students could respond to the assessment given by the teacher to evaluate the success of the learning process.

c. Observation

The results of learning observations showed that the application of a direct learning approach with concrete image media made students active and enthusiastic in the education process.

d. Reflection

From the results of learning observations carried out by teachers, it could be seen that students' activity had increased, so that student learning outcomes will increase.

Learning Outcomes

The test was given to determine the students' assimilation ability at the end of cycle I and the beginning of cycle II. The following table shows the average results of all students:

Table 1. Students Learning Outcomes

No	Students name	Cycle I	Cycle II
1	Ahmad Sulaiman	80	90
2	Fedriansyah	60	70
3	Khofifah Nurul A	90	90
4	Najma Firdaus	80	80
5	Fania	20	60
6	Gavriel F Bantjin	80	90
7	Meisya	60	70
8	Dopi	20	60
9	Tiffany Abygail	40	70
	Average Value	58	75
	Completed	4	7
	Not yet finished	5	2
	% Completeness	40%	70%

The data in the table showed a substantial increase in students' learning outcomes from Cycle I to Cycle II. In Cycle I, only 4 out of 9 students (40%) completed the course, but in Cycle II, the number of completers increased to 7 students (70%). In contrast, the number of students who failed to achieve completion decreased from 5 students (60%) in Cycle I to only 2 students (30%) in Cycle II. In Cycle I, the maximum score was 90, achieved by one student, and the lowest score was 20, recorded by two students. In Cycle II, the maximum score remained at 90, achieved by three students, while the minimum score increased to 60, obtained by two students. This showed that, as the number of students who passed increased, the overall quality of students' learning outcomes also improved.

Traditionally, students who had not achieved mastery in their studies had failed to meet the traditional completion level of 70%. In Cycle I, learning outcomes were relatively low, with only 40% of students completing the course and a class average of 58. Student learning outcomes improved after Cycle II improvements; the class average increased to 75, and 70% of students were able to complete the course. Demonstrating the success of the implemented learning improvements. Inadequate student learning was traditionally associated with the classic inadequate completion rate of 70%. During Cycle I, the class average was documented to be 58, with a completion rate of only 40%. After the implementation of the learning improvements in Cycle II, the class average increased to 75, with a completion rate of 70%. This improvement indicated substantial progress in students' learning outcomes following the implementation of the learning intervention.

Reflection

Analysis of observation and test results showed a general improvement in learning, especially in the learning outcomes of students who previously failed to meet the completion standards. The implementation of the next cycle would prioritize improving students' learning outcomes, if necessary. Continuous improvement initiatives were expected to result in continuous improvement in the average score of student learning outcomes, along with improvements in the quality of teaching by educators. After evaluating the actions in Cycle I, it was recommended to include various actions in the next cycle, in particular:
• Students should be organized into study groups.
• Complete the media with interesting pictures to enhance the learning material.
• Change the learning process using a direct learning model that utilizes real visual materials.
• Change the classroom environment to be more fun and supportive.
• Involve students in the educational process by providing learning media according to the subject matter.
• Provide encouragement and recognition to children.

CONCLUSIONS

From the results of Classroom Action Research (CAR) through educational improvement from Cycle I to Cycle II in mathematics subjects, the researcher concluded: 1. In Cycle I learning, the findings showed that 4 students completed the course, while 5 students did not complete the course, so the completion percentage was 40%. In Cycle II, the number of students who completed the course increased to 7, while those who did not complete the course decreased to 2, so the completion percentage was 70%. Statistics show that the use of concrete media, especially ice cream sticks, in teaching mathematics, especially for addition and subtraction, increases student engagement. This increase is evident from the increasing student engagement in learning and their academic results. As a result, physical media increases learning engagement while effectively improving students' understanding of the subject matter. 2. The application of a direct learning paradigm that uses physical visual aids, especially ice cream sticks, has had a positive impact on student learning outcomes. The material presented can be understood by students, who show a high level of responsibility for their tasks, which are completed effectively. This engagement facilitates active participation in class and assists teachers in explaining learning materials to students.

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