

## The Use of Picture Media to Improve Science Learning Outcomes in Grade V at SDN Sariwangi

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**Abstract:** *This study aims to determine the improvement in science learning outcomes of fifth-grade students Class V-D at SD Negeri Sariwangi in the 2024/2025 academic year through the use of visual media. This research is a classroom action research (CAR) study conducted in two cycles, analyzed descriptively. Data collection for this study took place from November to December 2024. The subjects of this study were 35 students from Class V-D, consisting of 20 male and 15 female students. The results of the study showed that students' learning outcomes before the implementation of CAR were 54.2%. After the first cycle, the learning outcomes remained at 54.2%. However, in the second cycle, the learning outcomes improved to 80.5%. It can be concluded that the use of visual media can enhance science learning outcomes for fifth-grade students (Class V-D) at SD Negeri Sariwangi in the 2024/2025 academic year.*

**Keywords:** Visual Media, Learning Outcomes, Science Learning

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### INTRODUCTION

Education is a process of interaction between teachers as educators and students, aimed at achieving predetermined educational goals. In this process, there are three main interrelated components, namely educators, students, and educational objectives (Dolong, 2016; Samsinar, 2019). These three elements form a unified whole; if one of them is absent, the essence of education will be lost. Although in certain situations the role of the teacher may be supported or partially replaced by other elements, such as technology, this role still cannot be entirely substituted (Fitriajhuri, 2021).

Natural Science is a discipline that studies the surrounding environment and its components. As an objective field of knowledge, science can be understood as a body of information organized on the basis of natural phenomena. Therefore, science focuses on the observation and analysis of various natural phenomena, which are systematically arranged through observations and experiments conducted by experts (Akmal, 2023).

Science learning in schools has several main objectives. First, it helps students develop curiosity and awareness of the environment, both natural and man-made, and understand its relationship to its use in everyday life. Second, science learning aims to develop students' skills in solving problems through a scientific approach or "doing science." In addition, it is intended to train students to apply scientific knowledge, technology, and skills that are useful in daily life, while also preparing them for higher levels of education.

Furthermore, science learning contributes to shaping insight, attitudes, and positive values, as well as increasing awareness of the relationship between the development of science and technology and environmental conditions, including efforts to preserve them. Therefore, science learning needs to be integrated with other subjects, because science is an effective means of developing scientific understanding, while the scientific method is one of the important pillars in the learning process pembelajaran (Ramadhani, 2019).

Science learning plays an important role in the educational curriculum, with the main objective of deepening students' understanding of natural phenomena and the application of scientific knowledge in everyday life. Although this subject is highly relevant, many students still show low motivation toward learning science. One of the factors influencing the teaching and learning process is the thinking ability of students at the elementary school level, which directly affects the effectiveness of science learning.

In science learning, students often become bored quickly and pay less attention to the teacher during the learning process. Therefore, the use of instructional media is important to support classroom learning activities (Wirdayati, 2024). Many students experience difficulties in understanding science concepts that are abstract in nature. Traditional teaching methods are often less effective in explaining complex material, causing students to have difficulty understanding and retaining information.

The appropriate use of instructional media by teachers can help explain the material more clearly during the learning process. Several factors contribute to low learning outcomes in science, including the lack of variation in learning models and methods used by teachers, as well as difficulties in delivering challenging material, which in turn affect students' low achievement (Ramadhanti et al., 2020). One example of students' lack of interest in science can be seen in the topic of the "water cycle," which is considered monotonous by students.

The results of the formative test showed that most students had not yet reached the expected mastery level. Of the 35 students tested, only 15 met the established standard, while the other 20 still did not show satisfactory results. During the learning process, many students appeared to be less focused on the teacher's explanation; some were busy chatting, playing, drawing, scribbling on paper, or appeared to be daydreaming and sleepy. When the teacher asked questions, only a few students responded, and many were unable to provide answers.

Instructional media include various tools and materials used in the learning process to help students understand and master the material. These media may take the form of physical objects, technology, or a combination of both, all designed to convey information effectively and support students' understanding and retention of the concepts being taught.

The use of instructional media aims to increase student engagement, deepen conceptual understanding, strengthen memory retention, and encourage collaborative learning in interpreting and applying the material (Anugrah, 2023). Understanding the causes of students' low interest in science learning can help teachers and educators design more effective strategies to enhance student engagement and motivation. One approach that can be applied is the use of more varied teaching methods, connecting the material to everyday life, and creating a more conducive learning environment.

One type of instructional media that can be used is picture media. The use of images in learning can increase students' interest and enthusiasm. In addition, interaction between teachers and students during the teaching and learning process becomes more active, which ultimately contributes to improving students' learning motivation. Picture media function as a form and channel for delivering information, thereby helping to clarify the material being taught (Herlina et al., 2024).

Picture media are visual tools related to learning material that serve as a means of conveying messages from teachers to students. The use of this media helps students understand information and the relationships among components of a problem more clearly (Sadiman, 2003). Picture media include various visual forms presented in certain dimensions as representations of ideas and thoughts, such as paintings, photographs, slides, films, and projectors (Hamalik, 2004).

From the explanation above, it can be concluded that picture media are one of the most commonly used instructional tools. This is because students tend to be more interested in images, especially those that are colorful and presented according to their level of understanding. Therefore, the use of picture media can increase students' enthusiasm in participating in the learning process. Based on the problems described, this study aims to determine how the use of picture media can improve students' learning outcomes in science for Grade V at SDN Sariwangi.

## **METHODS**

Make sure that work can be repeated according to the details provided. It contains technical information of the study presented clearly. Therefore, readers can conduct research based on the techniques presented. Materials and equipment specifications are necessary. Approaches or procedures of study together with data analysis methods must be presented.

In this study, the method used was Classroom Action Research (CAR), which consisted of two cycles with four stages: planning, implementation, observation, and reflection. The material discussed in this research was the water cycle. The study was conducted at SDN Sariwangi, Sariwangi District, Tasikmalaya Regency, in the 2024/2025 academic year, first semester. The research activities took place from November 2 to December 2024, with 35 fifth-grade students of SDN Sariwangi as the research subjects.

Data collection in this study was carried out through tests and observations of students' activities during the learning process. The data analysis technique used a quantitative approach aimed at measuring the percentage of students' learning mastery. Quantitative data were obtained by calculating the number of students who achieved mastery, then dividing it by the total number of students in the class. The percentage of learning mastery was calculated using the following formula:

$$P = \frac{\sum \text{students who achieved mastery}}{\sum \text{students}} \times 100\%$$

In this study, the criteria for learning mastery were defined as follows: a student is considered to have achieved mastery if they obtain a score  $\geq 70$  out of a maximum score of 100. Meanwhile, a class is considered to have achieved mastery if  $\geq 75\%$  of students obtain a score  $\geq 70$ .

The results of science learning achievement were presented in the form of bar charts. Prior to that, the data were organized into a grouped frequency distribution table based on assessment criteria. The range of students' achievement scores was determined using a normative subject score scale. Since this categorization is relative, the width of each category interval can be set subjectively, as long as it remains reasonable and logically acceptable (Azwar, 2002). The determination of score ranges considered the minimum score, maximum score, and the number of categories used.

The Minimum Mastery Criterion (KKM) for Grade V science at SDN Sariwangi is 70 as the minimum score, and the maximum test score is 100. Thus, the range is  $100 - 70 = 30$ . Therefore, each standard deviation unit (interval range) is  $30 \div 3 = 10$ . The following table presents the criteria for students' learning achievement scores:

**Table 1.** Criteria for Individual Learning Achievement Scores

No	Category	Score	Description
1	Very Good	90–100	Mastery
2	Good	80–89	Mastery
3	Fair	70–79	Mastery
4	Poor	60–69	Not Yet Mastered
5	Very Poor	0–59	Not Yet Mastered

## RESULT AND DISCUSSION

The results of science learning in Grade V at SD Negeri Sariwangi, Sariwangi District, Tasikmalaya Regency, in the 2024/2025 academic year indicate several obstacles, both in the learning process and in students' learning outcomes. Although some students had succeeded in understanding the material on the water cycle—as evidenced by their scores exceeding the Minimum Mastery Criterion (KKM) of 70—most students still experienced difficulties in understanding the concept. As a result, their learning outcomes remained below the established mastery threshold.

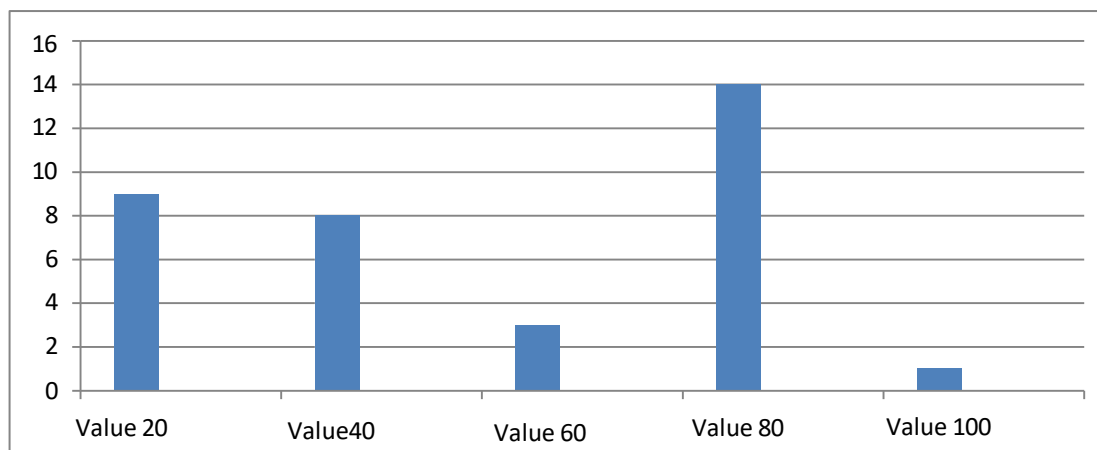
This condition suggests that the teaching and learning process had not yet fully supported students in understanding the topic effectively. Limited student engagement, low attention during classroom instruction, and the lack of varied instructional media may have contributed to these unsatisfactory outcomes. Therefore, improvements in teaching strategies and the use of more appropriate learning media were necessary to help students understand the water cycle material more clearly and to improve their overall learning achievement.

**Table 2.** Pre-Cycle Learning Outcomes of Grade V Students at SDN Sariwangi

Mastery Status	Pre-Cycle	%	Highest Score	Lowest Score
Mastery	15	43	100	20
Not Yet Mastered	20	57		
Total	35	100		
Average Score				54.2

Based on the table above, the students' average score before the implementation of the cycle was 54.2. Of the 35 students who took the formative test, only 15 students, or about 43%, succeeded in obtaining a score above the established Minimum Mastery Criterion (KKM), namely 70. These students were therefore categorized as having achieved mastery.

Meanwhile, 20 students, or 57%, still obtained scores below the KKM and were categorized as not yet achieving mastery. The highest score obtained by the students was 100, while the lowest score was 20.



**Gambar 1.** Pre cycle Value

The data above indicate that students' understanding of the water cycle material is still low. Based on the formative test results, many of the 35 students who took the test had not yet reached the expected level of mastery. To improve learning outcomes and achieve the desired level of mastery, improvements in the learning process are necessary. These improvements are carried out by modifying the teaching strategies and instructional media used. One effort implemented is the use of picture media in learning, with the expectation that it can enhance students' understanding of the material being taught.

The low level of mastery prior to intervention reflects a mismatch between instructional delivery and students' cognitive needs, particularly for abstract science concepts such as the water cycle. Research indicates that students often struggle to understand abstract material when learning relies heavily on verbal explanation without adequate visual support (Mayer, 2017). The introduction of picture media provides concrete representations that help students visualize processes, thereby improving comprehension and retention (Herlina et al., 2024). This aligns with findings that visual media can significantly increase students' engagement and conceptual understanding in science learning (Susanto, 2020). By integrating images into instruction, students are better able to connect theory with observable phenomena, which is essential in science education. Therefore, the use of picture media is a relevant and effective strategy to address low learning outcomes and enhance mastery levels.

### Cycle I

In Cycle I, the planning stage began with preparing the syllabus, designing the Lesson Plan (RPP), preparing observation sheets for both the teacher and students, and providing instructional media in the form of water cycle images.

In the implementation stage, the lesson started with preliminary activities such as praying, checking students' attendance, singing a national anthem, and conveying the learning objectives. In the main activity, the teacher delivered the material, students worked in groups to discuss and complete tasks, and then presented the results of their discussions. After that, the lesson concluded with a summary of the material and an ice-breaking activity to maintain students' focus and prevent drowsiness at the end of the session. The closing stage included administering an individual evaluation test, discussing and summarizing the material together, and ending the lesson with a prayer.

Based on the evaluation results after the implementation of Cycle I, several aspects still needed improvement. The learning outcomes had not yet reached optimal achievement, so corrective actions were necessary. One aspect that required improvement was the grouping of students. Groups needed to be formed more evenly by considering the number of members, gender, and students' academic abilities, so that each group had equal opportunities to develop and support one another in understanding the material. With these improvements, it is expected that students' learning outcomes in the next cycle will improve significantly.

In addition, greater attention needed to be given to increasing students' active participation during the learning process. Some students were still passive in discussions and had not fully engaged with the learning activities. Therefore, the teacher needed to provide clearer guidance, encourage cooperation among group members, and create more interactive learning situations. Through these improvements, students were

expected to become more involved in the lesson, better understand the material, and show higher achievement in Cycle II.

**Table 3.** Learning Outcome Scores in Cycle I of Grade V Students at SDN Sariwangi

<b>Mastery Status</b>	<b>Cycle I</b>	<b>%</b>	<b>Highest Score</b>	<b>Lowest Score</b>
Mastery	15	43	100	20
Not Yet Mastered	20	57		
Total	35	100		
<b>Average Score</b>				<b>54.2</b>

The evaluation results in Cycle I show an improvement compared to the pre-cycle condition, but they have not yet reached the expected level of mastery. From the table presented, the average student score increased, but many students still did not meet the Minimum Mastery Criterion (KKM). Of the 35 students who took the formative test, 15 students (43%) achieved mastery with scores above 70, while 20 students (57%) had not yet achieved mastery. The highest score obtained was 100, while the lowest was 20.

Based on the analysis of the Cycle I formative test results, it can be concluded that the use of picture media had not yet provided a significant improvement in the learning outcomes of Grade V students at SD Negeri Sariwangi on the water cycle topic. The class average remained at 54.2, with 15 students (43%) achieving mastery and 20 students (57%) not yet achieving mastery.

Although there was a slight improvement in individual scores, the overall results remained similar to the pre-cycle condition. Several factors contributed to this, including the lack of active student participation, unbalanced group distribution, and low student interest in learning. Therefore, in the next cycle, improvements are needed in instructional strategies, such as increasing teacher–student interaction, organizing more balanced groups, and applying more engaging approaches to enhance students’ learning motivation.

Based on the evaluation results of Cycle I, it is evident that students’ learning outcomes were still uneven. Therefore, following the suggestion of Supervisor 2, improvements in group formation are necessary. Discussion groups should be arranged more evenly by considering the number of members, gender, and students’ academic abilities.

With a more balanced group arrangement, it is expected that each student can actively contribute to discussions, support one another in understanding the material, and improve their comprehension of the water cycle concept. In addition, this improvement aims to enhance assessment results in the next cycle, so that more students achieve mastery according to the established KKM.

The results of Cycle I indicate that the use of picture media alone is not sufficient without effective instructional design and student engagement. Research shows that learning outcomes improve significantly when visual media are combined with active learning strategies such as group collaboration and interaction (Simarmata et al., 2025). The low mastery level in this study is likely influenced by limited student participation and unbalanced group dynamics, which reduce opportunities for meaningful learning. Previous studies also confirm that cooperative learning with well-structured grouping can enhance students’ understanding and academic performance (Slavin, 2015). Furthermore, students’ motivation plays a critical role in determining learning success, particularly in science subjects that require conceptual understanding (Ramadhanti et al., 2020). Therefore, improving group structure, increasing interaction, and integrating engaging instructional approaches are essential to achieve better learning outcomes in subsequent cycles.

## **Cycle II**

In the improvement stage of Cycle II, the preparation was carried out using the same steps as in Cycle I. The activities began with preparing the syllabus, designing the lesson plan (RPP), preparing observation sheets for both the teacher and students, and providing instructional media in the form of water cycle images. However, in the implementation of group learning, students were reorganized into new groups by considering the shortcomings identified in Cycle I.

In the implementation stage of Cycle II, the lesson began with preliminary activities, including praying, checking students’ attendance, singing a national anthem, conveying the learning objectives, and reviewing previously learned material. In the main activity, the teacher delivered the lesson, followed by group learning where students discussed tasks and presented their results. In addition, the teacher conducted a collaborative puzzle activity to enhance students’ understanding of the water cycle. Afterward, students summarized the

material they had learned, followed by an ice-breaking activity to maintain their focus until the end of the lesson. The closing stage included administering an individual evaluation test, conducting a class discussion to review and summarize the material, and ending the lesson with a prayer.

After the implementation of Cycle II, there was an improvement in students' learning outcomes. This improvement was influenced by increased student enthusiasm, more active participation, and higher learning interest. The use of picture media proved effective in supporting the learning process, helping students to be more focused and attentive to the material presented.

**Table 4.** Learning Outcome Scores in Cycle II of Grade V Students at SDN Sariwangi

<b>Mastery Status</b>	<b>Cycle I</b>	<b>%</b>	<b>Highest Score</b>	<b>Lowest Score</b>
Mastery	28	80	100	40
Not Yet Mastered	7	20		
Total	35	100		
<b>Average Score</b>				<b>80,5</b>

The results of the formative test in Cycle II show an improvement in students' learning outcomes. The lowest score obtained by students was 40, while the highest score reached 100. Of the 35 students who took the formative test, 80% achieved the Minimum Mastery Criterion (KKM) of 70 and were declared to have achieved mastery, with an average score of 80.5.

The improvement in Cycle II indicates that the revised instructional strategy was effective in enhancing students' learning outcomes. The increase in mastery to 80% suggests that the combination of picture media and more structured group learning created a more engaging and meaningful learning environment. This finding is consistent with research showing that visual media can significantly improve students' understanding of abstract science concepts (Simarmata et al., 2025). In addition, the use of interactive and collaborative learning activities has been proven to enhance students' motivation and participation, which directly impacts learning achievement (Susanto, 2020). The improvement in the class average to 80.5 also reflects better conceptual understanding among students. Therefore, integrating visual media with active learning strategies is an effective approach to improve science learning outcomes (Lin et al., 2016).

The improvement in learning outcomes from the pre-cycle to the implementation of instructional improvements in Cycle I and Cycle II can be seen in the following table:

**Table 5.** Implementation of Instructional Improvement

<b>No</b>	<b>Cycle</b>	<b>Average Score</b>	<b>Lowest Score</b>	<b>Highest Score</b>	<b>Mastery Level</b>
1.	<b>Pre-Cycle</b>	54.2	20	100	43%
2.	Cycle I	54.2	20	100	43%
3.	<b>Cycle II</b>	80.5	40	100	80%

In the initial stage, science learning did not yet use picture media, whereas in Cycle I and Cycle II, picture media were applied as part of the learning process. Based on observations from the initial stage to the end of Cycle II, there was an improvement in learning outcomes, where the average student score increased from 54.2 to 80.5. The use of picture media proved effective in improving students' understanding of the water cycle material, shifting from a very low category to a good category. Through the implementation of picture media, science learning outcomes on the water cycle topic showed a significant improvement. The instructional improvement process in this study, which was carried out over two cycles, produced several findings that were later discussed with Supervisor 2 to formulate conclusions.

In the pre-cycle stage, the teaching method used was still dominated by lectures without actively involving students. The formative test results showed that most students had not yet understood the water cycle material, as reflected in their low learning outcomes. Of the 35 fifth-grade students, only 15 students achieved scores above the established Minimum Mastery Criterion (KKM) and were declared to have achieved mastery, while the remaining 20 students were still below the KKM and had not yet achieved mastery. The highest score obtained was 100, while the lowest was 20.

The instructional improvement in Cycle I was carried out by applying picture media in science learning. The test results showed that the highest score remained 100, while the lowest score was still 20. Compared to the initial condition, there was some improvement in individual achievement; however, the class average remained the same as in the pre-cycle, namely 54.2. Of the 35 students, 15 students achieved scores above the KKM and were declared to have achieved mastery, while 20 students still had not reached mastery. In Cycle II, the researcher continued the instructional improvement by still using picture media, as in Cycle I. The learning steps remained similar, but improvements were made in group formation to ensure more balanced groups in terms of ability and gender distribution. After conducting the formative test, the learning outcomes showed a significant improvement.

In Cycle II, the lowest student score increased to 40, while the highest score remained 100. Of the 35 students who took the formative test, 28 students (80%) achieved mastery, with the average score increasing to 80.5. Compared to the pre-cycle and Cycle I, where the average score remained at 54.2, this improvement was highly significant. In addition, the percentage of learning mastery, which was previously only 43% in the pre-cycle and Cycle I, increased sharply to 80% in Cycle II. In Cycle II learning, a significant improvement occurred, with nearly 80% of students showing progress in their learning outcomes. This was influenced by increased student engagement and greater learning interest. The use of picture media in the learning process helped students become more focused and attentive to the material presented. Thus, the use of picture media in science learning at the elementary school level has been proven effective in improving students' learning outcomes (Endah, 2017; Sukmanawati, 2024). This is evidenced by the increase in the average score from Cycle I to Cycle II (Ambarwati, 2017).

## CONCLUSION

The use of picture media proved effective in improving students' learning outcomes on the Water Cycle topic in Grade V at SD Negeri Sariwangi in the 2024/2025 academic year. Before the implementation of the Classroom Action Research (CAR), the class average score was only 54.2, which fell into the very poor category. After the implementation of Cycle I, the average score increased slightly to 54.3, but it still remained in the very poor category. However, in Cycle II, there was a significant improvement, with the average score reaching 80.5, which falls into the "good" category.

In addition, students' learning mastery also improved. In the pre-cycle and Cycle I, the mastery level remained at 43% (15 students), while in Cycle II it increased to 80% (28 students). Based on these results, it can be concluded that science learning on the Water Cycle topic using picture media was able to improve the learning outcomes of Grade V students at SD Negeri Sariwangi in the 2024/2025 academic year.

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