

Application Of Image Media In Science Learning To Improve Learning Outcomes Of Grade IV Elementary School Students

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Abstrak: Tujuan penelitian adalah untuk mengetahui penerapan media gambar pada pembelajaran IPAS dalam meningkatkan hasil belajar siswa kelas IV SD. Jenis penelitian adalah penelitian tindakan kelas (PTK). Desain penelitian mengadopsi dari model Kemmis dan Taggart terdiri dari dua siklus yang masing-masing siklus meliputi perencanaan, pelaksanaan, observasi, dan refleksi. Subjek penelitian adalah siswa kelas IV SD yang berjumlah 35 siswa, yang terdiri dari 20 laki-laki dan 15 perempuan. Pengumpulan data melalui observasi, wawancara, dan dokumentasi. Analisis data dalam penelitian ini menggunakan analisis data kualitatif yaitu dengan model statistik seperti tabel dan diagram dari hasil observasi dan nilai setiap siklus serta menggunakan analisis data kuantitatif dengan membandingkan data yang diperoleh dari pelaksanaan kegiatan siklus I dan siklus II. Hasil penelitian menunjukkan adanya peningkatan hasil belajar setelah diterapkan media gambar pada mata pelajaran IPAS yang dibuktikan dari nilai rata-rata siklus I memperoleh 85 dengan persentase 51%, terdapat 18 siswa yang tuntas. Sedangkan pada siklus II memperoleh nilai rata-rata 90 dengan persentase 80% dan terdapat 28 siswa yang tuntas. Jadi dapat disimpulkan bahwa dari siklus I dan siklus II terdapat peningkatan hasil belajar siswa setelah diterapkan media gambar.

Abstract: The purpose of the study was to determine the application of image media in science learning in improving the learning outcomes of fourth grade elementary school students. The type of research is classroom action research (CAR). The research design adopts the Kemmis and Taggart model consisting of two cycles, each cycle includes planning, implementation, observation, and reflection. The subjects of the study were 35 fourth grade elementary school students, consisting of 20 males and 15 females. Data collection through observation, interviews, and documentation. Data analysis in this study used qualitative data analysis, namely with statistical models such as tables and diagrams from the results of observations and values of each cycle and using quantitative data analysis by comparing data obtained from the implementation of cycle I and cycle II activities. The results of the study showed an increase in learning outcomes after the application of image media in the subject of science as evidenced by the average value of cycle I obtained 85 with a percentage of 51%, there were 18 students who completed. While in cycle II obtained an average value of 90 with a percentage of 80% and there were 28 students who completed. So it can be concluded that from cycle I and cycle II there was an increase in student learning outcomes after the application of image media.

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PENDAHULUAN

Education is a planned and conscious effort to create a pleasant learning environment, so that students can be actively involved in exploring and developing their abilities (Fajri, 2019). Education aims to provide individuals with strength in spiritual and

religious dimensions, the ability to manage themselves, practice good moral values, increase intelligence, build a positive personality, and build abilities that are beneficial not only for individuals, but also for the benefit of society as a whole (Yusuf et al., 2024).

Excellent education is an aspiration that is expected and desired by all parties involved. Education is one of the most important things in life. Education in general divided into three paths, namely education formal, non-formal and informal (Syaadah et al., 2022). Natural and Social Sciences is a subject that aims to understand the surrounding environment, including natural and social phenomena. IPAS lessons are everything that discusses natural phenomena and social contexts (Wedyawati & Lisa, 2019). Thus, this lesson includes a fusion of two subjects, namely Natural and Social Sciences. This lesson is combined because it is related to nature from the life cycle to others. In addition, this lesson has dynamic characteristics and uses a holistic approach.

The objectives of learning science are to develop curiosity, understand oneself and one's environment, play an active role, develop inquiry skills and develop knowledge and understanding of science concepts (Goliah et al., 2022). Science is generally characterized as a collection of different information that is arranged rationally and methodically by considering cause and effect. Curiosity is the driving force behind students' understanding of how the universe functions and how it interacts with human life on earth (Arum et al., 2024). Thus, students can understand and identify what problems exist on earth and can seek and find solutions that are considered to be able to meet learning objectives .

In learning, media is needed as a message intermediary for the material to be delivered by the teacher. Learning media is any form of tool or material used in the learning process to help students understand and master the subject matter (Febrita & Ulfah, 2019). This media can be a physical object, technology, or a combination of both that is designed with the aim of communicating information more effectively and facilitating understanding and retention of learning concepts (Pangalila et al., 2024).

One of the media that can be used for learning is image media. Image media is anything that is manifested visually in two-dimensional form as an outpouring or thoughts that have various forms such as paintings, portraits, slides, films, strips, opaque projectors (Junaidi, 2021). The advantages of image media are its concrete nature, can overcome the limitations of space and time and the limitations of student observation (Aswat et al., 2019). Images can be used as a medium for teaching or providing reinforcement for several student learning skills. This is because images can translate an idea from the abstract into a real and easier to understand form (Febriyanto et al., 2018). Image media is not only an aspect of a method/technique but also represents a picture of an object, place or person that is an important part of the student's experience that teachers must know.

In the observation that has been done in grade IV of elementary school in learning that in the science learning activities the teacher does not utilize media such as pictures only in textbooks, because the learning media used causes students' learning motivation to decrease so that it has an impact on their learning outcomes. Effective learning is a supporter for improving student learning outcomes. Student learning outcomes are achievements achieved student academically through exams and assignments, actively asking and answering questions which supports the achievement of these learning outcomes (Dakhi, 2020). Student learning outcomes obtained through education will able to compete in various activities of community life. The current competitive situation requires quality human resources namely skilled human resources (Beddu, 2019).

It is also said (Siregar, 2017) that student learning outcomes can be increased with the motivation and interest of students in learning, where the motivation begins with teacher innovation in utilizing media such as image media. In another study, namely (Yastiari, 2019) that image media can improve the science learning achievement of grade V elementary school students. Similar to the study (Utami, 2020) if image media is very effective in being applied in the learning process which results in students being active, enthusiastic and able to understand the material being taught so that student learning achievement increases. Then the study (Dharwisesa et al., 2020) that image media has a positive effect on the learning outcomes of grade IV elementary school students. Based on several previous studies, the difference with this study is in the material taught to students and the images used as student learning motivation. From the description above, the purpose of the study is to determine the application of image media in science learning in improving the learning outcomes of grade IV elementary school students.

METODE

This study uses a qualitative research method with the type of research being Classroom Action Research (CAR). The purpose of CAR is to be able to solve problems that occur in the classroom and to be able to improve the quality of classroom learning practices continuously and also to improve the relevance of education (Lafendry, 2023). The location of the study was at SDN Kampung Besar II, Teluknaga District, Tangerang Regency . The research subjects were grade IV elementary school students, with a total of 35 students consisting of 20 boys and 15 girls. Data collection techniques used observation and interviews. The data sources used in the study came from primary data sources, namely data sources taken directly from the research subjects. The data sources used include observation, interviews, and documentation. While the data collection instruments used were observation sheets , written tests, and documentation.

The research procedure uses the Kemmis and Taggart model which consists of two cycles where each cycle consists of four stages, namely planning, implementation, observation and reflection (Wabdaron & Reba, 2020). In the planning stage, the researcher identifies problems that arise by observing directly in the classroom in the pre-cycle period. Then make preparations, namely the learning implementation plan, observation sheets and tests. In the observation stage, the researcher observes the application of image media in learning and the acquisition of student learning outcomes from the test. The reflection stage concludes from the data obtained. The research reached cycle II because the results of learning in science have increased so that it does not require follow-up in the next cycle. The following is a flow diagram of classroom action research, namely:

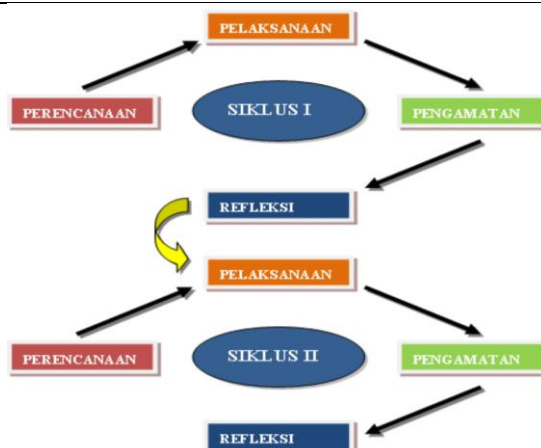


Figure 1. PTK Implementation Flow

HASIL DAN PEMBAHASAN

In the planning stage of cycle I and cycle II, the researcher prepares teaching materials such as syllabus and lesson implementation plan. In the early stages, the teacher designs the syllabus and RPP for learning activities. After that, the teacher prepares the science teaching materials that will be taught to students in teaching and learning activities. After the learning activities are completed, the teacher prepares reflection and observation sheets to find out the shortcomings and advantages that occurred during the learning that has taken place.

In the implementation stage of the action in cycle I and cycle II, it includes initial, core and final activities. The initial activities carried out by the researcher were greeting students, inviting students to pray according to their respective beliefs, asking how students were and checking student attendance. Providing motivation to students and giving encouragement so that students were more enthusiastic about learning. After that, reading the learning objectives and giving light questions to start the lesson. The teacher delivers the learning and relates it to previous learning. In the core activity, the teacher explains the material in the science lesson. Furthermore, the teacher also gives students the opportunity to read the material in the science lesson. Then, the teacher divides students into 3 groups of 4-5 members in each group. Furthermore, the teacher distributes the question sheets and distributes pictures of dances and asks students to answer questions about where the dances come from which are listed on the sheet. In this activity, students discuss to complete the task. Then, students collect the question sheets that have been answered to the teacher. Furthermore, in the final activity, the teacher and students together conclude the learning material and ask students again about today's learning. Then the teacher says hello.

At the observation stage, based on the data obtained, the results of learning science after the application of image media in cycle I and cycle II showed an increase compared to the pre-cycle. The increase in learning outcomes is presented in the following:

Table 1. Recapitulation of Student Learning Outcomes in Cycles I and II

Information	Cycle I	Percentage	Cycle II	Percentage
Completed	18	51.00%	28	80.00%
Not Completed	17	49.00%	7	20.00%
Amount	35	100%	35	100%

Based on the observation results in the table above, cycle I there were 18 students who completed with a percentage of 51.00% and 17 students who did not complete with a percentage of 49.00%, student learning outcomes in cycle I were still very low because many students did not understand the lesson so that action was needed in cycle II. Cycle II there were 28 students who completed with a percentage of 80.00% and 7 students who did not complete with a percentage of 20.00%, student learning outcomes in cycle II had increased because most students' learning outcomes were above the KKM.

Based on the results of student learning in cycle I and cycle II, there was an increase in learning outcomes after applying picture media to the subject of science as evidenced by the average value of cycle I obtained 85 with a percentage of 50%. While in cycle II obtained an average value of 90 with a percentage of 80%. So it can be concluded that from cycle I and cycle II there was an increase in learning outcomes. The following is a comparison of the graphs achieved in cycle I and cycle II.

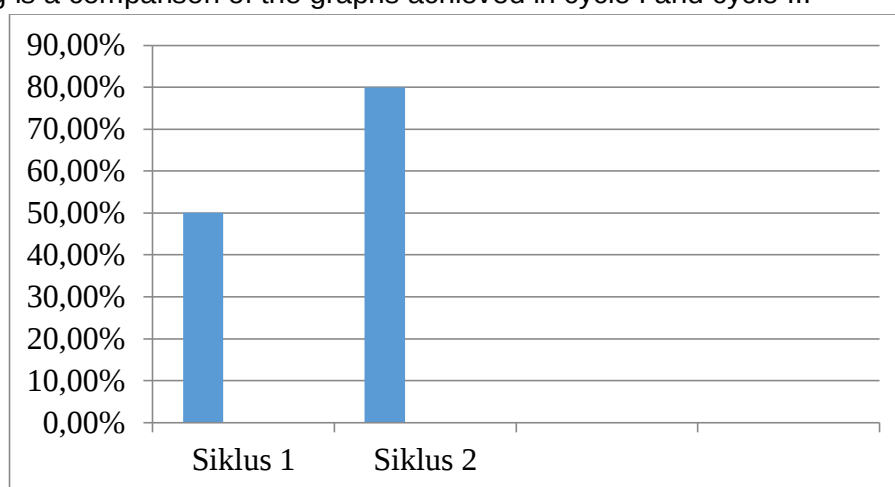


Figure 2. Comparison of Percentages of Cycle 1 and Cycle 2

Based on the graph above, it was found that the number of students who obtained complete learning outcomes continued to increase from cycle I and cycle II. In cycle I, it only reached a score of 50%. This is because the learning process has not implemented the right learning media, namely image media. In contrast to cycle II, after the application of image media, almost all students obtained complete learning outcomes with a score of 80%. The use of image media is able to overcome student learning outcomes. This means that by learning using the right learning media such as image media, students can build knowledge and master the material very well.

DISCUSSION

In this study, planning and implementation were carried out in two cycles to evaluate the improvement of student learning outcomes through the application of image media in the subject of science and natural sciences. In the observation stage, the data on the results of learning science and natural sciences showed an increase after the application of image media in cycles I and II. Based on the learning outcome table, in cycle I there were 18 students who completed the course with a percentage of 51% and 17 students who did not complete it with a percentage of 49%. Student learning outcomes in cycle I were still very low because many students did not understand the lesson so that action was needed in cycle II. In cycle II, there were 28 students who completed the course with a percentage of 80% and 7 students who did not complete it

with a percentage of 20%. Student learning outcomes in cycle II have increased because most students have achieved the KKM.

The average score in cycle I was 85 with a completion percentage of 51%, while in cycle II the average score increased to 90 with a completion percentage of 80%. The comparison graph of the percentage of learning outcomes shows that the number of students who obtained complete learning outcomes increased from cycle I to cycle II. In cycle I, student learning outcomes only reached a score of 51% because the learning process had not implemented the right learning media. However, after the application of image media in cycle II, almost all students obtained complete learning outcomes with a score of 80%.

The use of image media has been proven effective in improving student learning outcomes. Image media helps students understand and master the subject matter more easily. Through learning that uses appropriate learning media such as image media, students can build knowledge and master the material better. The significant increase in learning outcomes from cycle I to cycle II shows that image media can be one solution to overcome students' learning difficulties in the subject of science.

This is also similar to research (Udju et al., 2023) image media can be seen that there is an increase in student learning outcomes in the classroom. This can be seen from the changes and improvements from pre-cycle, to cycle I and cycle II. Learning outcomes in the cognitive domain at the pre-cycle stage reached 43.75%, cycle I increased by reaching 62.5% and continued to increase in cycle II reaching 87.5%. While the results of the psychomotor domain in cycle I reached 47%, in cycle II reached 88%. when in the learning process the teacher gives encouragement and appreciation to each student who can complete the tasks well and is able to answer questions. This is what makes students more active and more enthusiastic when participating in learning in class. With this motivation, students will feel more appreciated and continue to be motivated to learn.

Other research was also conducted by (Hambarandi et al., 2023) there is an increase in student learning outcomes through image media. This can be seen from the changes and improvements from the pre-cycle, to cycle I and cycle II. Learning outcomes in the cognitive domain at the pre-cycle stage reached 48%, cycle I experienced an increase by reaching 88% and continued to increase in cycle II reaching 100%. While the results of the psychomotor domain in cycle I reached 69.2%, in cycle II reached 86.4%. Furthermore, the research (Nisa et al., 2023) with the presence of image media can improve learning outcomes in the water cycle material. This is shown by the increase in the number of students who completed from pre-cycle to cycle II. Then the research (Ketuko et al., 2023) by using the application of image media on plant parts and their functions can improve student learning outcomes. This can be seen from the learning outcomes of students in cycle I obtaining a total value of 876 with an average of 73 with a classical completion percentage of 41.66% and cycle II obtaining a total value of 1092 with an average value of 91 with a classical completion percentage of 100%.

Overall, this study confirms that the use of image media as a learning aid can help students understand and master the subject matter more easily, thereby significantly improving their learning outcomes. The improvement seen from cycle I to cycle II indicates that image media is an effective solution to overcome students' learning difficulties in the subject of science. The study has several limitations that need to be considered. First, the focus of the study is limited to one type of learning media, namely image media, so it does not compare other relevant learning media. Second, the subjects

of this study are limited to one class with a relatively small number of students. Third, the evaluation of learning outcomes focuses more on the cognitive aspect, while the affective and psychomotor aspects are less explored. Finally, this study does not explain in detail the learning process and interactions between teachers and students during the application of image media, which are important for understanding class dynamics and the role of teachers in supporting the use of these media.

KESIMPULAN

The application of image media in science learning for grade 4 of SDN Kampung Besar II can improve student learning outcomes. This can be proven from the learning outcomes obtained by students in cycle I, and cycle II experienced an increase. In cycle I, there were 18 students who completed the course with a percentage of 51.00% and 17 students who did not complete it with a percentage of 49.00%, student learning outcomes in cycle I were still very low because many students did not understand the lesson so that action was needed in cycle II. In cycle II, there were 28 students who completed the course with a percentage of 80.00% and 7 students who did not complete it with a percentage of 20.00%, student learning outcomes in cycle II had increased because most students' learning outcomes were above the KKM.

Through image media, students are able to master the material presented individually. With the increase in student learning outcomes, indirectly student learning motivation also increases because it can be seen from the student learning outcomes which are quite satisfactory. There are several suggestions and recommendations for further research. First, further research can consider comparing the effectiveness of various types of learning media, such as videos, educational games, or interactive digital media, in addition to image media, to find out the most effective method in improving student learning outcomes. Second, to increase external validity and generalizability of findings, research should be conducted with larger subjects and cover several different classes or schools, so that the results can be applied more widely. Third, in addition to cognitive aspects, further research should also explore and measure the impact of image media on affective aspects (eg, student motivation, interest, and attitudes) and psychomotor aspects (eg, practical skills), to get a more holistic picture of the effectiveness of image media. Finally, providing training to teachers on how to effectively use image media in learning can be the focus of further research, to ensure that teachers have the skills and knowledge needed to utilize the media optimally.

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