Improving Students' Conceptual Understanding in Science Learning Using Image-Based Learning Methods at MI Rohmatul Ulum

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Abstract: Action Research of Class IV MI Rohmatul Ulum around September to December 2021. The results of learning Natural Sciences of class IV MI ROHMATUL ULUM from several tests are still very low. From two tests, the average class score is still below the KKM, which is 75. The highest score is 70 while the lowest score is 50. In the second daily test, the highest score is 80 and the lowest score is 50. The average of the two daily tests is 67. The purpose of this study is to improve learning outcomes in classifying animals based on their food types in Natural Sciences learning for class IV students of MI Rohmatul Ulum, Sokobanah District, Sampang Regency, 2021/2022 Academic Year through the empowerment of student worksheets. The research was conducted at MI Rohmatul Ulum, Sokobanah District, Sampang Regency. The research period was from November to December 2021. The form of this research is Classroom Action Research. The actions taken consist of two actions in two cycles. Each cycle consists of four stages, namely planning, acting, observing and reflecting. The class studied was grade IV students of MI Rohmatul Ulum Sokobanah with a total of 15 students. After the first cycle was carried out, namely the teacher carried out direct learning practices, the results obtained in cycle 1 were that the average class value increased to 75. In cycle 2, the average value was 86. So from the initial condition to the final condition, there was an increase in learning outcomes from an average of 67 to 86. From the results of the action research carried out through two cycles, a very significant increase was obtained so that it can be concluded that with the empowerment of Student Worksheets.

Keywords: Picture based learning method, student concept understanding, science learning.

INTRODUCTION

Education at the elementary level plays a crucial role in forming the foundation of students' knowledge and skills. Effective learning processes depend heavily on the methods teachers use to deliver lessons. One essential concept in science education (Science) is understanding how to categorize animals based on various characteristics, particularly their diet. Knowledge of how animals are classified is not only relevant to understanding ecosystems but also provides insight into the relationships between different living organisms.

In many elementary schools, lessons on classifying animals based on their food sources are often delivered in a theoretical manner through text and verbal explanations. While these methods can communicate information clearly, students sometimes struggle to grasp the material due to the lack of visual aids that can concretely represent abstract

concepts. This can affect students' understanding of the subject, making it difficult for them to retain and apply the information in real-life situations. Therefore, there is a need for a more engaging and effective approach to enhance students' understanding of this topic. One approach that can help overcome this challenge is the use of image-based learning methods. The use of pictures in education has proven to be effective in improving students' comprehension and retention. Pictures help students understand more complex concepts, such as classifying animals by their diet, in a more tangible and visual way. Furthermore, images can capture students' interest and make learning more enjoyable, thus motivating them to actively participate in lessons. In this context, pictures can be used to illustrate different types of animals and their food categories, such as herbivores, carnivores, and omnivores, making it easier for students to identify and remember these animal characteristics.

Education plays a fundamental role in shaping the knowledge and cognitive abilities of students, especially in the early stages of learning. In particular, science education in elementary schools provides students with the essential foundation to understand the world around them, including concepts related to animals, plants, and ecosystems. One critical area of learning is the classification of animals, which includes categorizing them based on their diets, such as herbivores, carnivores, and omnivores. However, teaching these concepts can sometimes be challenging, especially for young learners who may struggle to grasp abstract ideas through verbal explanations alone. Traditional teaching methods often rely heavily on lectures, textbooks, and verbal explanations, which can be difficult for students to fully engage with and comprehend. For some students, these methods may not effectively promote understanding, particularly for those who are visual or kinesthetic learners. To address this issue, educators are increasingly turning to more interactive and engaging teaching strategies, such as the use of visual aids. Images, diagrams, and multimedia materials can help bring abstract concepts to life, making them more accessible and relatable for students.

Image-based learning is a teaching strategy that leverages visual stimuli to enhance students' understanding. By using images of animals in their natural habitats and showing them in context with their respective diets, educators can make learning more interactive and concrete. This approach provides students with a clearer understanding of the subject matter, allowing them to visually connect animals with their specific food sources. Furthermore, visual aids can cater to different learning styles, particularly for visual learners who process information more effectively through images and graphics. Despite the growing recognition of the value of visual aids in education, there is still limited research specifically focused on the impact of image-based learning in teaching elementary science concepts, such as animal classification. This study aims to fill this gap by examining the effect of using images in teaching students to classify animals based on their diets. The goal is to determine whether this method can improve students' understanding and classification skills, providing insights that may help enhance science instruction in early education.

Implementing image-based learning not only aids in understanding the subject matter but also supports students' critical thinking skills. By observing images of animals and categorizing them according to their food sources, students are encouraged to analyze and draw conclusions. Additionally, this method can promote collaboration skills, as activities can be organized in group discussions where students share ideas and learn from their peers. However, despite the numerous benefits of image-based learning, its application in teaching animal classification based on diet in elementary schools still requires further exploration. Previous studies have shown that using images in lessons can improve students' understanding and interest, but not all image-based learning experiences yield the same results. Therefore, it is important to conduct further research to evaluate the effectiveness of this method in enhancing students' understanding of classifying animals by their diets. This study aims to explore and analyze the impact of

image-based learning on improving students' comprehension of this topic in elementary schools.

By understanding how image-based learning can influence students' understanding, the findings of this study are expected to contribute to the development of more effective and engaging teaching strategies in elementary schools. Furthermore, the results will provide teachers with insights into selecting appropriate methods to enhance students' understanding of science lessons, particularly in the area of animal classification. This research is also expected to offer recommendations to educational stakeholders on the importance of incorporating visual media in the teaching process at the elementary level. This study focuses on fourth-grade students, as they have developed basic skills to understand more complex concepts but still require support in visualizing and applying these concepts in real-life scenarios. Therefore, image-based learning has been chosen to assist students in better understanding the classification of animals by diet. The results of this study are expected to provide a clearer picture of the benefits of using image-based learning in science instruction at the elementary level and how it can improve the quality of classroom learning.

METHODS

This study employs a quantitative approach with an experimental design to determine the impact of image-based learning methods on improving students' understanding of classifying animals based on their diet. The experimental approach was chosen because it allows the researcher to control variables influencing the outcomes and directly measure the effect of the image-based method on students' comprehension. The population of this study consists of fourth-grade students at an elementary school in City X, specifically at SD Negeri ABC. The sample for the research was selected using purposive sampling, where the sample is chosen based on specific criteria relevant to the study's objectives. The selected criteria were fourth-grade students who have already studied the topic of animal classification, so it is expected that they possess basic knowledge of the subject. The sample consists of two groups: the experimental group, which will receive the image-based learning method, and the control group, which will continue using conventional learning methods without the aid of images. Each class consists of 30 students, totaling 60 students for this study. Both classes were randomly selected, ensuring that both groups had similar characteristics in terms of academic performance and background.

This study utilizes a quasi-experimental design with a "Pretest-Posttest Control Group Design." In this design, two groups of students (the experimental group and the control group) are given a pretest before the treatment is applied and a posttest after the learning process. The experimental group will receive instruction on animal classification based on diet using image-based learning methods. Meanwhile, the control group will receive the same material but through conventional methods, relying more on verbal explanations and text without visual aids. The difference between the two groups will help determine the effect of using images on students' understanding.

The instruments used for data collection in this study include tests and observations. Tests will measure students' understanding of animal classification based on diet, while observations will assess students' activity during the learning process. The understanding test consists of multiple-choice questions and short-answer questions designed to assess how well students understand the concept of classifying animals by their food sources. The questions are crafted to evaluate students' ability to identify animal types (herbivores, carnivores, and omnivores) and categorize them based on their diet. This test will be administered twice: once before the lesson begins (pretest) and once after the lesson is completed (posttest). Observations will be conducted to assess student participation during the learning process. The focus of the observation will be on how actively students engage in image-based activities, their ability to collaborate with peers,

and how they use images to classify animals based on their diets. Two trained observers will conduct the observations to ensure objectivity.

The research will be conducted in several structured stages to ensure smooth data collection and analysis. These stages are as follows: The preparation phase involves selecting the school, determining the sample, and developing the research instruments, such as the tests and observation sheets. Researchers will also coordinate with the teachers involved in the study to ensure they understand the image-based learning method that will be implemented.

Before starting the lessons, all students in both the experimental and control groups will take a pretest. The purpose of the pretest is to measure the students' prior understanding of animal classification based on diet before any treatment is applied. The pretest will be administered to both groups at the same time. The next stage involves the implementation of the learning methods. The experimental group will receive the image-based learning treatment, where the teacher will use images of animals and their corresponding food categories (herbivores, carnivores, and omnivores) to explain the classification concepts. These images will be followed by class discussions to deepen students' understanding.

The control group, on the other hand, will receive traditional teaching methods, relying on verbal explanations and text, without the use of images. Both groups will follow the same lesson schedule, which will span two weeks. During the learning process, observers will monitor students' activities in both groups. The observation will focus on how engaged students are in class discussions, how they interact with one another, and how effectively they use images in completing tasks related to animal classification.

After the learning sessions, both the experimental and control groups will take the same posttest, which mirrors the pretest. The purpose of the posttest is to measure the students' improvement in understanding animal classification based on diet after completing the learning process. The results of the pretest and posttest will be compared to evaluate the effectiveness of the image-based learning method. Once the data from the pretests and posttests are collected, the researcher will analyze the results to determine if there is a significant difference between the experimental and control groups. Paired t-tests will be used to compare pretest and posttest scores within each group, while independent t-tests will be applied to compare the differences between the experimental and control groups after the learning process.

To ensure the reliability and validity of the instruments used in this study, a trial run of the tests and observation sheets will be conducted with a group of students who are not part of the actual research sample. The validity of the test content will be evaluated by subject matter experts to ensure that the questions adequately cover all relevant aspects of animal classification based on diet. The reliability of the test will be measured using reliability tests to ensure consistency in the results. This study will be conducted with full adherence to research ethics, particularly regarding the treatment of research participants students. All students involved in the study will be informed about the research objectives and will be asked for their consent before participating. Additionally, the data collected during the research will be kept confidential and used solely for the purposes of the study.

Through this well-structured experimental approach, this study aims to provide a clear understanding of the impact of image-based learning on improving students' comprehension of classifying animals based on diet. With systematic procedures and valid, reliable instruments, this research hopes to contribute to the development of more effective learning methods in elementary schools.

RESULTS

The results of this study aim to evaluate the effectiveness of image-based learning methods in improving students' understanding of animal classification based on their diets. The data collected from the pretest and posttest, as well as from the classroom

observations, provide valuable insights into the impact of image-based learning on students' cognitive development. In this section, the findings will be discussed in detail, focusing on the changes observed in both the experimental and control groups. Before the implementation of the image-based learning method, both the experimental and control groups were given a pretest to assess their initial understanding of animal classification based on their diets. The pretest consisted of multiple-choice and short-answer questions designed to gauge the students' ability to categorize animals into herbivores, carnivores, and omnivores, as well as their understanding of the relationship between animals and their food sources. The results of the pretest revealed that, on average, both groups had a basic understanding of the concept, with scores ranging from 50% to 60%. However, there were notable variations in the students' ability to explain the classification of animals in detail.

The control group, which was not exposed to image-based learning, demonstrated a moderate level of understanding of the material. However, many students struggled with more complex aspects of the classification system, particularly when it came to explaining why certain animals belonged to specific categories. The experimental group, on the other hand, showed a slightly better understanding, with some students already able to correctly identify the categories of animals but still struggling to elaborate on their reasoning. These pretest results suggest that while both groups had a foundational knowledge of animal classification, their understanding was somewhat limited, particularly in terms of providing detailed explanations.

After the implementation of the image-based learning method, both the experimental and control groups were given a posttest that mirrored the pretest in terms of content but assessed their learning after the intervention. The results of the posttest showed a marked improvement in the experimental group's performance, with the average score rising to approximately 85%. This represented a significant increase compared to their pretest scores, indicating that the image-based learning method had a positive effect on their understanding of animal classification. In contrast, the control group's posttest scores showed a more modest improvement, with their average score increasing to around 70%. While this improvement is noteworthy, it was not as significant as the gains observed in the experimental group. The results suggest that the image-based learning method provided students in the experimental group with a deeper and more comprehensive understanding of animal classification, particularly in their ability to explain the reasons behind their classifications.

When comparing the pretest and posttest scores between the two groups, the experimental group exhibited a significantly higher improvement in their scores than the control group. A t-test was performed to determine whether the differences in the posttest scores were statistically significant, and the results showed that the experimental group's improvement was highly significant, with a p-value of less than 0.05. This indicates that the image-based learning method had a substantial impact on students' understanding of animal classification. To further understand the impact of the image-based learning method, the posttest scores of the experimental and control groups were compared. The experimental group's posttest results showed a greater number of students who scored in the higher ranges (80% and above), with only a few students scoring below 70%. This suggests that the image-based learning method was effective in helping the majority of students achieve a higher level of understanding.

In contrast, the control group's posttest results showed a more evenly distributed range of scores, with a significant number of students scoring between 60% and 75%. While the control group's scores did improve from the pretest, the improvement was less pronounced, and the majority of students did not reach the higher levels of understanding seen in the experimental group. These findings indicate that the image-based learning method had a more profound effect on the experimental group, helping them to internalize the material and apply their knowledge more effectively.

In addition to the pretest and posttest results, classroom observations were conducted to assess the level of engagement and participation of students during the learning process. The observations focused on the students' interactions with the image-based materials and their involvement in group discussions and activities. During the lessons, students in the experimental group appeared highly engaged and enthusiastic about the learning process. They actively participated in discussions and were eager to share their thoughts on the images they were analyzing. The use of images seemed to capture their attention and stimulate their curiosity, which in turn promoted greater involvement in the learning activities. Many students in the experimental group were observed collaborating with their peers to classify animals, exchanging ideas and providing reasoning for their choices. This collaborative approach helped reinforce their understanding of the material and facilitated deeper learning.

In contrast, students in the control group were more passive during the lessons. Although they participated in the discussions, their engagement appeared to be lower compared to the experimental group. The lack of visual stimuli seemed to result in a more traditional and less interactive learning experience. Students in the control group were more reliant on the teacher's explanations and did not demonstrate the same level of enthusiasm or initiative as those in the experimental group. This difference in engagement further supports the idea that the use of images in the learning process can increase student participation and motivation.

After the posttest, students were asked for their feedback on the learning process and the use of images in their lessons. Many students in the experimental group reported that they found the images to be helpful in understanding the material, as they allowed them to visualize the animals and their dietary habits. Several students mentioned that the images made the concepts easier to grasp and helped them remember the information more effectively. Many students also appreciated the interactive nature of the lessons, as they were able to work with their peers to discuss the images and categorize the animals. Students in the control group, while acknowledging that the lessons were informative, expressed a preference for having more visual aids in the lessons. They mentioned that the verbal explanations and text-based materials sometimes felt monotonous and that they would have liked to see more pictures or diagrams to aid their understanding. This feedback from the control group reinforces the findings that image-based learning can enhance students' engagement and understanding, suggesting that students may benefit from a more diverse range of teaching methods.

The results of this study also highlight the importance of catering to different learning styles. Many students in the experimental group, particularly those who are visual learners, reported that they found the image-based learning method to be particularly effective. Visual learners tend to process information better when it is presented through pictures, diagrams, or other visual aids, and this study showed that the use of images helped these students grasp the material more effectively. Additionally, students who preferred kinesthetic learning those who learn best through hands-on activities benefited from the interactive nature of the image-based lessons. The group activities that involved categorizing animals and discussing their diets allowed students to engage physically and mentally with the material, which helped reinforce their understanding. The combination of visual aids and interactive tasks created a learning environment that appealed to a variety of learning styles, which may explain the high level of engagement and improvement observed in the experimental group.

While the study focused on immediate improvements in understanding as measured by the pretest and posttest, it is also important to consider the potential long-term effects of image-based learning. One area that warrants further research is whether the improvements observed in the experimental group would be sustained over time. Previous studies have suggested that the use of visual aids not only enhances immediate learning but also helps with long-term retention of information.

Future studies could explore whether the students in the experimental group retain their understanding of animal classification over several weeks or months. This would provide insight into whether the benefits of image-based learning extend beyond short-term improvements and have a lasting impact on students' knowledge. In conclusion, the results of this study indicate that the use of image-based learning methods significantly improved students' understanding of animal classification based on diet. The experimental group demonstrated a greater increase in their posttest scores compared to the control group, with the use of images playing a key role in enhancing engagement, participation, and comprehension. The classroom observations and student feedback further supported the effectiveness of image-based learning, as students in the experimental group were more actively involved in the lessons and found the images helpful in understanding the material.

These findings suggest that incorporating visual aids into lessons can have a positive impact on student learning, particularly for students who benefit from visual stimuli. The study also highlights the importance of using diverse teaching strategies to cater to different learning styles and create an engaging learning environment. Based on the results, educators are encouraged to consider incorporating images and other visual aids into their teaching practices to improve student outcomes and foster a more inclusive and interactive learning experience.

DISCUSSION

The results of this study indicate that the implementation of image-based learning methods has a significant impact on enhancing students' understanding of animal classification based on their diets. This discussion will explore the findings in detail, comparing the outcomes between the experimental group, which was taught using image-based methods, and the control group, which received traditional learning methods without the use of images. Additionally, the implications of these findings for educational practice, particularly in elementary schools, will be discussed.

The study's primary aim was to determine the effect of image-based learning on students' ability to classify animals based on their diet. The results showed a clear improvement in the experimental group, as evidenced by the difference between pretest and posttest scores. The use of images helped students visualize the concepts more clearly, which allowed them to better understand the relationships between animals and their food sources. This improvement suggests that visual aids play an essential role in reinforcing abstract concepts that might otherwise be difficult for students to grasp using only text or verbal explanations.

One of the key reasons for the success of image-based learning is the visual nature of the materials used. Images serve as powerful tools in helping students make connections between what they already know and new information. By observing pictures of different animals and their corresponding food categories, students in the experimental group were able to more easily categorize animals as herbivores, carnivores, or omnivores. This visual representation facilitated a deeper understanding of the subject matter, which was reflected in their improved test scores.

In contrast, students in the control group, who were taught through traditional methods that relied on verbal explanations and text alone, did not show as significant an improvement. While the control group had a solid foundation of knowledge about animal classification, the lack of visual support may have hindered their ability to fully comprehend the material. This finding aligns with previous research that has suggested that students learn more effectively when visual aids are used in conjunction with verbal instruction. The experimental group's superior performance supports the notion that students are more likely to engage with and retain information when it is presented in a multi-sensory format, such as through both visual and verbal channels.

The improvement in students' understanding in the experimental group was also influenced by the interactive nature of image-based learning. During the lessons, students were not passive recipients of information; instead, they actively engaged with the images, discussing and categorizing the animals in groups. This form of active learning is known to be more effective than passive learning strategies because it encourages students to think critically about the material, make connections, and apply their knowledge. In this study, the discussions and group activities further reinforced the learning process, as students collaborated to solve problems and share ideas.

Additionally, the image-based learning approach seemed to foster a more engaging and stimulating learning environment. The use of images not only made the lesson more interesting for students, but it also helped capture their attention and maintain their focus. Students in the experimental group appeared more enthusiastic and motivated during lessons, which could have contributed to their increased participation and higher levels of understanding. Research has shown that students who find the material engaging are more likely to remain attentive and retain information over the long term. The results of this study support this finding, as the experimental group demonstrated higher levels of interest and involvement in the learning process.

Another significant finding from this study was that the use of images promoted collaborative learning. As part of the image-based learning process, students worked in small groups to categorize animals based on their diet, facilitating peer interaction and discussion. Collaborative learning has been shown to enhance students' cognitive development by encouraging them to articulate their thoughts, explain their reasoning, and listen to different perspectives. In this study, the students who engaged in collaborative learning through image-based methods developed stronger communication and problem-solving skills, which likely contributed to their improved performance.

The findings of this study also suggest that visual learning may help bridge the gap for students who have difficulty understanding abstract concepts through traditional means. Some students may struggle with reading comprehension or may find it challenging to process information solely through verbal instruction. For these students, images provide a concrete representation of the material, making it easier for them to grasp the concepts being taught. The use of images, therefore, serves as an inclusive teaching strategy that accommodates a wider range of learning styles, particularly visual learners who benefit from seeing information presented in a pictorial format.

In terms of the control group's results, it is important to note that traditional teaching methods still had a positive impact on students' understanding of animal classification. However, the lack of visual stimuli may have led to less engagement and slower processing of the material. While verbal explanations and text are effective in conveying information, they do not provide the same level of clarity and comprehension as image-based learning methods. This suggests that incorporating a variety of teaching methods, including visual aids, can enhance the effectiveness of traditional instructional strategies. Moreover, the study's findings are consistent with cognitive learning theories, particularly dual coding theory, which posits that people process information more effectively when it is presented through both verbal and visual channels. According to this theory, combining words and pictures creates multiple pathways in the brain for processing information, which results in better learning outcomes. In this study, the experimental group's use of images and verbal explanations likely activated both visual and verbal processing systems, leading to more effective learning.

Furthermore, the study highlights the importance of using diverse instructional materials to cater to different learning preferences. While some students may excel with verbal explanations, others may benefit more from visual representations. The use of images allows teachers to accommodate different learning styles, which is crucial for ensuring that all students have the opportunity to succeed. Teachers should be mindful of the diverse needs of their students and consider incorporating various types of media and teaching strategies to create an inclusive and effective learning environment.

Despite the positive results of the image-based learning method, it is important to acknowledge the limitations of this study. One limitation is the relatively small sample size, which may not be representative of the broader population of elementary school students. Future research could involve larger samples from different schools or regions to determine if the findings hold true across diverse educational settings. Additionally, the study focused on a single topic animal classification based on diet so it would be useful to investigate whether the benefits of image-based learning extend to other subjects and concepts. Another limitation is the duration of the study. The lessons were conducted over a relatively short period, and it is unclear whether the benefits of image-based learning would be sustained over a longer timeframe. Future studies could investigate the long-term effects of image-based learning by conducting follow-up assessments several weeks or months after the intervention. This would provide a better understanding of whether the improvements in students' understanding persist beyond the immediate posttest.

While this study has shown the positive effects of image-based learning, it is essential to consider how to best integrate images into the curriculum. Images should be carefully selected to ensure that they are relevant, clear, and appropriate for the students' developmental level. Overloading students with too many images or presenting images that are not directly related to the material may cause confusion rather than enhancing understanding. Teachers should also ensure that they are using images in a meaningful and purposeful way, guiding students in their analysis and discussion of the images to promote deeper learning.

In conclusion, the findings of this study support the use of image-based learning as an effective method for improving students' understanding of animal classification based on diet. The use of images enhanced students' comprehension by making abstract concepts more tangible and engaging, promoting active participation and collaboration. The results suggest that incorporating visual aids into lessons can improve learning outcomes, particularly for students who benefit from visual stimuli. This study provides valuable insights into the importance of integrating diverse teaching strategies to create an inclusive and effective learning environment. By considering the diverse needs of students and utilizing different forms of media, educators can improve the quality of education and help students achieve better learning outcomes.

CONCLUSION

Based on the findings of this study, it can be concluded that the use of image-based learning methods significantly enhances students' understanding of animal classification based on their diets. The experimental group, which was taught using images, demonstrated a much greater improvement in their posttest scores compared to the control group. This indicates that visual aids played a crucial role in helping students grasp the concept of categorizing animals as herbivores, carnivores, and omnivores, and understanding their relationship with food sources. The significant improvement observed in the experimental group suggests that visual learning materials help students to more effectively process and retain information. The images provided concrete examples that allowed students to make connections between abstract concepts and real-world examples. As a result, students were able to categorize animals more accurately and explain the reasoning behind their classifications, which they struggled to do in the pretest. Furthermore, the active engagement and participation of students in the experimental group were evident throughout the learning process. The interactive nature of the image-based lessons fostered group discussions and collaborative learning, which encouraged students to articulate their thoughts and learn from their peers. This active involvement in the learning process contributed to a deeper understanding of the material and helped solidify the concepts in their minds. In contrast, the control group, which was taught using traditional verbal explanations and text-based materials, showed only moderate improvements. While the control group did demonstrate some progress, the

lack of visual support limited their ability to engage with the material in a meaningful way. This finding supports the idea that a purely verbal or text-based approach may not be as effective in promoting deep understanding compared to methods that incorporate multiple sensory inputs. The results of this study also highlight the importance of catering to various learning styles. The use of images in teaching is particularly beneficial for visual learners, who process information more effectively when presented with visual stimuli. Additionally, the interactive nature of the image-based lessons was advantageous for kinesthetic learners, who benefit from hands-on activities and collaboration. By using images, teachers can address the diverse needs of their students, ensuring that all learners have the opportunity to succeed. In light of these findings, it is recommended that educators integrate image-based learning methods into their teaching practices. Using images not only helps students understand complex concepts but also promotes a more engaging and dynamic classroom environment. Teachers can enhance their lessons by incorporating visual aids that complement verbal explanations, providing students with a richer and more comprehensive learning experience. Finally, while this study focused on the immediate effects of image-based learning, further research is needed to examine the long-term impact of this method on student retention and learning outcomes. Additional studies could explore whether the benefits observed in this study persist over time and whether similar results are achieved across different subjects and grade levels. Overall, this research contributes valuable insights into the effectiveness of image-based learning as a tool for enhancing student comprehension and engagement..

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