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Improving Student Learning Activities Through The Use Of Concrete Media In Natural And Social Science Subjects

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Abstract **:** *This study aims to enhance the learning activity of fifth-grade students at SDN 4 Sumbersuko through the use of concrete media in Natural and Social Sciences (IPAS) lessons with the topic of magnetic force.The research was conducted using the Classroom Action Research (CAR) method, which consists of two cycles.Data were collected through observation, tests, and interviews, then analysed descriptively to measure the increase in student learning activity.This research involves 9 fifth-grade students as subjects.Data collection was carried out by analysing qualitative and quantitative data from observation sheets, learning activity tests, and interviews during the learning process.The success indicator set with a target of 80 percent learning activity completion.The research results show that the use of concrete media significantly increases student learning activity.At the pre-cycle stage, student learning activity only reached 52 percent.After the use of concrete media, student learning activity increased to 70 percent in Cycle I and reached 89 percent in Cycle II.This research proves that concrete media can consistently encourage student learning activity, especially in aspects of active participation, student interaction, involvement in discussions, and task completion ability.These results indicate that the use of concrete media in IPAS learning with magnetic force material is effective in enhancing the learning activity of fifth-grade students at SDN 4 Sumbersuko.*

Keywords: *Learning Activity, Magnetic Style, Learning.*

INTRODUCTION

Learning activity is one of the important aspects in achieving optimal learning outcomes, especially in the subjects of Natural and Social Sciences (IPAS). Student activity reflects their participation in the learning process, including asking questions, discussing, and participating in various learning activities. grade at SDN 4 Sumbersuko is still relatively low. Based on initial observations, most students only become passive listeners during the learning process. This is evident from the low student participation in discussion activities, the lack of courage among students to ask questions, and the minimal interaction between students and teachers as well as peers. monotonous and less engaging.

The topic of magnetic force is one of the important subjects in IPAS that discusses the interaction between objects with magnetic properties. This material requires concrete understanding so students can apply the concepts in their daily lives. However, the magnetic learning style is often conveyed verbally through lecture methods or using simple visual media such as pictures in textbooks. According to Hernawan (2019), abstract learning methods tend to make it difficult for students, especially at the elementary school age who find it easier to understand concepts through direct experience. The use of concrete media can be a solution to enhance student learning activity. Concrete media, such as magnetic props, allow students to conduct direct explorations,

enabling them to understand the properties and interactions of magnets in a tangible way. students.Concrete media can be used to help students understand abstract concepts, thereby increasing their understanding and interest in learning.Research conducted by Ardi (2011) shows that the use of concrete media in learning can increase student activity by up to 30% compared to conventional methods. In addition, concrete media can also facilitate students in understanding abstract concepts, making them easier to digest..

Previous research has proven the effectiveness of concrete media in increasing participation student.students.For example, research by Hidayati (2023) at SDN 4 Karanganyar found that the use of physical props in static electricity material can increase students' courage to ask questions and express opinions in class discussions.Furthermore, Fitria's (2023) research shows that concrete media can encourage students to be more courageous in presenting in front of the class because they have direct experiences that support their arguments.However, research on the application of concrete media in the magnet learning style, particularly in fifth-grade elementary school classes, is still limited. Previous studies generally focus on the aspect of conceptual understanding, but not many have highlighted learning activity as an indicator of learning success. This creates an imbalance in research, namely the need for an in-depth study on how the use of concrete media can enhance student learning activity on the topic of magnetic force.

Therefore, this research aims to fill that gap by focusing on increasing the learning activity of fifth-grade students at SDN 4 Sumbersuko through the use of concrete media in magnetism learning. The concrete media used will be designed to facilitate students to be more active in learning, such as through simple experiments and group activities. specifically on the topic of magnetic forces.By using concrete media, students are expected to be more active in asking questions, discussing, solving problems, and presenting their learning outcomes.In the end, this research is expected to make a tangible contribution to improving the quality of IPAS learning at the elementary school level, particularly in enhancing student engagement in abstract material.

In the end, this research is expected to make a real contribution to improving the quality of IPAS learning at the elementary school level, particularly in enhancing student learning activity on abstract material. Based on this background, this research has the main question: "How can the use of concrete media improve student learning activity on magnetic force materials in the 5th grade at SDN 4 Sumbersuko?"

Based on this background, this research has the main question: "How can the use of concrete media enhance student learning activity on the topic of magnetic force in the fifth grade at SDN 4 Sumbersuko?" This research is expected to provide practical solutions for teachers in designing more interactive and engaging learning, so that students can learn more actively and meaningfully.

RESEARCH METHODS

The type of research used in this study is classroom action research (CAR). According to Kemmis and McTaggart (1988), PTK is a research process conducted by educators regularly to address practical problems faced in the classroom and to improve the quality of their teaching practices through planning, action, observation, and reflection in a recurring cycle (Hanifah, 2014). directly, and continuously monitor the impact. This research was conducted in two cycles, where each cycle consists of four stages: (1) Planning, (2) Implementation, (3) Observation, and (4) Reflection.. This design is adopted to enable continuous evaluation and improvement in the use of concrete media in IPAS learning.

Figure 1.

FrameworkThinking

The subjects of this research are 9 fifth-grade students at SDN 4 Sumbersuko.Data were collected through observation, interviews, and documentation.This technique is used to observe student behaviour and engagement during the learning process.The data collected were analysed descriptively, both qualitatively and quantitatively.Qualitative analysis is used to describe students' responses to concrete media in depth, while quantitative analysis is used to measure the increase in students' learning activity from the pre-cycle to Cycle II.This quantitative data is calculated in the form of percentages and categories to show the level of student

learning activity achievement.The success indicator in this study is the achievement of 80% completion from students who demonstrate high learning activity.

RESULTS AND DISCUSSION

Classroom action research on the use of concrete diorama media in learning science on Magnetic Force material for class V at SDN 4 Sumbersuko began with a pre-cycle stage or assessment stage before the action using concrete diorama media was carried out. The results of the assessment at the pre-cycle stage are presented as follows:

Pre-cycle

In the pre-cycle, the researcher conducted a pre-test to see the initial abilities of students before concrete media was applied to the Natural and Social Sciences (IPAS) subject on Magnetic Force material for class V at SDN 4 Sumbersuko. This was done to determine students' ability to work together. There are five indicators assessed in the attitude of cooperation, namely: (1) Participating in learning tasks, (2) Participating in problem solving, (3) Dare to Ask (express opinions), and (4) Dare to appear in front of the class

The following table provides an overview of the results regarding the level of student activity in class V at SDN 4 Sumbersuko before the application of concrete media. The average value of students' activeness ability at the pre-action stage for each indicator can be seen in the following table:

Table 1. Results of Student Activeness in the Pre-Cycle

No	Assessment Indicator	Average Value
1	Participating in learning assignments	55%
2	Participating in problem solving	65%
3	Dare to ask questions (express opinions)	40%
4	Dare to appear in front of the	50%
	Total	52%

Table 1 displays the results of the pre-action study on student activeness in mathematics learning based on four indicators of student activeness. The following is an explanation of each indicator and the overall average value:

The indicator "participating in learning assignments" shows that 55% of students participate in learning assignments. This shows that more than half of the students are actively involved in carrying out the tasks given, although there is still room for increased participation. The indicator "participating in problem solving" shows that 65% of students participate in problem solving, a figure that is quite high compared to other indicators. This indicates that most students have a tendency to be actively involved in problem-solving activities that may be considered challenging and interesting.

In the indicator "dare to ask (express opinions)" only 40% of students dare to ask or express opinions. This figure is the lowest among all indicators, indicating that students' courage in expressing their thoughts in class still needs to be improved. The indicator "dare to appear in front of the class" shows that half of the students 50% dare to appear in front of the class, indicating that there is a balanced proportion between students who feel confident to appear and those who may still feel uncomfortable.

The average value of student activity from the four indicators is 52%. This indicates that in general, the level of student activity is at a low level in the subject of Science on the material of Magnetic Force. Although there is a positive tendency in terms of participation in problem solving, other aspects such as the courage to ask questions and full involvement in learning tasks still require more attention. These results indicate that there needs to be Actions that can increase student activity. This is done so that students are more interactive and support students to be more courageous in participating actively in class, such as through activities that encourage them to ask questions and appear in front of the class. Therefore, to improve student learning activity, researchers took action by implementing Concrete media in science learning on the material of Magnetic force. Based on the results of this pre-action stage, it can be seen that the level of student activity is still low. The presence of Concrete media in the next cycle is expected to increase student activity, especially in the ability to speak in front of the class, provide correct examples, and apply concepts in solving problems in front of the class, express opinions and ask questions. This also underlines the importance of using interactive and concrete media to improve the quality of learning abstract concepts such as force and magnetism.

Cycle I

In the planning stage, before compiling the learning tools, the researcher conducted an initial assessment to find out and understand the needs and characteristics of the students. The researcher used various assessment techniques, such as interviews, observations, and questionnaires, to identify students' learning difficulties in the Natural and Social Sciences subjects, especially the material on magnetic force. The data from this assessment became the basis for designing relevant and effective learning. Furthermore, the researcher set specific and measurable learning objectives, namely increasing students' learning activity through the use of concrete media. The media chosen were designed to support students' understanding of the concept of magnetic force, such as bar magnets, circular magnets, and everyday objects that are magnetic. This media is expected to trigger students' active involvement in learning. In addition, the researcher provided observation sheets, student worksheets (LKPD), and assessment instruments that were adjusted to the learning objectives. The learning process was carried out in two meetings. During the learning process, students were invited to do various practical activities using concrete media, such as testing the magnetic attraction of certain objects and making a simple compass. This media aims to attract students' interest while increasing their participation in the learning process. Cycle I is a research action after conducting a pre-cycle. In this first cycle, the researcher applied concrete media in the science learning of fifth grade students at SDN 4 Sumbersuko. The results of cycle I can be seen in table 2 below:

Table 2. Results of Student Activeness in Cycle I

No	Assessment Indicator	Average Value
1.	Participating in learning assignments	80%
2.	Participating in problem solving	90%
3.	Dare to ask questions (express opinions)	50%
4.	Dare to appear in front of the	60%
Total		70%

The results of Table 3 show the results of the study on student activeness after the application of concrete media in science learning on the material of force and magnetism for fifth grade students at SDN 4 Sumbersuko. The following is an explanation of each indicator of student activeness along with the overall average score:

The indicator "Participating in Learning Tasks" obtained a percentage of 80%, this shows that concrete media such as magnets, circular bar magnets, and everyday objects that are magnetic are used to involve students in learning tasks. During the activity, students were invited to test the magnetic force on various objects and make a simple compass. The use of LKPD designed for practical activities also helps students follow the learning process systematically. The findings above also show that most students seemed enthusiastic and actively participated in practical activities. They followed the teacher's instructions well, completed the tasks in the LKPD, and worked together in groups. Concrete media provides an interesting hands-on experience, thus encouraging students to be more involved in learning tasks. According to Pratiwi, (2023), concrete media can increase student involvement in learning tasks, especially in materials that require an understanding of abstract concepts such as magnetic force. Bruner's theory (1966) emphasizes that learning through direct manipulation (enactive) helps students understand concepts more deeply. This is in line with the results in class, where students find it easier to understand the concept of magnetic force through practical experience (Rusmiati, 2013).

The indicator "Participating in Problem Solving" obtained a percentage of 90%. These results indicate that most students are actively involved in discussions and collaborations to solve problems. They look confident in conveying their ideas in groups. Concrete media plays an important role in connecting theory with practice, making it easier for students to complete problem-based tasks. The above findings are in line with research by Setiawan et al. (2020) which found that the use of concrete media increased student participation in problem solving by up to 88%. Experiment-based learning motivates students to think critically and analytically. In addition, Vygotsky's Theory (1978) states that learning that involves social interaction, such as group discussions, encourages students' cognitive development. In this case, concrete media is an effective tool to facilitate this interaction. The indicator "Dare to Ask (Express Opinions)" obtained a percentage of 50%. In its application, teachers provide opportunities for students to ask questions and express opinions after each practical activity. Students are encouraged to ask questions that are relevant to the results of the experiments that have been carried out. As for the results of the application of concrete media, only half of the students dared to ask or express their opinions in class. Some students still feel hesitant or lack confidence to speak in front of their friends. Media concretely attracts their attention, but it is not enough to encourage all students to express their opinions. This is in line with Hidayat's research which shows that students' courage to ask questions increases when learning is supported by concrete media. However, additional strategies are needed, such as giving awards or personal guidance, to encourage more active participation. Bandura's theory of self-efficacy states that self-confidence plays an important role in students' courage to ask questions or express opinions (Ananda, 2022). Teachers need to create a supportive environment so that students feel comfortable speaking in class. The indicator "Dare to Appear in Front of the Class" obtained 60%. This shows that around 60% of students are willing to appear in front of the class to understand the results of group work. However, there are still students who feel less confident. Concrete media helps students understand the material well, but has not fully increased their courage to speak in front of the class. This is in line with Wijayanti (2018) who stated that the use of concrete media can increase students' courage to appear in front of the class, especially when supported by a conducive classroom atmosphere. According to Gardner's (1983) theory of multiple intelligences, interpersonal intelligence, such as public speaking skills, can be developed through practical experience and social interaction. Presentation activities help students practice these skills. Overall, the results of cycle I showed that the use of concrete media succeeded in increasing students' learning activity in learning science on magnetic force material at SDN 4 Sumbersuko, with an average indicator value of 70%. The best indicator is completion in problem solving (90%), indicating the effectiveness of concrete media in training students' critical thinking skills. The lowest indicator is daring to ask questions (50%), indicating that students' courage to express their opinions still needs to be improved. The success of this learning is supported by Vygotsky's theory which emphasizes the importance of direct experience, social interaction, and self-confidence in learning (Handayani, 2024). For the next cycle, additional strategies are needed, such as giving awards and personal guidance, to increase students' courage to ask questions and appear in front of the class.

These results indicate that the application of Concrete media in learning science on magnetic force material is quite effective in increasing student activity. However, there are still several aspects such as students' courage to ask questions and express opinions that need to be improved. Based on the results of the study above, the average student activity from the four indicators is 70%. This shows that overall it has not reached the Maximum Completion Criteria of 80%. Therefore, the researcher will continue to cycle II by correcting the deficiencies in cycle I.

Please add at least 2 photos during cycle 1 activities.

Cycle II

At this stage, the researcher carried out the same procedure as in the previous cycle, but by correcting the deficiencies in the previous cycle. In the implementation of cycle I, student learning outcomes had not reached the completion standard, with a success percentage of only 70%, which is still below 80%. This shows the need for changes in action in cycle II. The researcher made more innovative and interesting changes and helped by providing comprehensive directions. The researcher also considered the learning abilities of each student so that they could actively participate in the classroom. The results of observations of students' activeness in Cycle II through the application of concrete media can be seen in table 3 below:

Table 3. Results of Student Activeness in Cycle II

No	Assessment Indicator	Average Value
1.	Participating in learning assignments	90%
2.	Participating in problem solving	85%
3.	Dare to ask questions (express opinions)	90%
4.	Dare to appear in front of the	90%
Total		89%

In Cycle II, the researcher implemented improvements to the shortcomings found in Cycle I, such as providing more comprehensive directions, innovation in the use of concrete media, and an approach that considers the abilities of individual students. These steps were taken to optimize student activeness in learning. Concrete media, such as bar magnets, circle magnets, and everyday objects that are magnetic, were used to help students understand the concept of magnetic force directly.

The results showed that student learning activeness increased significantly in all indicators with an overall average value of 89%, exceeding the completion standard of 80%. The following is an explanation of each indicator along with the average value: The indicator "Participating in Learning Tasks" obtained a percentage value of 90%. This shows that in Cycle II, students are increasingly active in completing the learning tasks given. With more intensive guidance from the teacher, students are able to utilize concrete media effectively to complete the tasks listed in the LKPD, such as testing the attraction of magnets to certain objects and making a simple compass. The results of the study above show that most students are actively involved in completing learning tasks. Clearer directions and the use of relevant concrete media make students understand their tasks better and participate fully in the learning process. Research by Kurniati, (2016) shows that the application of concrete media can increase student activity in completing learning tasks to an average of 90%, especially if accompanied by detailed teacher direction. According to Bruner, learning experiences through manipulating real objects allow students to build a more concrete and in-depth understanding of concepts. In this context, the use of concrete media makes it easier for students to be directly involved in learning tasks (Taliak, 2021).

The indicator "Participating in Problem Solving" obtained a percentage of 85%. This shows that in this indicator, students are given the task of solving problems related to magnetic force, such as determining objects that are magnetic and comparing the attraction of different magnets. The teacher facilitates small group discussions to support students' critical thinking skills. Although this indicator shows the lowest value compared to other indicators, the average success rate remains high (85%). Some students need more time to understand the concept of magnetic force, but with additional guidance, they are able to complete the task well. The above findings are in line with the results of Islahiyah's research, (2020) showing that problem-based learning supported by concrete media can improve students' problem-solving abilities. In this learning, concrete media functions as a tool to facilitate student exploration and understanding.

The indicator "Dare to Ask (Express Opinions)" obtained a percentage of 90%. This shows that a conducive learning environment in Cycle II makes students feel more confident to ask questions and express their opinions. Teachers encourage students to be more active by giving awards to those who ask questions or contribute to the discussion. Most students no longer hesitate to express their opinions or ask for explanations when facing difficulties. This approach has succeeded in increasing students' courage to speak during learning. Research by Muammar, (2018) shows that the use of concrete media and a supportive learning environment can increase students' courage to ask questions. According to Bandura's theory of self-efficacy, students' courage to ask questions is influenced by their previous natural successful experiences. Concrete media provides direct learning experiences, so students are more confident in asking questions (Gunadi, 2015). The indicator "Dare to Appear in Front of the Class" obtained a percentage of 90%. This shows that in this indicator, students are asked to present the results of their experiments in front of the class. The teacher

provides moral support and awards to increase students' motivation to be more confident in appearing in front of their friends. Findings in class also show that most students enthusiastically show their work, such as how to make a simple compass or show magnetic objects. Students' courage to perform increased significantly compared to Cycle I. According to Mariyaningsih, (2018), giving awards and individual guidance during concrete media-based learning can increase students' courage to perform in front of the class. Fadlillah, (2016) emphasized the importance of developing interpersonal intelligence, such as the courage to speak in public. Concrete media helps students understand the material well, so they are more confident when presenting their work.
Please add 2 photos of activities during cycle 2.

The results of the study in Cycle II showed a significant increase in all indicators of student learning activity with an overall average of 89%, which exceeded the minimum completion standard (80%). The best indicators: Participating in learning assignments, Dare to Ask Questions, and Dare to Appear in Front of the Class (90%). Indicators that need further attention: Participating in Problem Solving (85%), although still showing a significant increase

CONCLUSION AND SUGGESTIONS

This study shows that the use of concrete diorama media in science learning can significantly increase the activeness of science learning on the material of Force and magnetism of class students at SDN 4 Sumbersuko. Based on data collected in two cycles, dioramas have proven effective in helping students internalize the concept of Magnetic Force through visual and concrete experiences, thus encouraging student activity consistently in each indicator. In cycle II, student activity increased from an average value of 52% in the pre-cycle to 89%, exceeding the set completion target of 80%. These findings confirm that concrete media can not only facilitate students in learning, but also enrich their learning experiences in a more interactive and real environment. In addition, this study proves that learning supported by media can guide students in learning so that students can be motivated in learning which ultimately makes students active in class. This approach is relevant to the needs of learning in the current era which is oriented towards the development of critical thinking skills and understanding based on real practice. For future applications, it is recommended that the use of other concrete media continue to be developed and adjusted to students' learning needs in understanding complex science concepts.

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