



Analysis Of the Effect Of Learning Activeness on Elementary School Students' Mathematics Learning Outcomes

Mukhtiarotul Aulia^{1✉}

Universitas Islam Malang, Malang, Indonesia

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Abstract

Learning outcomes are an important indicator for assessing the success of the learning process in schools. One factor that influences student learning outcomes is active learning during the learning process. Active learning reflects student involvement both physically and mentally in learning activities. This study aims to analyze the effect of active learning on elementary school students' mathematics learning outcomes. The research method used is quantitative research with an associative approach. The subjects were 32 fifth-grade students. Data collection techniques used questionnaires to measure active learning and grade documentation to determine mathematics learning outcomes. Data analysis used simple linear regression. The results showed that active learning had a significant effect on students' mathematics learning outcomes.

[✉]Correspondence Address:
Universitas Islam Malang, Malang, Indonesia
E-mail: tiaraaulia180604@gmail.com

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INTRODUCTION

Education plays a crucial role in shaping the quality of human resources. Through education, individuals are equipped with the knowledge, skills, and attitudes necessary to face changing times. The educational process is not solely oriented toward outcomes but also focuses on the learning experience of students.

Learning is a process characterized by changes in behavior, knowledge, and skills resulting from experience and interaction with the environment. In the context of school learning, learning is the primary activity students must undertake to achieve established educational goals.

The success of students' learning processes can be seen from their learning outcomes. Learning outcomes indicate the extent to which students can understand and master the material being taught. Therefore, learning outcomes are often used as a benchmark for the success of the learning process in schools.

One factor influencing learning outcomes is student engagement. Learning engagement includes student involvement in learning activities, such as listening to teacher explanations, asking questions, discussing, taking notes, and completing assignments and exercises.

Learning engagement is crucial because it creates a conducive and meaningful learning environment. Active students tend to have a better understanding of learning material than passive students. Conversely, less active students typically simply receive information without processing it deeply.

In mathematics learning, active learning is a crucial factor. Mathematics is often considered a difficult subject by some students because it involves many abstract concepts and calculations. This perception often leads to students being less interested and less active in learning.

This lack of student engagement in mathematics learning can impact poor learning outcomes. Passive students tend to give up easily when faced with math problems and make little

effort to understand the material taught by the teacher.

Based on observations in elementary schools, students remain less active in mathematics learning. This is evident in their minimal participation in asking, answering questions, and engaging in discussions during the learning process.

Therefore, efforts are needed to increase students' active learning to improve mathematics learning outcomes. Based on this description, this study is important to determine the effect of active learning on elementary school students' mathematics learning outcomes.

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Therefore, efforts are needed to increase student learning engagement to improve mathematics learning outcomes. Teachers play a crucial role in creating a learning environment that actively engages students through a variety of strategies and methods.

In addition to the teacher's role, the learning environment and student characteristics also influence the level of learning engagement. A comfortable and supportive learning environment will encourage students to actively participate in learning, particularly in mathematics. Based on this description, this study is crucial for determining the effect of learning engagement on elementary school students' mathematics learning outcomes.

METHOD

This research used a quantitative, associative approach. The purpose of this study was to determine the relationship and influence between two variables: learning engagement as the independent variable and mathematics learning outcomes as the dependent variable.

The subjects were 32 fifth-grade elementary school students. Data collection techniques included a questionnaire to measure

student learning engagement and documentation of mathematics test scores to determine student learning outcomes.

The research instrument underwent validity and reliability testing before use. Data were analyzed using simple linear regression with a 5% significance level.

RESULTS AND DISCUSSIONS

The study's results showed that fifth-grade students' learning engagement was moderate. Most students were quite active in listening to teacher explanations and completing assignments, but were less active in asking questions and expressing opinions.

Students' mathematics learning outcomes were also moderate. This indicates that students' understanding of the mathematics material is quite good, but still needs to be improved through more active and innovative learning.

Statistical test results indicate that learning engagement significantly influences students' mathematics learning outcomes. This indicates that students with high levels of learning engagement tend to achieve better learning outcomes than students with low levels of learning engagement.

Learning engagement provides students with the opportunity to better understand the material through asking questions, discussing, and doing exercises. These activities help students develop their thinking and problem-solving skills.

Furthermore, learning engagement can also increase students' motivation and confidence in participating in mathematics lessons. Students who are accustomed to being active are more likely to express their opinions and are less likely to give up when facing learning difficulties. Thus, learning engagement is an important factor contributing to improved mathematics learning outcomes, although other factors also influence student learning outcomes.

The results of this study indicate that active learning plays a significant role in improving elementary school students' mathematics learning outcomes. These findings suggest that

students' active involvement in the learning process can help them understand the material more deeply.

Active learning allows students to engage directly in learning activities, such as asking questions, discussing, and working on exercises. Through these activities, students not only receive information from the teacher but also process and construct knowledge independently.

In mathematics learning, active learning is crucial because mathematical material is abstract and requires a strong conceptual understanding. Students who are active tend to be more willing to try to solve problems and are less likely to give up when faced with difficulties.

These research findings align with learning theory, which states that learning will be more meaningful when students are actively involved in the learning process. Active learning can improve students' memory, comprehension, and critical thinking skills.

Furthermore, active learning also influences student motivation and self-confidence. Active students typically have higher self-confidence because they are accustomed to expressing their opinions and interacting in learning.

With increased active learning, the learning atmosphere becomes more lively and conducive. This can encourage students to be more focused and enthusiastic in participating in mathematics lessons, thus positively impacting their learning outcomes.

Therefore, teachers need to implement learning strategies that encourage student engagement, such as group discussions, question-and-answer sessions, and challenging assignments. Active learning is expected to optimally improve students' mathematics learning outcomes.

CONCLUSION

Based on the research results, it can be concluded that active learning has a significant influence on elementary school students' mathematics learning outcomes. Students who are active in the learning process tend to achieve

better learning outcomes than students who are less active. Active learning encourages students to be directly involved in learning by asking questions, discussing, doing exercises, and paying attention to the teacher's explanations. These activities help students understand mathematical concepts more deeply. The results of this study indicate that active learning not only influences material understanding but also students' motivation and confidence in participating in mathematics learning. Active students tend to be more courageous in trying and do not give up easily when facing difficulties. Therefore, teachers are expected to be able to implement learning strategies that encourage student activity, such as discussion-based learning, question-and-answer methods, and providing a variety of exercises. By increasing students' active

learning, mathematics learning outcomes are expected to improve optimally.

REFERENCES

- Abdurrahman, M. (2009). Pendidikan bagi Anak Berkesulitan Belajar. Jakarta: Rineka Cipta.
- Priansa, D. J. (2017). Pengembangan Strategi dan Model Pembelajaran. Bandung: Pustaka Setia.
- Purwanto. (2016). Evaluasi Hasil Belajar. Yogyakarta: Pustaka Pelajar.
- Susanto, A. (2013). Teori Belajar dan Pembelajaran di Sekolah Dasar. Jakarta: Kencana.