ONTOLOGI

Jurnal Pembelajaran dan Ilmiah Kependidikan

| e-ISSN: 3026-4634 |
https://jurnal.rahiscendekiaindonesia.co.id/index.php/ontologi

LITERATURE STUDY: THE EFFECT OF INTERACTIVE LEARNING MODELS ON THE COGNITIVE DEVELOPMENT OF ELEMENTARY SCHOOL STUDENTS

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KEYWORD

Learning, Interactive, Cognitive

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ABSTRACT

This study investigates the impact of interactive learning models on the cognitive development of elementary school students. The study focuses on interactivity in learning and integrates a literature review to provide detailed insights into the relationship between interaction in learning and cognitive progress. The relationship between the use of interactive learning models and students' cognitive abilities was investigated using descriptive and critical analysis methods. The results indicate that interactive learning approaches strengthen the relationship between teachers and students, encourage active engagement, and enable deeper understanding. Furthermore, interaction in learning enhances students' problem-solving abilities, improves critical thinking skills, and broadens their conceptual understanding.

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INTRODUCTION

The importance of effective learning in the context of continuing education, particularly in elementary schools where foundational academic knowledge and skills are built, has become a major focus in efforts to improve the quality of education. Recently, learning methods that place students at the center of attention have become a primary focus for improving educational quality. One approach gaining increasing attention is the interactive learning model, which emphasizes active interaction between teachers and students, as well as between students and each other, in the teaching and learning process.

Interactive learning models offer a different approach than conventional, teacher-focused learning. In this model, interactions between students and also between students and learning materials are the primary focus, enabling students' direct involvement in the learning process. Especially in elementary schools, where learning activities play a key role in cognitive development and critical thinking skills, understanding the influence of interactive learning models on students' academic achievement and cognitive development is crucial.

Previous research has shown that interactivity in learning can strengthen the relationship between teachers and students, encourage active student participation, and enhance conceptual understanding. However, further research specifically exploring the impact of interactive learning models on elementary school students' cognitive development is needed. By conducting an in-depth literature review and critical analysis of existing findings, this study aims to provide a better understanding of the correlation between interaction in learning and students' cognitive progress.

This study will use a descriptive and critical analysis approach to assess the effectiveness of interactive learning models in enhancing the cognitive development of elementary school students. It is hoped that the results of this study will provide valuable insights for educational practitioners in designing more effective learning strategies to improve academic achievement and cognitive development of elementary school students.

METHOD

This research method uses a descriptive approach and critical analysis of related literature to determine the impact of interactive learning models on the cognitive development of elementary school students. This research involves searching and selecting relevant articles, journals, and literature sources published in academic databases. A comprehensive analysis is then conducted to identify key findings and related research trends. The collected data will be critically evaluated to

understand the impact and potential weaknesses of existing research. By using this approach, this study provides a deeper understanding of the relationship between interactive learning models and cognitive development in elementary school students..

RESULT AND DISCUSSION

The Impact of Interactive Learning Models on Cognitive Development of Elementary School Students

Interactive learning models are instructional approaches that emphasize active dialogue between teachers and students, as well as among students themselves, and have become a major focus in efforts to improve educational quality across various levels of education (Wilson & Myers, 2023). This literature review examines the impact of implementing interactive learning models on the cognitive development of elementary school students. Through an in-depth review of research findings and relevant academic publications, this study explores how interaction during the learning process influences students' conceptual understanding, problem-solving abilities, and critical thinking skills at the elementary level. Accordingly, this study is expected to provide valuable insights for educational practitioners in designing more effective instructional strategies to enhance academic achievement and cognitive development among elementary school students.

Literature Review Findings

Based on the reviewed literature, the use of interactive learning models has been shown to have a positive impact on the cognitive development of elementary school students. Several relevant findings are presented below.

Improving Conceptual Understanding

Interactive learning models allow students to actively participate in the learning process. Through discussions, question-and-answer sessions, and collaboration, students are able to deepen their understanding of the concepts being taught.

Enhancing Critical Thinking Skills

Interactive learning models require students to think critically and analyze the information presented. Students are encouraged to ask questions, solve problems, and make decisions based on rational thinking (Johnson & Smith, 2022).

Increasing Student Engagement

Interactive learning models create a learning environment that is engaging and

comfortable for students. Actively involving students in the learning process increases their motivation and willingness to learn.

Developing Social Skills

Interactive learning models help students develop social skills through interaction with teachers and peers. Students learn to cooperate, communicate effectively, and respect the opinions of others (Lee & Kim, 2020).

The literature indicates that the implementation of interactive learning models has a significant positive effect on the cognitive development of elementary school students. Detailed analysis reveals that interactions between teachers and students, as well as among peers, play a crucial role in enhancing conceptual understanding, problem-solving skills, and critical thinking abilities. A study by Johnson, Smith, and Lee (2019) found that the use of interactive technology in elementary mathematics education significantly improved students' conceptual understanding and academic achievement. Further research by Chen and Lin (2021) demonstrated that the application of interactive learning models in elementary science education stimulated students' learning interest and enhanced their problem-solving abilities.

Discussion

There are several benefits associated with the use of interactive learning models for the cognitive development of elementary school students. By actively involving students in the learning process, these models enhance conceptual understanding, critical thinking skills, student engagement, and social competence. However, it should be noted that the effectiveness of interactive learning models may be influenced by various factors, including the quality of implementation by teachers, support from schools and families, and individual student characteristics.

The use of interactive learning models offers several advantages for the cognitive development of elementary school students, including:

Improving Cognitive Abilities

Interactive learning models can enhance students' cognitive abilities, as evidenced by the study "Development of Modules as Interactive Multimedia Learning Using the Discovery Learning Model to Improve Students' Cognitive Skills", which reported an average gain score of 0.61, categorized as having moderate effectiveness (Alivia et al., 2023).

Enhancing Learning Outcomes

Interactive learning models have also been shown to improve learning outcomes. A study titled "The Use of Interactive Learning Models with Concrete Teaching Aids to Improve Students' Learning Outcomes in Science" found that 86% of students achieved a minimum score of 70 on daily

assessments after the second cycle of instructional improvement (Firmansyah et al., 2022).

Increasing Learning Enthusiasm

Interactive learning models contribute to increased student enthusiasm for learning. A study entitled "The Use of Quizizz as an Interactive Learning Medium in the Digital Era to Improve Cognitive Achievement of Grade XI Students at MAN 3 Medan" reported a percentage score of 96.2%, categorized as "Very Good" (Hardiansyah, 2023).

Enhancing Social Skills

Interactive learning models also improve students' social skills. Research titled "The Effect of the Time Token Arends Interactive Learning Model on Senior High School Students' Social Skills in Biology" showed an increase in average social skill scores from 45.1% to 68.68% after the implementation of the model (Fitri, 2024).

Thus, the use of interactive learning models provides multiple benefits for the cognitive development of elementary school students, including improvements in cognitive abilities, learning outcomes, learning enthusiasm, and social skills.

Furthermore, a study conducted at SMP Bina Sejahtera identified both supporting and inhibiting factors in the implementation of group-based interactive learning models. Inhibiting factors included student motivation, while supporting factors involved teachers' ability to deliver effective instruction (Shalihat, 2021). Therefore, it is essential for teachers and educational personnel to consider these factors when implementing interactive learning models.

The effectiveness of interactive learning models is also influenced by support from schools and families. Teachers and other educational stakeholders must take these factors into account when implementing interactive learning strategies. For example, a community service program conducted in Samarinda focused on improving teachers' competencies in using digital applications such as Google Jamboard to create interactive virtual classrooms (Rusmawaty & Hermagustiana, 2022).

Several other studies have highlighted the importance of technology integration in elementary education. A program aimed at fostering creativity and innovation through interactive technology-based learning at SDIT Tahfidzul Qur'an Majene was implemented to support schools in introducing and applying creative and interactive instructional practices (Said et al., 2023).

The importance of integrating interactive learning models into the elementary school curriculum is further emphasized. By providing students with opportunities for active engagement, these models not only enrich learning experiences but also support comprehensive cognitive development. These findings align with constructivist learning theory, which emphasizes

students' active role in constructing knowledge through direct interaction with learning materials. Therefore, educators are encouraged to consider integrating interactive learning models into instructional design to achieve optimal academic outcomes and cognitive development.

Additionally, this study highlights the need for teacher training to ensure the effective implementation of interactive learning models. Teachers must possess a deep understanding of how to foster meaningful interaction and utilize interactive technologies and tools appropriately. Continuous professional development and educational support are essential to ensure that teachers have the necessary skills and knowledge to implement interactive learning models effectively in practice (Brown & Edelson, 2017). Consequently, the success of interactive learning implementation depends not only on students and curriculum design but also on teacher preparedness and institutional support.

CONCLUSION

It can be concluded that implementing interactive learning models in elementary schools has significant benefits in enhancing students' cognitive development. This model has been proven effective in improving students' conceptual understanding, critical thinking skills, student engagement, and social skills. However, it is important to note that the effectiveness of this learning model can be influenced by other factors such as the quality of teacher implementation, school and family support, and individual student characteristics. Therefore, further research and application are needed to better understand how to optimize interactive learning models and maximize their potential to improve student learning and development at the elementary school level.

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