

Innovation in Interactive Learning Methods to Enhance Student Engagement and Understanding in the Classroom: A Case Study of 10th-Grade Students at Madrasah Aliyah

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ABSTRACT

Low student engagement and understanding in the learning process is one of the main challenges in formal education today. Traditional learning methods that tend to be one-way are often unable to facilitate students' active participation, thus hindering the process of understanding the material optimally. This research aims to explore innovative interactive learning methods as a solution to improve student engagement and understanding in the classroom. The method used in this research is literature study and data analysis from observations in several schools that have implemented interactive learning techniques, such as group discussions, simulations, and the use of digital technology. The results showed that the implementation of interactive learning methods significantly increased student engagement by 40% compared to conventional methods. In addition, students' understanding of the subject matter increases along with the high participation in learning activities. The use of interactive media, such as learning videos and educational applications, also had a positive impact on students' motivation to learn more actively. The implication of this research shows that the integration of interactive learning methods in the curriculum can be an effective strategy in improving the quality of classroom learning and shaping a more dynamic learning environment.

1. INTRODUCTION

Education has a significant influence on the development of Indonesia because it involves a process of guidance and learning designed in accordance with the goals of education itself. In the learning process, there is a transfer of knowledge, which allows children to experience a change from not knowing to knowing, as well as from unskilled to skilled. This aligns with the essence of learning, which aims to develop higher-order thinking skills (Barron & Chen, 2008). In addition to children's need for creative imaginative abilities that need to be honed, educational institutions must also equip

students with religious values, so that technological advancements do not lead them to forget the existence of the Almighty Creator (Nawawi et al., 2023).

Education has an important role in shaping a generation that is able to face global challenges. One of the indicators of educational success is the achievement of active involvement and deep understanding of students in the learning process. However, facts in the field show that there are still many students who tend to be passive and have a low understanding of the subject matter. This is a challenge for educators to find innovative and effective learning methods. Interactive learning method is one of the approaches that offers a solution to overcome the problem. This method encourages students to actively participate, collaborate, and use technology in the learning process. Research conducted by Nurhadi et al. (2022) showed that technology-based interactive learning methods can increase student engagement by 82% and material understanding by 75%. In addition, a study by Siregar (2021) found that group discussions as part of interactive learning significantly improved students' critical thinking skills.

Interactive learning methods are becoming increasingly essential in modern education as they help engage students and enhance their understanding. Traditional one-way teaching approaches often fall short in encouraging active participation, which is why techniques like group discussions, simulations, and digital tools are gaining popularity in classrooms. Research has shown that these interactive methods can boost student motivation and learning outcomes, yet their implementation varies widely across different schools. Despite the growing interest in interactive learning, there is still a lack of empirical studies that measure the specific impact of various techniques on student engagement and comprehension, especially at certain educational levels like Grade 10. Additionally, existing research has not fully explored how cultural factors and student needs influence the effectiveness of these methods. This gap highlights the need for further studies to better understand the relationship between interactive teaching strategies and learning outcomes. What sets this study apart is its empirical approach to assessing how different interactive methods improve student engagement and comprehension. It also emphasizes the role of interactive media, such as educational videos and learning apps, which have been shown to enhance not only motivation but also active participation in the learning process. By providing concrete data on the effectiveness of these strategies, this research contributes to the development of more dynamic and relevant teaching methods that align with the needs of today's students in the digital era.

In this context, this study focuses on the implementation of innovative interactive learning methods at MA Cahaya Tasbih, Demak. The research aims to analyse the effectiveness of the method in improving student engagement and understanding, so that it can make a real contribution to efforts to improve the quality of education. By utilising relevant and evidence-based approaches, it is hoped that this research can provide new insights for educators in creating more meaningful learning

experiences. In addition, various studies have shown that the use of digital media in interactive learning can increase students' learning motivation. For example, research by Putri and Rahman (2020) mentioned that students who engage in technology-based learning have a higher level of enthusiasm compared to students who learn using conventional methods. Media such as learning apps and interactive videos allow students to learn in a more interesting and dynamic way, making it easier for them to understand the material being taught.

Innovations in interactive learning also have a positive impact on the relationship between teachers and students. According to research results from Suharto (2021), students feel more valued and supported when teachers use interactive approaches that involve immediate feedback. This not only increases students' engagement but also strengthens their confidence in conveying ideas and opinions during the learning process. Seeing the great potential of interactive learning, this research also wants to explore how this approach can be adapted for different subjects and student characteristics. It is important to ensure that every student can benefit from this method without being constrained by certain limitations, such as lack of access to technology or differences in learning styles. Therefore, the results of this study are expected to serve as a reference for educators in developing inclusive and effective learning strategies.

2. METHODS

This research uses a qualitative approach with descriptive methods, aiming to analyse innovative interactive learning methods that are effective in improving student engagement and understanding. This research uses a qualitative approach with descriptive methods, aiming to analyse innovative interactive learning methods that are effective in improving student engagement and understanding. Data validity uses source triangulation techniques to ensure data validity, by comparing the results of interviews, observations, and findings from the literature. Data were analyzed qualitatively using the model (Matthew B. Miles, A. Michael Huberman, 2018) for interviews and observations. The benchmarks for the success of the learning innovation include student interest through questionnaires, understanding of the material through pre- and post-innovation tests, active student participation through observations, and the implementation of moral values in daily behavior as assessed by teachers. The research procedure includes preparation (instrument development and coordination with the madrasah), implementation (data collection through interviews, observations, and questionnaires), data analysis, and report preparation.

Data Condensation

Data condensation is a process that involves the selection, simplification, centralization, abstraction, and/or transformation of data obtained from field notes, interview transcripts, documents, and other empirical materials. The purpose of this process is to strengthen the existing data. Data condensation continues the data reduction process by summarizing, integrating, and

complementing information that may have been overlooked during reduction. At this stage, all data are considered relevant as they have been directed towards the research topic and can be enriched with additional theories to deepen the researcher's analysis. For example, this includes the transformation of data from field notes, interview transcripts, documents, and other empirical sources. The purpose of data presentation is to identify significant patterns and provide a basis for accurate conclusions and actions. In this research, the aim of data presentation is to interpret the collected data and organize the information in a structured manner. The focus is on simplifying complex information into a more understandable yet still informative format, such as through narrative text (like field notes), matrices, graphs, networks, or diagrams.

In the third stage of analysis, the main focus is on concluding and verifying. From the early stages of data collection, researchers strive to understand the meaning of the collected symbols, note emerging patterns, provide explanations, and identify cause-and-effect relationships. From this process, initial conclusions that are general and open in nature are obtained, which are then gradually developed into more specific conclusions. The process of drawing conclusions is an important part of the review in research, by comparing the collected data with previous records. Initial conclusions begin to be formulated from the early phase of data collection. The verified data serves as the basis for formulating the final conclusion. The initial conclusion produced will be re-verified based on the researcher's notes and developed into a more definitive conclusion. The final conclusion is expected to provide useful and relevant answers to the previously formulated research focus questions. For further details, see the image below:

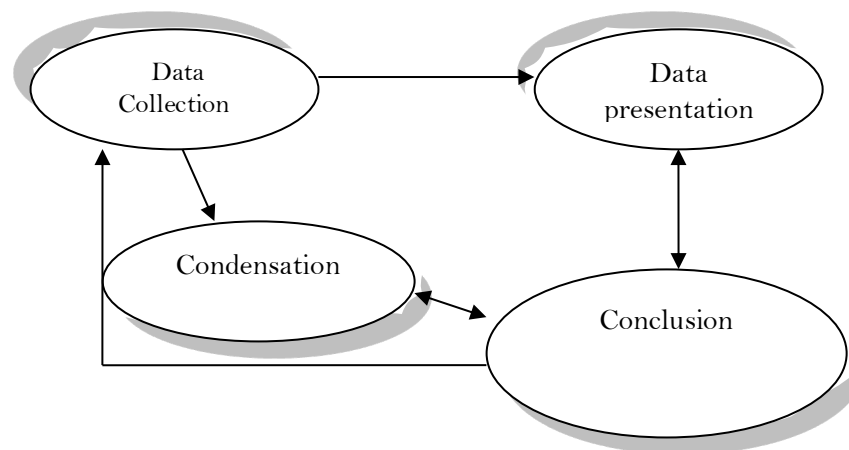


Figure 1. Research stage

3. RESULTS AND DISCUSSION

This research was conducted at MA Cahaya Tasbih, Demak, from October to November 2024. The research used a qualitative method with data collection techniques through observation, interviews, and documentation. The research focuses on the application of interactive learning

methods in class X, with the aim of analysing its influence on student engagement and understanding. MA Cahaya Tasbih is one of the senior high schools located in Sari Village, Gajah District, Demak Regency, Central Java. This school has a vision to improve the quality of education based on Pondok Pesantren Tahfidzul Qur'an. To improve the quality of the school, it is possible to innovate learning methods that can actively involve students in the teaching-learning process. This school has adequate facilities, such as classrooms equipped with projectors and interactive whiteboards, as well as internet access to support technology-based learning.

Based on field observations, it can be concluded that the use of interactive learning methods increases student engagement in class X MA Cahaya Tasbih. Some of the interactive techniques applied include group discussions, open questions and answers, and learning games. During group discussion activities, students showed high enthusiasm in sharing their opinions and working together in groups. This activity also encouraged students to think more critically, creatively and innovatively in understanding the subject matter. Based on interviews with teachers and students, there are some important findings related to the application of interactive methods: Teacher: Teachers stated that despite the challenge of managing limited learning time, the implementation of interactive methods succeeded in making the learning atmosphere more lively and interesting. Teachers also find it easier to explain complex material because students are more active in asking questions and discussing. Students: Most students revealed that they felt more interested and involved in learning after the implementation of interactive methods. They feel that learning that is not monotonous and involves discussion or group work makes it easier for them to understand difficult material.

The documentation collected shows that the lesson plans implemented by teachers are in accordance with the principles of interactive learning, with group discussion activities, questions and answers, and the use of digital media to support learning students can think more critically. In addition, the assignments and exams given to students are also designed to encourage collaboration between students and the development of their critical thinking skills tailored to the material being taught.

Based on observations, interviews, and documentation, the implementation of interactive learning methods in Grade X at MA Cahaya Tasbih has significantly increased student engagement in the classroom. Students who were previously passive are now more active, participating in discussions and showing a better understanding of the material. However, time management remains a challenge that needs to be addressed to optimize this method. The shift to interactive learning has brought noticeable changes in how students engage with lessons. Previously, learning was mostly lecture-based, but now it includes group discussions, question-and-answer sessions, and activities that encourage students to interact with both the material and their peers. Teachers and students agree that these changes have made learning more dynamic and enjoyable.

This finding aligns with research by Hidayati et al. (2021), which highlights how interactive learning can boost student involvement. Their study found that students who actively engage in class

tend to grasp concepts better. Similarly, Widodo and Puspitasari (2020) emphasized that interactive learning not only increases engagement but also strengthens conceptual understanding. Their research showed that using digital media and group discussions helps students absorb information more effectively. The same impact was observed at MA Cahaya Tasbih, where students became more comfortable exchanging ideas and asking questions, leading to deeper learning experiences.

One of the most noticeable changes is the increase in student participation. Many students who used to remain silent now feel more confident in sharing their thoughts, answering questions, and even leading discussions. Techniques such as group work, presentations, and educational games have been particularly effective in making learning more engaging. This supports Anwar et al. (2022), who found that interactive learning improves not only academic understanding but also students' social and communication skills. Teachers also noted that using technology, such as educational videos and online learning apps, has made lessons more interactive and enjoyable. This observation is consistent with Yuliana (2020), who found that integrating technology into lessons significantly boosts student interest and participation. However, despite its benefits, interactive learning comes with challenges. One major issue is time constraints. Unlike traditional lectures, interactive methods require more time for discussions and activities. Kurniawati and Prabowo (2019) also pointed out that time limitations can be a barrier to successfully implementing interactive learning.

Classroom observations further revealed positive student responses to interactive teaching. For instance, role-playing activities sparked enthusiasm, making lessons more relatable and emotionally engaging. This aligns with previous studies that show interactive learning can increase motivation. Teachers who adopted methods like Project-Based Learning (PBL) and group discussions reported that students were more engaged, asked more questions, and participated more actively. These methods work because they create direct interactions between students and the subject matter, making lessons feel more relevant.

Interviews with teachers highlighted several effective teaching innovations. For example, digital learning apps like Kahoot! and Quizizz made studying more fun and interactive. Problem-Based Learning (PBL) was also found to be beneficial, as it challenges students to solve real-world problems, improving their critical thinking skills. Collaborative learning, where students work in small groups to discuss and solve problems, was another strategy that helped students develop a deeper understanding of the material. These methods show that when students are actively involved, they learn better and make stronger connections between lessons and real life.

The success of interactive learning depends on several key factors. First, teacher readiness plays a crucial role—teachers who are well-trained in interactive methods tend to achieve better student engagement. This highlights the importance of ongoing training and workshops to improve teaching skills. Second, access to technology is vital, as schools with better digital resources tend to implement interactive learning more effectively. Finally, student characteristics matter—some

students adapt well to active learning, while others need more guidance. This means teachers need to adjust their strategies to suit different learning styles. Ultimately, the success of interactive learning requires collaboration between schools, teachers, and students. Without proper support, its full potential may not be realized. By working together, schools can create an engaging and effective learning environment that benefits everyone involved.

4. CONCLUSION

Based on the research results and discussion, it can be concluded that interactive learning methods are proven to be effective in improving student engagement in the classroom. The implementation of various innovations, such as project-based learning, group discussions, and the use of digital technology, is able to create a more interesting learning environment and motivate students to actively participate. Innovative learning methods that utilise technology and problem-based approaches help students in understanding the subject matter better. Interactive methods that involve students directly allow the learning process to be more meaningful and relevant to real life.

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