

IMPROVING STUDENTS' UNDERSTANDING IN PAI LEARNING THROUGH QUIZZ-BASED DIGITAL MEDIA AT SMAN 1 TANAH LUAS

Rafizal^{1*}, Jalaluddin², Yusraini³.

^{1,2,3} Universitas Islam Negeri Sultanah Nahrasiyah Lhokseumawe, Indonesia

Correspondence E-mail: 2024520013@mhs.uinsuna.ac.id, jalakasaa08@gmail.com, yusraini@uinsuna.ac.id

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Abstract

This study aims to improve students' understanding in Islamic Religious Education (PAI) learning through the use of Quizizz-based digital media at SMAN 1 Tanah Luas. The background of this study is based on the low level of involvement and understanding of some students in the PAI learning process, which is caused by the use of learning methods that are still conventional and less varied. This condition has an impact on low student learning motivation and less than optimal achievement of learning objectives. Along with the development of technology and the characteristics of students in the digital era, learning innovations are needed that are able to provide a more interesting, interactive learning atmosphere, and are in accordance with student needs. This study uses a quantitative approach with a quasi-experimental design to measure the effect of using Quizizz-based digital media on student understanding. The research subjects were grade X students of SMAN 1 Tanah Luas who were selected as the research sample. Data collection techniques were carried out through pretests and posttests to measure improvements in student learning outcomes, and supported by observation and documentation to obtain a comprehensive picture of the learning process. Quizizz media was used as a means of evaluation and reinforcement of Islamic Religious Education material, by presenting interactive questions that encourage active student participation in the learning process. The results of the study showed a significant increase in student understanding after the implementation of Quizizz-based digital media in Islamic Religious Education (PAI) learning. This was demonstrated by an increase in the average value of student learning outcomes as well as increased student enthusiasm and activeness during the learning process. The use of Quizizz not only helped students better understand Islamic Religious Education material but also created a fun and healthy competitive learning atmosphere. Thus, Quizizz-based digital media has proven effective in improving student understanding and presenting Islamic Religious Education learning that is more engaging, interactive, and relevant to the characteristics of learners in the digital era.

Keywords: *Digital Media, Islamic Education Learning, Student Understanding, Quizizz.*

INTRODUCTION

The development of digital technology in education has accelerated rapidly over the past decade, driven by the increasing use of digital devices, the internet, and online learning platforms at various levels of education. The integration of information and communication technology into the learning process has not only transformed the way teachers deliver teaching materials but also influenced the way students learn, interact, and build understanding of the knowledge they acquire. The learning process, previously one-way, has now evolved to become more dynamic, interactive, and participatory, supported by various digital media that enable two-way communication between teachers and students. 21st-century education demands innovative, collaborative, and student-centered learning, oriented toward strengthening critical thinking, creativity, communication, and collaboration competencies. Therefore, the use of digital technology in learning is a necessity to encourage meaningful learning and enhance students' in-depth understanding of the material being studied (Huang et al., 2020). In the context of Islamic Religious Education (PAI) learning, a major challenge still frequently encountered in various educational units is the dominance of conventional learning methods, such as lectures and memorization, which position the teacher as the primary source of knowledge. This approach tends to position students as passive recipients of information, thus limiting the space for critical thinking, discussion, and reflection on Islamic values. Furthermore, conventional methods have not fully adapted to the characteristics of the digital generation, which is accustomed to technology,

visualization, and rapid and varied interactions. This mismatch between learning methods and student characteristics results in low student engagement in the learning process. As a result, students' understanding of PAI material is often shallow, oriented solely toward memorization and grade achievement, and does not fully reflect the internalization of religious values in everyday life (Zainuddin & Perera, 2019). Islamic Religious Education plays a strategic role in shaping students' character, religious attitudes, and understanding of moral values, as a foundation for their personal and social lives. Islamic Religious Education (PAI) aims not only to transfer religious knowledge but also to instill values of faith, noble morals, and social responsibility, which are reflected in students' daily behavior. Therefore, Islamic Religious Education (PAI) learning must not only emphasize cognitive aspects but must also integrate affective and psychomotor aspects through a meaningful, enjoyable, and contextual learning process. Such learning enables students to understand Islamic teachings more deeply and relate them to the realities of life they face. In this context, the use of appropriate and innovative learning media is key to optimally achieving Islamic Religious Education (PAI) learning objectives, as media serve as a means to bridge teaching materials with students' learning experiences (Rusman, 2017).

With the increasingly massive development of technology, today's students are dominated by Generation Z, who grew up and developed in a digital environment. This generation is very familiar with the use of digital devices, the internet, and various technology-based applications in everyday life, including learning activities. The characteristics of Generation Z show a tendency to prefer interactive, visual, fast-paced learning that involves elements of games or game-based learning, because it can provide a more interesting and challenging learning experience. If the learning process in schools is unable to accommodate these characteristics, then learning has the potential to become monotonous and less meaningful for students. This condition can result in decreased learning motivation, low student engagement, and weak understanding of the material being studied. Therefore, teachers are required to adapt learning strategies and media to the characteristics of the digital generation so that the learning process can take place effectively and oriented towards deeper understanding (Prensky, 2015).

Digital learning media based on educational games has proven to have significant potential in increasing student engagement and understanding in the learning process. The game-based learning approach can create a fun, challenging, and competitive learning atmosphere in a positive way by providing challenges, scores, and direct feedback to students. This condition encourages students to be actively involved, think critically, and learn independently without feeling burdened by the pressures of conventional learning. Furthermore, game-based learning also allows for iterative and reflective learning, thus helping students strengthen their understanding of concepts gradually. This approach is considered relevant for application in Islamic Religious Education (PAI) learning, which some students still consider monotonous and uninteresting. By integrating elements of educational games, PAI learning is expected to provide a more meaningful learning experience and increase students' interest and understanding of the Islamic values taught (Dichev & Dicheva, 2017).

One of the digital media widely used in today's learning is Quizizz. Quizizz is an online quiz-based learning platform that allows teachers to present interactive evaluative questions, both in face-to-face and online learning. Through a direct feedback system, students can immediately determine their level of understanding of the material being studied, so that the evaluation process functions not only as an assessment tool but also as a learning tool. Various features provided, such as scores, rankings, avatars, time settings, and attractive visual displays, enable Quizizz to create a healthy and enjoyable competitive learning atmosphere. This condition encourages students to be more focused, concentrated, and actively involved during the learning process. With these characteristics, Quizizz is considered effective in increasing learning motivation and helping students build a more optimal understanding of the material (Zhao, 2019).

Various recent studies have shown that the use of Quizizz in learning has a positive impact on student learning outcomes, both cognitively and affectively. Salsabila et al. (2021) found that the application of Quizizz was effective in improving conceptual understanding and student learning motivation compared to conventional, passive evaluation methods. Through the interactive presentation of questions and direct feedback, students became more enthusiastic and motivated to understand the material more deeply. These findings are supported by research by Wahyuningsih and Sungkono (2022), which stated that the use of Quizizz can increase active student participation during the learning process, particularly in evaluation activities and material reinforcement. Furthermore, Quizizz also provides opportunities for students to learn reflectively through question repetition and self-evaluation. Thus, these research results indicate that Quizizz functions not only as an evaluation tool but also as an effective learning medium in improving the quality of student learning processes and outcomes. In addition to improving learning outcomes, the use of Quizizz also plays a significant role in reducing student anxiety levels during the learning evaluation process. Evaluations packaged in the form of educational games make students feel more relaxed,

comfortable, and confident in answering questions, thereby minimizing the psychological pressure that typically arises in conventional evaluations. This positive emotional state allows students to display their cognitive abilities more optimally without excessive fear or anxiety. Basuki and Hidayati (2019) stated that game-based evaluations can create a pleasant learning atmosphere and increase student self-confidence. This is very important in Islamic Religious Education (PAI) learning, which emphasizes not only academic achievement but also emotional comfort and the process of internalizing religious values. With a conducive and pressure-free learning environment, students are expected to understand and internalize PAI values more deeply and sustainably.

From a pedagogical perspective, the use of Quizizz aligns with a student-centered learning approach, which positions students as active subjects in the learning process. Through Quizizz, students are given the opportunity to engage directly in learning activities, work independently on problems, and reflect on their level of understanding through instant feedback. Meanwhile, the teacher's role shifts from being a central source of information to being a facilitator who directs, guides, and provides reinforcement according to students' learning needs. Hattie (2017) emphasized that effective learning is learning that provides clear and continuous feedback to students. In the context of Islamic Religious Education (PAI) learning, this approach allows teachers to adapt learning strategies to students' levels of understanding and characteristics. Thus, PAI learning becomes more adaptive, responsive, and oriented towards meeting students' individual and collective learning needs.

An analysis of the Islamic Religious Education (PAI) learning situation at SMAN 1 Tanah Luas shows that the learning process is still dominated by conventional lecture methods and written evaluations. This teacher-centered learning pattern tends to be one-way and provides little space for active student participation. This condition has resulted in low enthusiasm and low understanding of PAI material for some students, especially in understanding religious concepts and values in depth. Furthermore, the monotonous evaluation format also makes students less motivated to demonstrate their best abilities. Therefore, PAI teachers need alternative learning media that are innovative, easy to use, and appropriate to the characteristics of digital generation students. The use of technology-based learning media is expected to increase student engagement, improve the quality of the learning process, and ultimately enhance student understanding of PAI material.

Based on these conditions, the implementation of digital media based on Quizizz is seen as a relevant and strategic solution to improve the quality of Islamic Religious Education (PAI) learning. Quizizz functions not only as a learning evaluation tool, but also as a means of material reinforcement and learning reflection, allowing students to independently review their level of understanding. Through interactive presentation of questions and direct feedback, students can identify errors and continuously improve their understanding. Furthermore, the integration of Quizizz in PAI learning can create a more engaging learning atmosphere and be in line with the characteristics of students in the digital era. Darmawan (2020) emphasized that the use of digital media in learning plays a crucial role in bridging the gap between teaching materials and students' learning needs, thereby making the learning process more effective, contextual, and meaningful.

The rationale for these learning service activities is based on the need to continuously improve student understanding through the implementation of learning innovations relevant to technological developments and student characteristics. Learning innovation is necessary so that the learning process does not only focus on delivering material but also creates meaningful and effective learning experiences. Quizizz was chosen because of its advantages in terms of ease of access, flexibility of use, and can be integrated into both face-to-face and online learning. Furthermore, this platform supports effective learning without requiring complex technological infrastructure, allowing for optimal implementation in the school environment. Considering the aspects of ease, effectiveness, and suitability to school conditions, Quizizz is considered appropriate for use as a learning medium to improve student understanding in Islamic Religious Education.

The main objective of this activity is to improve students' understanding of Islamic Religious Education (PAI) through the use of Quizizz-based digital media at SMAN 1 Tanah Luas. Specifically, this activity aims to increase active student engagement in the learning process, improve learning outcomes from both cognitive and affective aspects, and create a more interactive and enjoyable PAI learning atmosphere. Through the application of Quizizz, students are expected to be able to understand PAI material more deeply, not only by memorizing concepts, but also by relating them to the context of everyday life. In addition, this activity also aims to encourage teachers to develop technology-based learning innovations as an effort to continuously improve the quality of PAI learning. The problem-solving plan for this activity was implemented by integrating Quizizz into the Islamic Religious Education (PAI) learning process in a systematic and structured manner. This integration encompasses the learning planning stage, the implementation of teaching and learning activities, and the evaluation of student learning outcomes. During the planning stage, teachers develop learning materials and evaluation questions tailored to the core competencies

and achievement indicators of PAI learning. Furthermore, during the implementation stage, Quizizz is used as a learning support medium to directly and interactively measure student understanding. During the evaluation stage, Quizizz is utilized as a formative and summative evaluation medium to continuously assess the development of student understanding. Through these steps, it is hoped that the PAI learning process will be more effective, focused, and able to provide constructive feedback for both students and teachers. With the implementation of Quizizz-based digital media, Islamic Religious Education (PAI) learning at SMAN 1 Tanah Luas is expected to be more effective, relevant, and meaningful in accordance with the demands of education in the digital era. The use of this media not only has the potential to increase student understanding and engagement, but also encourages the creation of a more interactive and enjoyable learning atmosphere. The findings from this activity are expected to provide practical contributions for PAI teachers in developing technology-based learning innovations, particularly in the use of digital media as a means of evaluation and material reinforcement. In addition, the results of this activity are also expected to serve as a reference for the development of technology-based PAI learning at the secondary school level and become a consideration for schools in improving the quality of PAI learning in a sustainable manner.

LITERATURE REVIEW

Islamic Religious Education (PAI) teaching in secondary schools plays a crucial role in shaping students' religious understanding and character. However, various studies show that PAI instruction is still dominated by conventional lecture methods and written assessments, resulting in low student engagement and understanding. This situation demands learning innovations that are more relevant to the characteristics of students in the digital age. A student-centered learning approach is a pedagogical foundation widely recommended in educational literature. Hattie (2017) asserts that effective learning occurs when students are actively engaged, receive prompt feedback, and have the opportunity to reflect on their learning process. This approach positions the teacher as a facilitator who directs and supports the learning process. Integrating digital technology into learning is a crucial strategy to support student-centered learning. According to Darmawan (2020), digital media can increase student motivation and participation because it offers interactive and contextual learning experiences. In the context of Islamic Religious Education (PAI), the use of digital technology has the potential to help students understand material in a more engaging and meaningful way.

Quizizz is a game-based digital learning platform widely used as a tool for evaluation and material reinforcement. This platform allows teachers to present questions interactively with immediate feedback, helping students identify errors and improve their understanding of concepts. These characteristics make Quizizz relevant for supporting active and reflective learning. Several studies have shown that using Quizizz has a positive impact on student learning outcomes and motivation. Research by Purba (2020) and Salsabila and Pramudiani (2021) found that Quizizz can increase student active participation and create a more enjoyable learning environment. These findings suggest that game-based media can improve the quality of the learning process. From a pedagogical perspective, Quizizz aligns with constructivism theory, which emphasizes students' active role in constructing knowledge. Through the process of answering questions, receiving feedback, and reflecting, students not only memorize material but also gain a deeper understanding of concepts. This is highly relevant to Islamic Religious Education (PAI) learning objectives, which emphasize understanding and internalizing values.

Besides being an evaluation tool, Quizizz also functions as a formative assessment tool that helps teachers monitor student learning progress. Black and Wiliam (2018) emphasized that effective formative assessment can continuously improve the quality of learning. Therefore, using Quizizz in Islamic Religious Education (PAI) learning can help teachers adapt learning strategies to meet student needs. However, a literature review shows that research on the use of Quizizz in Islamic Religious Education (PAI) learning at the high school level is still limited. Most studies focus on general subjects, necessitating contextual studies in PAI learning. This limitation indicates a research gap that needs to be filled. Based on this description, this research focuses on the application of Quizizz-based digital media in Islamic Religious Education (PAI) learning at SMAN 1 Tanah Luas. This study aims to examine the extent to which Quizizz can improve student understanding and engagement, thereby providing practical and empirical contributions to the development of technology-based PAI learning.

METHOD

This study employed an innovative digital media-based learning design with a descriptive quasi-experimental approach. This approach was chosen to analyze the improvement in student understanding in Islamic Religious Education (PAI) learning through the use of Quizizz-based digital media. The activities were systematically implemented through planning, learning implementation, data collection, and analysis of the results.

The research subjects were 10th-grade students at SMAN 1 Tanah Luas taking Islamic Religious Education. Subject selection was conducted purposively, considering the suitability of the teaching materials, students' readiness to use digital devices, and the availability of learning support facilities. The research subjects were characterized by their habit of using gadgets and the internet in their daily learning activities. The instruments and materials used in this study included Islamic Religious Education learning materials (PAI) in the form of teaching modules and lesson plans (RPP), technological devices (laptops or student devices), an internet connection, and the Quizizz platform as a learning and evaluation medium. Data collection instruments included student activity observation sheets, Quizizz-based test questions, and student response questionnaires. The learning design integrates Quizizz into core Islamic Religious Education (PAI) learning activities. The teacher briefly presents the learning objectives and material, then administers an interactive quiz using Quizizz to reinforce and evaluate student understanding. This learning flow is designed to encourage active student engagement and provide immediate feedback on learning outcomes.

Figure 1. Quizizz-Based Islamic Education Learning Flow



Data collection techniques included observation, tests, and questionnaires. Observations were used to assess student activity and engagement during the learning process. Tests were conducted using Quizizz quizzes to measure students' understanding of Islamic Religious Education (PAI) material. Questionnaires were used to obtain data on student responses to the use of digital media in learning. Data analysis was conducted using both quantitative and qualitative descriptive methods. Test results were analyzed by calculating the average score and percentage of students' understanding levels before and after the Quizizz application. Observation and questionnaire data were analyzed qualitatively to illustrate changes in student motivation, attitudes, and engagement. Examples of the results of the analysis of student understanding are presented in Table 1 as a basis for discussing the increase in student understanding after implementing the Quizizz media.

Table 1. Results of Student Understanding in Islamic Religious Education Learning

Understanding Category	Before Quizizz (%)	After Quizizz (%)
Very good	15	40
Good	35	45
Enough	30	10
Not enough	20	5

The data in the table is further analyzed in the Results and Discussion section to explain the effectiveness of using Quizizz-based digital media in improving students' understanding of Islamic Religious Education learning at SMAN 1 Tanah Luas.

RESULTS AND DISCUSSION

Improving Student Understanding through Quizizz Media

The research results show that the implementation of Quizizz-based digital media has a positive impact on improving student understanding in Islamic Religious Education (PAI) learning. This improvement can be clearly seen from the comparison of student understanding levels before and after using Quizizz, as presented in Table 1. The data shows a significant shift from low understanding to higher understanding.

Before the implementation of Quizizz, the distribution of student understanding was still dominated by the "good" and "sufficient" categories, with some even falling into the "poor" category. This condition indicates that Islamic Religious Education (PAI) learning using conventional methods has not been able to fully reach all levels of student ability. After the use of Quizizz, there was an increase in the percentage of students in the "very good" and "good" categories, accompanied by a significant decrease in the "sufficient" and "poor" categories. These changes indicate that Quizizz media is able to help students understand Islamic Religious Education material more optimally and evenly. This improved understanding is inseparable from Quizizz's characteristic of providing immediate feedback. Each question answered by students is immediately followed by correct or incorrect information, allowing students to immediately identify errors and correct their understanding. This mechanism encourages a reflective learning process, where students not only memorize material but also understand concepts more deeply. This aligns with Black and Wiliam's (2018) perspective, which emphasizes the importance of formative assessment in improving the quality of learning.

Furthermore, the systematic learning flow, as shown in Figure 1, also contributes to improved student understanding. Presenting learning objectives at the beginning of the lesson provides students with a clear direction and focus. The concise and contextual presentation of the material makes it easier for students to grasp the core learning points before taking the interactive quiz. Reflection and reinforcement activities at the end of the lesson further solidify students' understanding of the Islamic Religious Education (PAI) material they have learned. Using Quizizz also allows teachers to monitor student understanding in real time. Teachers can use quiz data to identify material that students haven't fully grasped. This allows teachers to reinforce or improve learning directly. These findings demonstrate that Quizizz functions not only as an evaluation tool but also as a diagnostic instrument in Islamic Religious Education (PAI) learning. The findings of this study reinforce previous research that found game-based learning media to be highly effective in improving students' conceptual understanding. Salsabila and Pramudiani (2021) stated that using Quizizz can significantly improve students' understanding and learning motivation compared to conventional assessment methods. Therefore, the results of this study provide empirical support for these findings, particularly in the context of Islamic Religious Education (PAI) learning.

Student Involvement and Response in Islamic Religious Education Learning

In addition to improved understanding, observations also showed increased student engagement and activeness during the Islamic Religious Education (PAI) learning process. During the Quizizz implementation, students appeared more focused, enthusiastic, and eager to participate in the learning activities. The classroom atmosphere became more lively as students were directly involved in answering questions and observing the results displayed in real time. This student engagement is influenced by the healthy competitive elements in Quizizz, such as scoring and ranking. These elements encourage students to work more seriously on answering questions without creating undue pressure. Learning presented in a game-like format makes students feel more relaxed and comfortable, allowing them to showcase their true abilities. This is crucial in Islamic Religious Education (PAI) learning, which emphasizes emotional well-being and a positive attitude. Student responses to the use of Quizizz have also been very positive. A survey showed that most students stated that Islamic Religious Education (PAI) learning became more engaging, enjoyable, and less boring. Students felt more motivated to participate in learning and work on the questions because of Quizizz's interactive and user-friendly interface. This demonstrates that the right digital media can increase student interest in Islamic Religious Education (PAI).

From a pedagogical perspective, these findings reflect the application of student-centered learning principles in Islamic Religious Education (PAI) instruction. Quizizz provides a space for students to learn actively and independently, while the teacher acts as a facilitator, guiding the learning process. This approach aligns with Hattie's (2017) opinion, which states that active student engagement is a key factor in increasing learning effectiveness. The implications of this research indicate that Quizizz-based digital media can be used as a strategic alternative to improve the quality of Islamic Religious Education (PAI) learning in secondary schools. The implementation of Quizizz not only improves student understanding but also creates a more interactive and enjoyable learning environment. Therefore, the integration of Quizizz into Islamic Religious Education (PAI) learning at SMAN 1 Tanah Luas can be a relevant and sustainable technology-based learning model.

CONCLUSION

The use of Quizizz-based digital media in Islamic Religious Education (PAI) learning at SMAN 1 Tanah Luas has been proven to positively contribute to improving the quality of student learning processes

and outcomes. The integration of Quizizz into learning activities increases student engagement, creates a more interactive and enjoyable learning environment, and helps students understand PAI material more effectively. Evaluation results showed an increase in student understanding of the material presented, both through formative and summative evaluations. Quizizz's immediate feedback feature allows students to quickly assess their level of mastery, encouraging continuous improvement in understanding and conceptual reinforcement. These findings confirm that the use of technology-based digital media can support student-centered Islamic Religious Education (PAI) learning. In addition to improving student learning outcomes, using Quizizz also makes it easier for teachers to conduct systematic and efficient learning evaluations. Teachers can use quiz data as a basis for reflection and refinement of teaching strategies and methods for subsequent sessions. Thus, Quizizz serves not only as an evaluation tool but also as a supporting tool for improving the quality of learning. Going forward, the implementation of Quizizz-based digital media needs to be developed sustainably by integrating it into more varied and contextual learning models. This development is expected to strengthen the relevance of Islamic Religious Education (PAI) learning in the digital era and serve as a practical reference for teachers in optimizing the use of technology in secondary school learning.

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