

## The Influence Of Using The Quizizz Application On Student Engagement In Fiqh Subjects At SMA Muhammadiyah 3 Surakarta

Fadhilah Hasanah<sup>1\*</sup>, Joko Subando<sup>2</sup>

Islamic Education Study Program, Institut Islam Mamba'ul Ulum Surakarta\*<sup>1,2</sup>

<sup>\*1</sup>email: [fadhilahhasanah@gmail.com](mailto:fadhilahhasanah@gmail.com)

<sup>2</sup>email: [jokosubando@yahoo.co.id](mailto:jokosubando@yahoo.co.id)

**Abstract:** This study aims to examine the influence of using the Quizizz application on student engagement in Fiqh learning at SMA Muhammadiyah 3 Surakarta. This research employs a quantitative approach with a quasi-experimental design, involving two groups: the experimental group (using Quizizz) and the control group (using conventional methods). Data were collected through observation and questionnaires, and analyzed using a t-test. The results showed that students in the experimental group were significantly more active than those in the control group. Visual, listening, motor, and verbal participation aspects were more dominant in the experimental group. The use of Quizizz not only increased student motivation and engagement but also made it easier for teachers to conduct real-time assessments. Therefore, Quizizz can serve as an effective technology-based learning strategy to enhance student participation, particularly in subjects that are typically perceived as monotonous.

**Keywords:** Quizizz; Student Engagement; Fiqh Learning; Educational Technology; Quasi-Experimen.

**Abstrak:** Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan aplikasi Quizizz terhadap keaktifan siswa dalam pembelajaran mata pelajaran fikih di SMA Muhammadiyah 3 Surakarta. Penelitian ini menggunakan pendekatan kuantitatif dengan desain kuasi-eksperimen, melibatkan dua kelompok: eksperimen (menggunakan Quizizz) dan kontrol (menggunakan metode konvensional). Data dikumpulkan melalui observasi dan angket, serta dianalisis menggunakan uji-t. Hasil penelitian menunjukkan bahwa keaktifan siswa pada kelompok eksperimen meningkat secara signifikan dibandingkan kelompok kontrol. Aspek visual, mendengarkan, motorik, dan

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partisipasi lisan lebih dominan pada kelompok eksperimen. Penggunaan Quizizz tidak hanya meningkatkan motivasi dan keterlibatan siswa, tetapi juga memudahkan guru dalam proses evaluasi pembelajaran secara real-time. Dengan demikian, Quizizz dapat menjadi alternatif strategi pembelajaran berbasis teknologi yang efektif dalam meningkatkan keaktifan siswa, khususnya pada mata pelajaran yang cenderung dianggap membosankan.

**Keywords:** Quizizz; Student Engagement; Fiqh Learning; Educational Technology; Quasi-Experiment.

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### **A. Introduction**

Education is one of the main pillars in developing high-quality human resources. In the world of education, student engagement in the learning process is one of the key indicators of the success of a teaching method. Student activity not only reflects their involvement in the learning process, but also indicates their level of understanding, interest, and motivation in absorbing knowledge. Students who are actively engaged in learning tend to have better understanding, the ability to think critically, and are more capable of solving problems effectively.

However, the reality in the field shows that many students still experience difficulties in maintaining their engagement during the learning process. Factors such as monotonous teaching methods, lack of interaction between teachers and students, and limited variation in material delivery often lead to a decline in students' learning enthusiasm. This condition is particularly evident in the subject of Fiqh, which is often perceived as a theoretical and less interesting subject by most students.

Fiqh is one of the important subjects in Islamic education that aims to provide understanding regarding Islamic laws related to daily life. Although it has a significant role in shaping students' character and behavior, in practice, this subject is often less favored by students. Many students perceive Fiqh as a boring subject due to the fact that it is usually delivered in a lecture-based manner and lacks active interaction. In such conditions, innovation in learning strategies is needed to enhance student engagement and to make Fiqh learning more appealing and effective.

Along with technological development, various innovations have emerged in the field of education that aim to improve the quality of learning. One of the increasingly used technologies in education is digital-based applications designed to support interactive learning. One application that has been proven to increase student activity in learning is Quizizz.

Quizizz is a game-based learning platform that allows students to learn in a more fun and interactive way. This application offers a variety of attractive features, such as interactive quizzes, time limits, rankings, and instant feedback, all of which can increase student involvement and motivation in the learning process.

According to Windartati (2023), Quizizz is a narrative and flexible educational game application. Besides serving as a means of delivering material, this application can also be used as an interesting and enjoyable learning evaluation tool. Learning using Quizizz can reduce student boredom and make the learning process more interactive. With the ease of access to technology today, teachers can develop and utilize Quizizz as an evaluation tool to achieve educational goals more effectively.

Maria Victoria Agouborde (2025), in her article, quoted the opinion of Albert Sangrà, an expert in the field of digital learning, who stated that the use of technology in education can significantly improve the quality of learning. According to him, the appropriate use of technology can create a more dynamic and interactive learning environment, which in turn can increase students' motivation and learning outcomes. He also emphasized that technology-based learning models will continue to develop in the future, especially with the emergence of hybrid learning models that combine face-to-face methods with digital technology.

By using Quizizz, students can learn while playing, which makes them more motivated to actively participate in class. In addition, this application also allows teachers to create questions flexibly, monitor student learning outcomes in real-time, and provide faster and more effective feedback.

This research focuses on analyzing the effect of using the Quizizz application on student engagement in the subject of Fiqh at SMA Muhammadiyah 3 Surakarta for the 2024/2025 academic year. This research is expected to provide insights for educators

regarding the effectiveness of technology-based learning media in increasing student participation in the learning process. With this research, it is also hoped that teachers will better understand the benefits and optimal strategies for using Quizizz as a learning aid, thereby creating a more interactive, interesting, and effective learning atmosphere for students.

## **B. Research Methods**

**Type of Research:** The type of research used in this study is quasi-experimental research, which is a method designed to examine cause-and-effect relationships between variables without randomly assigning subjects (non-random assignment). This approach is chosen because it fits the real conditions in schools, where random assignment of students into different groups is not always feasible. This design allows the researcher to provide specific treatment (use of the Quizizz application) to one group and compare it with another group that does not receive the treatment (conventional method) in order to determine the effect on student engagement in Fiqh learning.

According to Sugiyono (2019), quasi-experimental methods allow researchers to maintain control over external variables that may affect internal validity, even without full randomization. Therefore, this design is often applied in educational research involving pre-existing class groups.

**Place and Time of Research:** This research was conducted at SMA Muhammadiyah 3 Surakarta, a senior high school that has begun to integrate technology into its teaching activities. The school was selected due to the availability of digital learning facilities and its openness to instructional innovation such as the implementation of the Quizizz application.

The research was carried out over a period of six months, from March to August 2025, which included the planning stage, implementation of treatment, data collection, and analysis. This timeframe was considered sufficient to observe the effect of using Quizizz on student engagement in the Fiqh subject.

**Research Design:** The study employed a Pretest–Posttest Non-Equivalent Control Group Design, involving two groups:

- 1) **Experimental Group:** students learning Fiqh using the Quizizz application

- 2) Control Group: students learning Fiqh through conventional teaching methods

This design provides a comparison of student engagement levels before and after treatment in both groups. The design structure is as follows:

Group	Treatment	Measurement
Experimental	X (Quizizz)	O <sub>1</sub> (pretest), O <sub>2</sub> (posttest)
Control	– (Conventional)	O <sub>1</sub> (pretest), O <sub>2</sub> (posttest)

Notes:

- 1) O<sub>1</sub> = Pretest to measure engagement before treatment
- 2) O<sub>2</sub> = Posttest to measure engagement after treatment
- 3) X = Treatment using Quizizz in Fiqh learning

**Population and Sample:** The population in this study included all tenth-grade students at SMA Muhammadiyah 3 Surakarta in the 2024/2025 academic year who participated in Fiqh learning, totaling 57 students. The sample was selected using purposive sampling, a non-probability sampling technique where subjects are selected based on specific criteria relevant to the study objectives. The sample consisted of two classes:

- 1) Class X-A (28 students): designated as the experimental group
- 2) Class X-B (29 students): designated as the control group

These classes were chosen based on criteria such as academic level equivalence, availability of supporting facilities, and the readiness of students and teachers to implement technology-based learning.

**Data Collection Techniques:** The following data collection methods were used:

**Observation:** Observations were conducted to directly monitor student activities during the learning process. The researcher used an observation sheet that included five key indicators of engagement: Visual activity, Verbal activity, Listening activity, Writing activity, Motor activity, Observations were conducted systematically to obtain objective data on student involvement throughout the lessons.

Engagement Questionnaire: The questionnaire was based on a Likert scale and filled out by observers (not students). It was designed to complement the observational data and provide a more holistic view of student engagement during learning. The indicators used in the questionnaire aligned with the five key engagement aspects and were validated by experts before implementation.

**Validity and Reliability Testing:**

- 1) Content Validity was assessed through expert judgment to ensure the appropriateness of each indicator with the intended measurement objectives.
- 2) Empirical Validity was tested using Pearson correlation via SPSS. An item was considered valid if the calculated r-value exceeded the critical r-table value.
- 3) Reliability was assessed using Cronbach's Alpha. A reliability coefficient of  $\alpha > 0.60$  indicated that the instrument was reliable.

**Data Analysis Techniques**

The data were analyzed using statistical methods as follows: Descriptive Analysis: This provided an overview of the scores from observations and questionnaires, including means, standard deviations, and data distribution. Preliminary Assumption Testing:

Normality Test: Using Kolmogorov-Smirnov or Shapiro-Wilk tests to determine whether the data followed a normal distribution. Homogeneity Test: Using Levene's Test to verify the equality of variances between the two groups.

Hypothesis Testing (Independent t-Test): The independent t-test was used to assess whether there was a significant difference in student engagement between the experimental and control groups.

**Decision Criteria:**

If Sig. (2-tailed)  $< 0.05 \rightarrow H_0$  is rejected  $\rightarrow$  there is a significant difference (treatment had an effect).

If Sig.  $> 0.05 \rightarrow H_0$  is accepted  $\rightarrow$  there is no significant difference.

**C. Results and Discussion**

This study aimed to determine the influence of using the Quizizz application on student engagement in the Fiqh subject at SMA Muhammadiyah 3 Surakarta. Based on the data collected through observation and questionnaires, it was found that the use of Quizizz had a significant impact in increasing student engagement compared to conventional teaching methods. Observational results showed that the average level of student engagement in the experimental group reached 69%, while in the control group it was only 34%. This difference indicates that learning methods with a gamification approach through Quizizz were able to create a more interesting, participatory, and interactive learning environment.

**Analysis by Engagement Aspects:** Student engagement was analyzed based on five main indicators, as follows:

#### **Visual Aspect (89%)**

The visual design presented in the Quizizz application was proven to increase students' attention. The materials were displayed in the form of interactive quizzes with bright colors, animated icons, and countdown timers, which made students focus and feel motivated to pay attention to each question. The use of strong visual elements aligns with Mayer's (2001) multimedia learning theory, which states that the combination of words and images can significantly enhance cognitive processing.

#### **Listening Aspect (91%)**

Students' listening ability also improved, as shown by their attention when the teacher explained the correct answers after the quiz session. This demonstrated that digital-based learning not only facilitated one-way interaction but also strengthened teacher-student interaction.

#### **Verbal Aspect (53%)**

Students became more active in discussions and in answering questions verbally, either spontaneously or when asked by the teacher. Increased verbal participation indicated that learning with Quizizz encouraged students to express their opinions, demonstrate understanding, and gain confidence in articulating arguments.

#### **Writing Aspect (52%)**

Although writing activity was not dominant, it was still evident, particularly when students recorded scores, incorrect answers, or key points from discussions. Some students even rewrote questions and explanations as a form of independent reflection. This showed that the evaluative process in Quizizz could trigger continuous learning awareness.

### **Motor Aspect (80%)**

Motor engagement was observed when students interacted with digital devices by typing, selecting answers, or moving around to discuss with peers. This physical activity contrasted with the control group, where students remained mostly passive, only listening without significant physical engagement.

### **Active Learning through Gamification**

Quizizz integrates the principles of gamification, namely the application of game elements in learning to create a more engaging and enjoyable experience. In this context, features such as scores, rankings, countdown timers, and interactive displays play an important role in fostering healthy competition among students. This environment drives active participation as students feel challenged to achieve their best performance.

Additionally, the instant feedback provided after each question enables students to understand how well they grasped the material, while also motivating them to make improvements. Visually presented achievements also give a positive psychological boost that can increase self-confidence and enthusiasm for learning.

Real-time scoring displays, leaderboards, and digital rewards such as medals or badges encourage students to stay focused and competitive. This becomes an effective form of positive reinforcement, where students feel appreciated for their efforts, not just for the outcomes.

### **Qualitative Findings and Field Observations**

Informal interviews with Fiqh teachers revealed that using Quizizz created a more dynamic classroom atmosphere. Students appeared more active, asked more questions, and even previously passive students became more engaged. Teachers also noted that

the learning process became less monotonous, and the classroom environment more conducive.

Quizizz also helped teachers carry out real-time assessments. Teachers were able to monitor students' results immediately after quizzes and identify which parts of the material were most frequently answered incorrectly. This enabled timely remediation and allowed for a formative, adaptive evaluation process.

### **Statistical Analysis Results (t-Test)**

To examine the significance of differences between the two groups, an independent t-test was conducted using SPSS. The result showed a significance value (Sig. 2-tailed) of  $< 0.05$ , which indicates a statistically significant difference between the experimental and control groups in terms of student engagement.

These findings confirm that the use of Quizizz has a positive effect on increasing student engagement in Fiqh learning.

### **Theoretical Relevance**

The results of this study are supported by constructivist learning theory, which states that meaningful learning occurs when students actively construct knowledge through experience. Quizizz encourages students to engage in the learning process directly, understand concepts through quiz challenges, and integrate knowledge through discussions after the quizzes.

This study also supports the 21st-century learning framework, which emphasizes the development of 4C skills: critical thinking, creativity, collaboration, and communication. Quizizz promotes quick thinking, creative problem-solving, and active communication with both teachers and peers.

### **Challenges and Solutions**

The main challenges found were the limited availability of devices and unequal internet connectivity. To overcome this, teachers provided school Wi-Fi access and arranged for device loans for students in need. Teachers also gave clear usage instructions to avoid wasting time on technical issues.

Another challenge was the risk of distraction from digital devices. Therefore, teachers had to closely supervise usage to ensure students stayed focused on learning and not on unrelated apps.

### **Practical Implications**

For Teachers:

Quizizz can serve as an effective and enjoyable teaching aid. Teachers can use it not only for evaluation purposes but also for drilling, reviews, or ice-breaking activities. It also provides accurate data on student performance, allowing teachers to quickly adapt their teaching strategies.

For Students:

The use of Quizizz fosters confidence, encourages creativity, and promotes independent learning habits. Students find learning more enjoyable and less boring.

For Schools and Educational Institutions:

Quizizz represents a model of digital transformation in education. Schools should provide adequate digital infrastructure and teacher training so that technology-based learning can run effectively and sustainably.

### **D. Conclusion**

The use of the Quizizz application in Fiqh learning has shown a positive impact on the engagement of tenth-grade students at SMA Muhammadiyah 3 Surakarta. Students became more motivated, active, and involved in the learning process. Quizizz can be considered an innovative alternative strategy that improves the quality of Fiqh learning. The integration of technology in education not only enhances learning outcomes but also transforms the classroom atmosphere into a more enjoyable and interactive environment.

Through gamification features such as scoring, leaderboards, and timed quizzes, Quizizz successfully creates a competitive learning environment that encourages active participation from all students. Teachers also benefit from the ease of managing and evaluating the learning process in real-time. With this approach, students do not merely

receive information passively but also build their understanding through play and healthy competition.

The increase in student engagement was evident from observations, questionnaire results, and statistical analysis, all of which showed that students in the experimental class were more active in visual, verbal, listening, writing, and motor aspects compared to those in the control class. Therefore, technology-based learning such as Quizizz is highly relevant to be implemented in the digital era to improve the effectiveness of teaching, especially in subjects perceived as monotonous like Fiqh.

Accordingly, this study recommends that teachers begin integrating applications like Quizizz into their learning strategies. Schools are also expected to support this effort by providing teacher training and technological facilities to ensure the optimal and sustainable implementation of such methods.

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