
The Application of Quizizz as an Interactive Learning Medium to Enhance Student Learning Engagement

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Abstract: Student engagement plays a key role in the success of the learning process, as it directly affects students' understanding, motivation, and ability to think critically. To encourage greater participation, Quizizz a game-based learning platform has shown strong potential. This study sought to enhance the engagement of fifth-grade students at SDN 3 Lamahala by integrating interactive learning activities through Quizizz. The research focused on three main indicators: students' ability to ask questions, attentiveness during the teacher's explanations, and independence in completing assignments. Using a Classroom Action Research (CAR) approach, the study was conducted over two cycles, each involving four stages: planning, implementation, observation, and reflection. The results of the study showed a significant increase in student learning activity. In the pre-cycle stage, the activity level was only 24%. This figure increased to 52% at the end of cycle I and reached its peak at 80% in cycle II. Thus, it can be concluded that the use of the Quizizz application is effective in increasing student learning activity and creating a more enjoyable, interactive, and participatory learning atmosphere.

Keywords: learning activity; interactive learning; Quizizz application.

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Introduction

One of the main indicators of successful education is the creation of a fun and interactive learning process, that is characterized by high student participation. A conducive learning environment has been proven to improve students' understanding of the material and motivation to learn, as well as develop their critical thinking skills (Nurhasanah et al., 2024; Pranoto, 2020). Student engagement also facilitates effective communication among teachers and students. However, the reality on the ground shows that many students, especially at the elementary school level, still tend to be passive in their learning (Loupatty & Saragih, 2021). This has become a serious problem that hinders the achievement of optimal educational goals.

The phenomenon of low student participation is also faced by SD Negeri 3 Lamahala. Preliminary studies through observation and interviews reveal several contributing factors, such as the dominance of boring lecture methods, a lack of intrinsic motivation among students, that requires external stimuli, a lack of courage among students to ask or answer questions, and limited learning media and facilities. Although various methods have been implemented to enhance student participation, there remains a gap where existing solutions have not fully addressed the issue comprehensively. Conventional solutions often lack appeal and interactivity, thereby failing to effectively stimulate sustained student engagement.

Entering the digital age, information and communication technology (ICT) offers great potential as an innovative solution to overcome these challenges (Anggoro et al., 2024; Nadila & Septiaji, 2023). One relevant ICT application is Quizizz, a web-based platform that enables teachers to create interactive quizzes and game-based learning activities. Quizizz has proven effective in presenting material, evaluating learning outcomes, and creating a more enjoyable learning environment (Mulyati & Evendi, 2020). Its diverse features, such as multiple choice, true-false, short answer, background image addition, and flexibility in use as classroom exercises or homework, make it a potential medium for stimulating active student participation (Supriadi & Tazkiyah, 2021).

The results of a study by (Masnu'ah et al., 2024) in the journal article "The Use of the Quizizz Application in Learning Activity in Islamic Education at Madrasah Tsanawiyah" show that the use of the Quizizz application has proven to be very effective in various aspects of Islamic education. The integration of Quizizz into the learning process markedly enhanced students' engagement, fostering greater motivation, heightened focus, and increased enthusiasm compared to conventional instructional methods. This positive shift was further reflected in the notable improvement of their academic performance.

Findings from a related study published in the journal *The Effect of Using Interactive Learning Media Quizizz on the Learning Outcomes of Grade 10 Students in the DKV Vocational Program at SMK Negeri 10 Malang* demonstrate that the implementation of Quizizz is highly effective in enhancing students' learning outcomes while fostering a more engaging and interactive classroom atmosphere. The platform facilitates the delivery of material in a structured and appealing format, transforming the learning process into an innovative and enjoyable experience by integrating quiz-based assessments with game-like elements. Additionally, Quizizz supports optimal assessment of learning outcomes by features such as a leaderboard and paper mode, enabling teachers to view students' scores and evaluate their understanding quickly, while also boosting motivation and student engagement due to the enjoyable and interactive learning environment (Saputra et al., 2024).

Meanwhile, recent findings reported in the journal *The Use of Quizizz Media in Enhancing Student Learning Engagement in Islamic Education and Civic Education Classes at Grade VIII of SMP Negeri 1 Jenangan Ponorogo* provide compelling evidence that the integration of the Quizizz application is highly effective in overcoming low levels of student engagement often associated with conventional, non-interactive teaching methods. Quizizz successfully presents material in an innovative, interactive, and enjoyable manner, thanks to its gamification features and visual, audio, and animation elements, that bring life to learning that is often perceived as monotonous. Furthermore, this application significantly enhances student learning engagement across various aspects, including interactive and enjoyable group discussions, boosting students' confidence in asking questions due to immediate feedback, and increasing their enthusiasm in answering questions by fostering active participation and healthy competition (Wardana & Mustofa, 2025).

The three research articles above focus primarily on the use of the Quizizz application as an interactive learning medium in secondary education (junior high school/MTs/vocational high school). All three agree that Quizizz is effective in overcoming the problem of low student activity or learning outcomes caused by conventional learning methods. In contrast, this study differs in its systematic effort to analyze the specific impact of Quizizz usage on improving student learning engagement in fifth-grade students at SD Negeri 3 Lamahala, by a focus on how the game elements and interactivity inside of Quizizz can significantly transform classroom dynamics by passive to active.

Based on the problems and potential solutions that have been described, the main objective of this study is to determine the extent to that the use of the Quizizz application can increase the learning activity of fifth-grade students at SD Negeri 3 Lamahala. This study will focus on the use of Quizizz as the independent variable and student learning activity as the dependent variable. Thus, this study is expected to provide empirical evidence regarding the effectiveness of the Quizizz application as an

innovative learning tool to enhance student activity in elementary school settings, as well as serve as a reference for teachers and educational institutions in adopting technology to create more dynamic and engaging learning experiences.

Method

This study uses the Classroom Action Research (CAR) method, that is a research model developed in the classroom by the aim of improving learning. Improvements are made gradually and continuously throughout the research period, that is by February to March 2025. In Classroom Action Research (PTK), there is a cycle of implementation consisting of the following patterns: planning, implementation, observation, reflection, and revision (replanning). Unlike conventional research, this study is accompanied by a cycle of interventions. The research activities began by a pre-cycle phase, where the learning media had not yet been implemented. The objective was to assess the level of student activity and ability in classroom learning before the implementation of the Quizizz learning media. This was followed by two additional cycles, Cycle I and Cycle II, each consisting of two meetings.

This classroom action research was conducted at SDN 3 Lamahala, Lamahala Jaya Village, East Adonara District, East Flores Regency, East Nusa Tenggara Province. The research subjects were all 25 fifth-grade students, consisting of 11 male students and 14 female students. All students were selected as subjects because this research is inherently participatory and contextual, by the aim of improving teaching practices inside of the fifth-grade class that is the subject of the study. Therefore, all class members involved in the improvement actions were included as research subjects. Additionally, this study focuses on improvements inside of the specific context of that class, rather than generalizing the results to a larger population.

The success of this study was measured by achieving a minimum learning activity level of 75%, that falls into the "Very Good" category according to the learning activity conversion guidelines. Observations were conducted during the learning process as a form of measurement using observation sheets by the following criteria: (1) asking questions, (2) paying attention to the teacher's explanations, and (3) completing tasks independently. The classification categories used in this study are "very good" by a score range of 80-100, "good" by a score range of 70-79, "fair" by a score range of 60-69, and "poor" by a score range of less than 60 (0-59). To obtain the percentage of activity, the presentation formula was used, that involves summing the scores for each question and dividing them by the maximum score, then multiplying by 100%. The resulting percentages were then compared across cycles to observe changes in student learning activity and determine whether there was an increase in activity by one cycle to the next.

Results and Discussion

This research activity began by a pre-cycle phase, during that the new learning media had not yet been implemented. This was done to determine the level of student activity and ability in classroom learning before the Quizizz media was applied.

This study was conducted in two cycles, Cycle I and Cycle II, by two meetings in each cycle. The research stages conducted in Cycle I, Session 1, were as follows: 1) planning stage, where the researcher prepared observation sheets and developed quiz questions; 2) implementation stage, that involved distributing the material files via a WhatsApp group, instructing and guiding students on how to download the application, and providing the quiz code; 3) observation stage, where the researcher downloaded the students' work; and 4) reflection. These stages were also carried out for the second meeting.

The complete observation results for each cycle can be seen in the following table:

Table 1. Summary of Student Activity Observation Results Pre-Cycle

No	N	F	Criteria
1	6	24	Very Good
2	4	16	Good
3	9	36	Fair
4	6	24	Insufficient

The table above shows that in the pre-cycle activity, where new learning media had not yet been implemented, the percentage of students who were active in learning was very small, namely 24% or only 6 out of 25 students. In other words, 76% or 19 students were not seen to be active in learning. Based on the research findings presented, there are several analyses explaining why the pre-cycle conditions showed low student activity and learning outcomes, as well as why new learning media (such as Quizizz) are believed to address these issues.

First, learning that relies solely on lectures devoid of creative and interactive media is unable to stimulate enthusiasm and active participation among students. Lectures tend to make students passive recipients of information, devoid of room for exploration or two-way interaction. This leads to boredom and a lack of mental and physical engagement among students in the learning process.

Second, the absence of creative and interactive media results in learning that is lacking in visual, auditory, or kinesthetic stimuli. Students do not receive enough stimulation to maintain their attention, causing their concentration to decline and becoming inactive. Limited interaction among teachers and students or among students also hinders the collaborative construction of knowledge.

Third, the unattractive nature of direct learning methods has implications for low student motivation. The uninteresting nature of teaching methods is one of the main factors contributing to low learning motivation (Nopriansyah & Ismanuar, 2024). When students are unmotivated, they tend not to participate actively, that ultimately correlates by low learning outcomes. This is evident by the majority of students who did not meet the Minimum Competency Criteria (KKM) at the beginning of the study.

Fourth, in today's digital age, students are accustomed to instant interaction and engaging content by various digital platforms. Learning that does not utilize interactive media becomes less relevant to their learning style, making it difficult to attract their interest and attention.

The results of this pre-cycle study emphasize that the use of learning media such as Quizizz can be an effective solution due to its ability to create a fun, interactive, and competitive learning environment. The gamification elements, immediate feedback, and competitive challenges offered by Quizizz can reignite students' enthusiasm and active participation, thereby significantly improving their engagement and learning outcomes. This reveals that the issue lies not in the students' abilities but in the learning approach, that has not yet been optimized to facilitate their potential.

Table 2. Summary of Student Activity Observation Results in Cycle I

No	Meeting 1	Session 2	Criteria
1	12 (48%)	14 (56%)	Very Good
2	8 (32%)	9 (36%)	Good
3	4 (16%)	2 (8%)	Fair
4	1 (4)	0 (0%)	Insufficient

Based on the table above, it can be seen that the results of Cycle I observations in the first meeting showed that 48% or only 12 out of 25 students were active. In the second meeting, 56% or 14 out of 25 students actively worked on quiz 2. Meanwhile, 45% or 11 students did not show any

improvement in Cycle I. The results of the first meeting became the basis for the next activity, namely reflection to identify weaknesses and obstacles encountered in that cycle. This was done to find solutions that could be applied in Cycle II by the hope of seeing improvement in that cycle. Based on the reflection conducted in Cycle I, several weaknesses were identified that prevented the learning objectives by being achieved. The weaknesses included unstable devices and internet connections, as well as many students who were late in accessing the Quizizz application, resulting in wasted time and reduced duration for completing the questions.

Table 3. Summary of Student Activity Observation Results Cycle II

No	Meeting	Meeting 2	Criteria
1	19 (76%)	21 (84%)	Very Good
2	5 (20%)	4 (16%)	Good
3	1 (4%)	0 (0%)	Fair
4	0 (0%)	0 (0%)	Insufficient

In the implementation of cycle II, teachers took the same steps as in cycle I, but by some adjustments and improvements based on the results of the reflection in cycle I. This can be seen in the table above, where it is known that in cycle II meeting 1, 76% or 19 out of 25 students actively worked on quiz 3. Meanwhile, in the second meeting, 84% or 21 out of 24 students were active. The students who had not yet drawn improvement accounted for 16% or only 4 out of 25 students. This reveals that there is an increase in student learning activity in each cycle, unlike the conditions in the pre-cycle. A similar finding was reported by (Azizah et al., 2023) in their study conducted at SMP Islam Tarbiyyatul Falah Karawang, that stated that before the implementation of interactive learning media such as Quizizz, students tended to be passive and unmotivated in participating in Islamic Education lessons. However, after using the application, students demonstrated high enthusiasm, greater focus, and active participation in answering questions and engaging in class discussions.

Table 4. Summary of Student Activity Success Rates in Classical Learning

No	Cycle	Meeting 1	Meeting 2	Average	Category
1	Pre	24	-	24	Low
2	I	48	56	52	Moderate
3	II	76	84	80	High

Based on the table above, the average achievement of each cycle can be presented in the following graph:

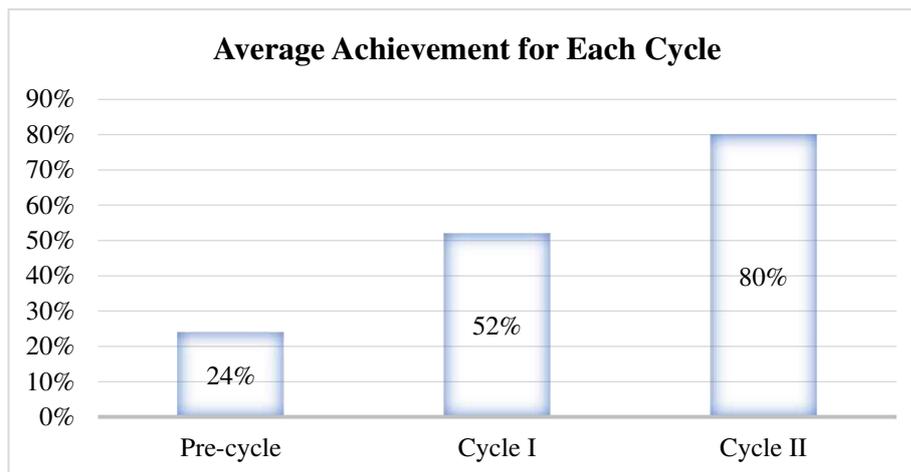


Figure 1. Average Achievement for Each Cycle

The graph above shows that student learning activity increased by Cycle I to Cycle II, as revealed by an increase in the average percentage of students who were active in learning, by 52% to 80%. Although there are still students who have not drawn an increase in learning activity, their percentage is very low. This also means that the percentage of student learning activity has met the success indicators after the implementation of the Quizizz media.

This is consistent by the findings of Dwi Utami & Tjipto Subroto (2023), who used the same method and revealed that the use of Quizizz media in learning was proven to stimulate and increase student activity in the classroom. A study involving 27 fifth-grade students at SD Negeri Petungrejo, Nguntoronadi District, Magetan Regency, revealed that the use of Quizizz created a more interactive and enjoyable learning experience. It also encouraged students to remain focused, actively participate, and maintain higher levels of motivation throughout the learning process. These findings highlight the considerable potential of Quizizz to enhance both student engagement and the overall quality of learning when implemented appropriately and strategically.

The integration of digital-based learning media, such as Quizizz, has been shown to effectively stimulate and enhance student learning activity in the classroom. A study by Latifah et al. (2024) at SDN 8 Cakranegara demonstrated that the use of Quizizz in science instruction led to a substantial increase in active student participation, which initially fell within the “adequate” category (52.2%) in Cycle I and rose to the “high” category (73.81%) in Cycle II. This improvement is largely attributed to the interactive, enjoyable, and game-based nature of Quizizz, which captures students’ attention and motivates them to participate more actively in the learning process. Although technical challenges such as unstable internet connections and limited device availability were encountered, the findings suggest that Quizizz can serve as a relevant and adaptive instructional tool, effectively fostering student engagement and supporting the attainment of learning objectives.

Other research conducted by (Astuti et al., 2024) revealed that the use of Quizizz learning media proved effective in creating an engaging learning process and increasing student activity in the classroom. Quizizz, as a technology-based learning medium, provides a diverse, interactive, and enjoyable learning experience that encourages active student participation. Its features such as game-based elements and real-time assessments effectively capture students’ attention, alleviate boredom, and foster deeper involvement in the learning process. Research findings indicate that the integration of Quizizz as a digital learning platform offers a relevant and responsive solution to the evolving demands of modern education, particularly within the context of elementary school science instruction. Consequently, incorporating Quizizz into teaching practices represents a pedagogical

strategy capable of facilitating the achievement of learning objectives in a more effective and meaningful way.

This study, although it shows the positive impact of Quizizz on student learning activity, has several limitations that may limit the generalization and depth of its analysis. First, this study only involved 25 students in one class, that is a very small and specific sample, so that findings regarding the effectiveness of Quizizz may not be generalized to a wider student population or other schools. Second, this study focused more on increasing the percentage of student activity, but did not elaborate on qualitative indicators of activity in more detail or how specific interactions by Quizizz features influenced deeper conceptual understanding, beyond simply actively working on quizzes or daring to ask questions.

Conclusion

The use of digital-based learning media such as Quizizz has proven to be effective in increasing student learning activity, as seen by the increase in average achievement by the low category (24%) in the pre-cycle to moderate (52%) in cycle I and high (80%) in cycle II. These findings align by previous studies indicating that Quizizz can create an interactive, enjoyable, and motivating learning environment, thereby encouraging active student participation in the learning process. Despite technical challenges, Quizizz's features, such as gamification and real-time assessment, make it a relevant and adaptive alternative learning tool. Therefore, it is recommended that future research examine the effectiveness of Quizizz at different educational levels and subject areas, as well as consider the integration of other pedagogical strategies to maximize student engagement and overall learning outcomes.

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