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Quizzz Game Media In Learning Mathematics To Improvement Learning Outcomes Mathematics Student Vocational School Muhammadiyah Lebaksiu

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ABSTRACT
ABSTRACT This study aims to examine the impact of using the Quizizz application in mathematics learning on student learning outcomes at SMK Muhammadiyah Lebaksiu. Using the Classroom Action Research (CAR) method, the results indicate that students' learning outcomes improved from a 24% success rate in the pre-cycle to 100% in the second cycle, with average scores increasing from 58 to 86.4. Additionally, student responses to the learning process increased from 52.4% to 83.46%. These findings demonstrate that Quizizz is effective in creating interactive, engaging learning experiences and enhancing student motivation.

Keywords: Quizizz, learning outcomes, mathematics, CAR.

54 Introduction

Education does not only cover basic skills such as reading, writing, and arithmetic, but also includes the development of social, personal, and other skills that are important for everyday life. In this case, teachers play an important role in transferring knowledge to students so that they are able to face various challenges. Mathematics, as an important part of science, has a vital role in everyday life such as measuring and calculating activities. Therefore, mathematics is taught since elementary school to form logical, analytical, and critical thinking patterns.

However, many students have difficulty in learning mathematics because the learning methods are monotonous and less interesting. This causes students to feel anxious, have difficulty understanding the material, and are less motivated. Therefore, teachers need to apply interactive and fun learning methods to help students understand the material better. The use of interesting learning media is one effective solution in creating a more lively learning atmosphere.

One of the learning media that can be used is Quizizz, an online-based application that provides interactive quizzes with interesting features such as animation, images, and automatic assessment. This application allows teachers to create multiple-choice questions, insert visual media, and share codes with students to access the quiz. Quizizz also provides statistics and student performance reports that can be downloaded and analyzed further, so that teachers can find out how far students understand the material.

In addition to being used directly in class, Quizizz also supports a "homework" feature that allows students to work on assignments anytime and anywhere, in accordance with the flexible learning concept of the 4.0 era. With ease of use and fast assessment, Quizizz helps teachers save, refine, and evaluate the questions used, and improve the quality of the questions through

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analysis of difficulty levels and discriminatory power. This makes Quizizz an effective tool for increasing student interest, motivation, and learning outcomes. Previous studies by Mulyati & Evendi (2020) and Muamalah et al. (2023) proved that the use of Quizizz in mathematics learning can significantly improve student learning outcomes. The increase in learning scores and process skills shows that this method is not only fun but also effective. This study is also in line with our research focus at SMK Muhammadiyah Lebaksiu which aims to utilize Quizizz to create fun mathematics learning and improve learning outcomes. With this media, students can learn flexibly, without being limited by classroom space.

55 Research Methods

Classroom Action Research (CAR) is a research conducted by teachers in the environment where they teach, aimed at improving the learning process and practices. According to Frankeel and Walled (2009), CAR can be conducted individually or in groups to address local problems, such as low learning motivation, high student absences, or suboptimal use of technology in learning. CAR is usually implemented in several repeated cycles with the Kurt Lewin model consisting of four main stages: planning, action, observation, and reflection. This model is flexible because the number of cycles can be adjusted until the expected improvement is achieved.

This research was conducted in class XII A of Health Analyst Department of SMK Muhammadiyah Lebaksiu in semester 2024/2025. The subjects of the research consisted of 25 students, with a composition of 3 male students and 22 female students. Data collection techniques were carried out through learning outcome tests and questionnaires to determine the extent of students' understanding and responses to the learning methods applied. This research prioritizes a solution-oriented approach that is directly applied in the classroom, with the hope of providing real changes to the quality of mathematics learning.

The criteria for learning outcome completion based on Pradilasari, Gani, and Khaldun (2019) are divided into five categories: very high (85–100), high (75–79.9), sufficient (70–74.9), low (60–69.9), and very low (0–59.9). Through this analysis, teachers can evaluate the success of the actions taken in each cycle, and determine whether further improvements are needed.

56 Result and Discussion

The pre-cycle stage in this study revealed a number of problems in the mathematics learning process, such as boredom and low student learning focus. Student learning outcomes at this stage were still relatively low with an average score of 58% and only 6 out of 25 students achieved learning completion, or around 24%. In addition, the results of the questionnaire showed that students' responses to mathematics learning were only 52.4%, which was included in the sufficient category. Based on these conditions, the researcher decided to use the Quizizz application as an intervention method in the learning process to improve student interest and learning outcomes.

In cycle I, researchers began to implement the Quizizz application in the learning process. The stages were carried out through planning, action, observation, and reflection. The implementation of learning using Quizizz succeeded in increasing student participation, although obstacles were still found, such as unstable internet connections. Learning outcomes showed an increase with an average value of 71.36% and a completion rate of 32%, or 8 students who completed. Student responses to learning also increased to 79.46%, but were still categorized as sufficient. Therefore, improvements need to be made in the next cycle.

Entering cycle II, the teacher made more thorough planning, including asking students to prepare personal internet quotas. The learning process ran more smoothly and student enthusiasm increased significantly. All students were able to access Quizizz without any problems,

and their involvement in learning increased. Learning outcomes in cycle II showed a significant spike with an average score of 86.6% and a completion rate of 100%, or all students achieved scores above the KKM. Student responses to learning also increased to 83.46%, which is included in the good category.

Based on the reflection results, the use of the Quizizz application has proven effective in improving students' learning outcomes and motivation. Technical problems that occurred in cycle I were successfully resolved in cycle II. The duration of working on the questions set at 5 minutes per question also helped students manage their time. The teacher also provided additional explanations and active Q&A to ensure students' understanding of the material, which also encouraged an increase in overall learning achievement.

Overall, the results of the study showed a significant increase in student learning outcomes and motivation from the pre-cycle stage to cycle II. Learning completeness increased from 24% in the pre-cycle to 32% in cycle I, and reached 100% in cycle II. Student responses to learning also increased from 52.4% in the pre-cycle to 79.46% in cycle I, and reached 83.46% in cycle II. This increase reflects that the application of game-based learning methods using the Quizizz application can improve the effectiveness of mathematics learning in the classroom.

57 Conclusion

Based on the results of the study, discussion, and data analysis, it can be concluded that the implementation of online game applications in learning shows a significant increase in student learning outcomes. In the pre-cycle, the completion rate only reached 24%. In cycle I, completion increased to 32%, and in cycle II, completion reached 100%, which means that all students have reached the completion limit.

As a suggestion, it is recommended that students use a data package when implementing the Quizizz game application. This aims to minimize network disruptions that can hinder the smooth learning process.

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