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# Improving Indonesian Language Learning Outcomes Through Quizizz Learning Media in Elementary Schools

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**Abstract:** The COVID-19 epidemic has significantly affected the education sector, resulting in a shift from traditional offline learning to online platforms. Quizizz is a media tool that teachers can utilize during online learning. The objective of this study is to ascertain whether the utilization of Quizizz as a learning medium has an impact on students' academic achievements. The research methodology employed is quantitative, utilizing a pre-experimental research design. The participants consisted of 26 fourth-grade kids. The data collection methods employed included the utilization of tests and questionnaires. The pre-test score yielded a mean result of 65.19, whereas the post-test score yielded a mean result of 88.08. Based on the research data analysis conducted using SPSS version 25, the results of the paired sample t-test indicate that the two-tailed significance value (sig) is 0.000, which is less than the significance level of 0.05. Therefore, we may conclude that the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. The study findings suggest that the utilization of Quizizz as a learning tool has a significant impact on students' academic performance in mathematics when accessed online at SDN Gunggung Sumenep.

**Keywords:** quizizz learning media, indonesian, learning results

## Introduction

The global COVID-19 epidemic has had a profound impact on various aspects, particularly in the field of education, including Indonesia. Traditional education methods must now transition to internet learning. Online learning is an educational system conducted through the internet, employing its network for the learning process. The current period of swift technological advancement is altering the education paradigm, particularly since instructors, who act as agents of learning, must acquire and utilize technology and communication in the process of education (Hardiansyah & Mulyadi, 2022).

According to the kemdikbud.com page, Minister of Education and Culture (Mendikbud) Nadiem Anwar Makarim believes that there are various challenges in implementing online learning, such as teachers facing difficulty in utilizing the methods and media employed in the online learning process (Hardiansyah, AR, & Hidayatillah, 2022). Moreover, students require assistance in maintaining concentration and acquiring knowledge while studying at home, which therefore renders the educational materials provided by professors less engaging (Hardiansyah, 2022b). These modifications need that educators possess the ability to effectively employ technology-based learning material for instructional and educational activities with pupils (De Keersmaecker et al., 2020). This is in accordance with Law Number 20 of 2003, Article 40, Paragraph 2, which mandates that educators and teaching staff are required to establish an educational environment that is meaningful, enjoyable, innovative, lively, and promotes dialogue. Utilizing media in the process of learning is a method to infuse enjoyment into the educational experience (Franić & Drnovšek, 2019).

According to (Na et al., 2020), media serves as a means to facilitate the transmission of information. In the context of learning, the role of media can be summarized as follows: (1) it functions as a conduit for messages between the sender and recipient, (2) it aids students in comprehending concepts conveyed by educators, (3) it acts as an intermediary between teachers and students to foster positive relationships during the learning process, and (4) it serves as a strategy to alleviate students' boredom while learning.

According to the findings from the research conducted in class IV at SDN Gunggung Sumenep, it has been observed that there is a deficiency in students' comprehension of Indonesian language learning. This indicates that the majority of students still require additional practice in solving narrative-based exercises that pertain to everyday tasks. The teacher's failure to elucidate the significance of the story leads to a deficiency in pupils' comprehension, as they are only encouraged to memorize without understanding. This would detrimentally impact student learning results since kids prefer to acquire knowledge without comprehending it, resulting in rapid forgetting of remembered information. Many students find Indonesian language training to be challenging and monotonous, failing to engage their interest during online study. The results revealed that the mean score for the

Indonesian language was 80%, which fell short of the minimum passing grade, indicating low student learning outcomes.

Learning outcomes refer to the degree of achievement that students attain in their study of specific subjects at school, as indicated by the scores they receive on tests related to those subjects (Menap, Bayani, & Prayogi, 2021). Categorizes the factors that affect student learning outcomes into internal and external components. The internal elements referred to originate from within the learner and encompass attributes like as intelligence, curiosity, attention, learning motivation, perseverance, attitude, study habits, as well as physical and health issues (Hardiansyah & Wahdian, 2023). Conversely, external influences originate externally and encompass aspects such as the caliber of instruction and the educational resources employed by educators. Consistent with the aforementioned viewpoint, findings from a study conducted by (Hardiansyah & Mas'odi, 2022) also indicate that when educators employ suitable media, students' reactions to the use of such media will improve, leading to enhanced learning outcomes during the educational process.

As to the findings of (Hardiansyah, 2023), the progress in technology, education, and media through the utilization of mobile phones, computers, and the internet has motivated individuals to enhance the efficiency and effectiveness of their daily tasks. Furthermore, educators must cultivate appropriate instructional methodologies to effectively instill the necessary competencies in students. According to the aforementioned opinion, it is necessary for an educator to possess the capability to utilize impactful and efficient media for instructional purposes (Hardiansyah, 2022a). The media plays a crucial role in the learning process by facilitating the rapid and optimal reception of instructional material by students (Wang, Zhu, & Chang, 2022). Through the utilization of media, it is anticipated that pupils will more readily embrace or assimilate the instructional material presented by the teacher. Educators can utilize technology-based learning resources to enhance and enrich their own knowledge as well as that of their pupils (Margunayasa, Dantes, Marhaeni, & Suastra, 2019).

According to a survey conducted at SDN Gunggung Sumenep, it was found that the learning process implemented during the COVID-19 pandemic utilized an online or internet-based learning system. Online learning enables students to engage in study activities at their convenience, without any limitations of location or time. Through the utilization of various tools such as classroom, teams, zoom meetings, and others, students are able to engage in interactive communication with their teachers. In addition, the exponential progress of science and technology has facilitated the creation of online learning resources that are based on applications. There are multiple online programs, including both prepaid and non-prepaid options, that educators can utilize to maximize their effectiveness. Quizizz is an internet-based tool that may be utilized to produce educational materials.

Quizizz is a web-based educational tool that consists of quizzes, surveys, games, and conversation elements (Hardiansyah & Zainuddin, 2022). The Quizizz program offers interactive questions on a wide range of themes, subjects, and difficulty levels. Educators have the flexibility to select the content they want to include in the learning material. The Quizizz application can also serve as engaging educational material, incorporating learning videos, images, and music (Hardiansyah & AR, 2022). Quizizz is an online platform that enables the creation of interactive quiz games, which can be accessed and played on any electronic device owned by students. This program will provide an environment that is favorable, stimulating, and enjoyable for the learning process. Multiple research affirm that the utilization of Quizizz as an educational tool can enhance student learning achievements. This statement is derived on a prior study (Gao et al., 2022). The study concluded that the use of Quizizz, an educational game-based learning platform, had a positive impact on student learning outcomes in online education, specifically in the subject of Globalization. Moreover, a study conducted by (Muzropovich, 2021) determined that the utilization of Quizizz resulted in increased student engagement and attentiveness towards the offered material. Similarly, the findings of a study conducted by (Foster, 2020) suggest that student academic achievements are superior while utilizing the Quizizz interactive quiz platform compared to not using it.

## Methodology

The research uses quantitative research with the pre-experimental design method and the one-group pre-test post-test design research form. In this study, there was only one experimental group where a pre-test (O1) was held to determine the initial conditions. Then, a treatment (X) is held, after which a post-test (O2) is held to determine the final results. In this way, researchers can compare the conditions before and after treatment.

The test results are then analysed and processed to determine the effect of the treatment symbol. If there is a significant difference between the pre-test and post-test, using Quizizz learning media influences student learning outcomes. The population in this study was all class IV students, totalling 26 students, consisting of 17 boys and nine girls. The sampling technique used in the research was saturation or census. Saturated sampling is a technique in which all population members are used as samples.

The types of research instruments used by this researcher are tests and questionnaires. This research test looks at student learning outcomes through multiple choices. Previously, the test instrument passed validity and reliability testing. The research used a validity test with a relationship formula using the Pearson product-moment correlation formula and a reliability test using the Cronbach Alpha formula.

This research uses quantitative data collection and analysis techniques using prerequisite tests, namely the normality and homogeneity tests. In the normality test, the

data tested uses the Kolmogorov-Smirnov formula, while the homogeneity test can be carried out using the variance homogeneity test contained in the SPSS version 25 programme. After carrying out the prerequisite tests, calculate the t-test, namely the paired sample t-test.

## Result and Discussion

The following is a presentation of data from research on the influence of using Quizizz learning media on student learning outcomes in online mathematics subjects at SDN Gunggung Sumenep. This research was conducted in class IV A with 26 students: 17 boys and 9 girls.

**Table 1.** Pre-test and Post-test Student Learning Results

	Minimum score	Maximum score	Average	Standard Deviation
<i>Pre-test</i>	20	100	66	21
<i>Post-test</i>	75	100	89	15

Student learning outcomes Before applying the Quizizz learning media, they got an average score of 66 with a minimum score of 20, while the maximum score was 100. Then, to determine whether there was an influence from the Quizizz media, the researcher gave post-test questions, which got an average result of 89 with a minimum score of 75, while the maximum score was 100. So, it is known that there is an increase in the average score between the pre-test and post-test of 23. This is (Kitayama et al., 2019) opinion: Using Quizizz makes students happier and more concentrated. Apart from that, students can also understand the learning material better using multi-game exercises through Quizizz. The prerequisite tests, namely the normality and homogeneity tests, can be seen in the table below.

**Table 2.** Normality Test Results of Student Learning Outcome Data

Learning outcomes	<i>Kolmogrov-smirnov</i>		
	Statistic	Df	Sig.
	0.143	26	0.184

Based on the results of the normality test calculations, it meets the normality assumption ( $\alpha > 0.05$ ). The resulting  $\alpha$  value is  $0.184 > 0.05$ , meaning that data distribution in a group of data or research variables is usually distributed. By using the Levens statistics method, the sig value is obtained. Amounting to  $0.348 > 0.05$ , it can be said that the research data is homogeneous. After calculating the prerequisite tests for data analysis, namely the normality test and homogeneity test, with the results of the calculation of the data obtained being regular and homogeneous data, the next step is that the researcher can carry out a hypothesis test, namely the t-test in table 4 with the help of SPSS version 25.

**Table 3.** t-test results

Pair 1	Pretest - posttest	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig (2- tailed )
					Lower	Upper			
		-21.154	13.214	2.592	-26.491	-15.163	-8.163	25	0.000

Based on the paired sample t-test calculation results with SPSS version 25, the decision is made if the sig. (2-tailed) is smaller than the  $\alpha$  value (0.05), then  $H_0$  is rejected, and  $H_1$  is accepted. Judging from the calculation, the significance value is smaller than 0.05, namely  $0.000 < 0.05$ . Thus, it can be concluded that using the Quizizz learning medium influences the learning outcomes of class students in online mathematics subjects at SDN Gunggung Sumenep.

According to the explanation above, (Hardiansyah, 2022a) impacts the use of Quizizz learning media on student learning outcomes in the learning process. Quizizz is a learning medium that can create an exciting atmosphere in the teaching and learning process, and the material can be conveyed well so that student learning outcomes will increase. Educators need to improve student learning outcomes by providing interactive, innovative, and exciting learning media for students. It is not only the use of learning media that teachers can use, but it is also necessary to motivate children to develop an attitude of independence and encourage each individual to carry out activities to achieve specific goals. Students are given motivation to improve student learning outcomes through the use of Quizizz learning media.

The opinion above explains that Quizizz can be a creative, innovative, and fun learning medium that influences student learning outcomes. Using Quizizz learning media in the mathematics learning process can help increase student learning motivation, resulting in students being more focused and enthusiastic about learning so that student learning outcomes can improve. Research conducted (Hardiansyah, 2022c) states that applying the innovative learning medium Quizizz increases student activity, understanding, and accuracy to enhance student learning outcomes.

## Conclusion

Based on the results of the analysis in the discussion that has been carried out, this research concludes that there is a significant influence of  $0.000 < 0.05$  and a strong influence of 0.766, meaning that  $H_0$  is rejected and  $H_1$  is accepted, meaning that there is an influence after using the Quizizz learning media in mathematics subjects. Online at SDN Gunggung Sumenep, student learning outcomes have improved.



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