A SYSTEMATIC LITERATURE REVIEW (SLR) : ANALYSIS OF THE USE OF QUZIZZ LEARNING MEDIA ON IMPROVING STUDENT LEARNING OUTCOMES

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Abstract: *In the digital era, innovation in learning media is becoming increasingly important to improve the quality of education. One such innovation is the use of Quizizz, a gamification-based learning platform. This study aims to evaluate the effectiveness of using Quizizz learning media in improving student learning outcomes and motivation. The research method used is a literature study by analyzing various relevant research results. Several studies have shown that the use of Quizizz can significantly improve student learning outcomes compared to traditional learning methods, although there are also studies that find that the difference is not significant. In addition, the use of Quizizz has been shown to increase student motivation and engagement in the learning process, making learning more interactive and enjoyable. This study covers various subjects such as science, mathematics, economics, and accounting, and found that Quizizz can improve students' understanding of concepts and academic performance. The results of this study conclude that Quizizz is an effective learning tool in improving student learning outcomes and motivation, although its effectiveness can vary depending on the context and application.*

Keywords: *Quizizz, learning media, gamification, learning outcomes, student motivation*

INTRODUCTION

In this increasingly advanced digital era, technological developments have brought great changes in various aspects of life, including in the field of education. Technology is an overall means to provide the necessary goods for the survival and comfort of human life Putra et al. (2021) Technology has become an inseparable part of daily life, providing easy access to information, communication, and various digital services. The increase in internet access, the development of mobile devices, and the emergence of various educational applications have opened up new opportunities for innovation in the learning process. The integration of technology into the learning process is inevitable. The use of technology in education has brought many positive changes, including in terms of accessibility, interactivity, and personalization of learning. Technology allows the learning process to be more dynamic, adaptive, and engaging for students, which in turn can increase their motivation and engagement.

Learning media is a tool, method, or technique used to improve the quality of the learning process. This media helps convey information, facilitate understanding of the material, and increase interaction between educators and students (Audie, 2019). Effective

learning is one of the main keys in improving the quality of education. In this increasingly advanced digital era, the integration of technology into the learning process is inevitable. One of the technology platforms that has been widely used in education is Quizizz. Quizizz is a gamification-based learning platform that allows educators to create and manage interactive quizzes online. This *platform* is designed to make the learning process more fun and effective through the use of game elements (Wibowo, 2023), a web-based application that allows teachers to create interactive quizzes that can be accessed by students in real-time as well as as as independent exercises.

The use of Quizizz in learning activities provides many benefits, including increased student learning motivation, active involvement in the learning process, and increased understanding of the material through more interactive and fun learning methods. Salsabila et al. (2020) In addition, features in Quizizz such as direct feedback, *leaderboards*, and analysis of quiz results provides an additional advantage in monitoring and evaluating student learning progress. However, even though the use of Quizizz is growing in popularity, there are still various views on its effectiveness in improving student learning outcomes. Learning outcomes are behavioral changes that occur after participating in learning in accordance with educational objectives in the cognitive, affective and psychomotor domains Purwanto (2010), The definition of learning outcomes is also stated by Susanto in Darmawan et al. (2021) who said that learning outcomes are changes that occur in students, both related to cognitive aspects,. Several studies have shown a significant improvement in the learning outcomes of students who use Quizizz.

The previous research carried out by Khasanah & Lestari (2021) with the research title "*The Effect of Quizizz and Learning Independence on Mathematics Learning Outcomes*" with a significance result of 0.025 where 0.025<0.05 which means Ho was rejected and H1 was accepted, so that there is an influence of quizizz learning media to improve student learning outcomes when compared to the use of LKS media which also supports this research. Meanwhile, according to research conducted by Ayunengdyah et al. (2022), the results are less consistent and state that quiziz media does not have a significant effect on learning outcomes. Therefore, an in-depth study is needed to understand the extent to which the use of Quizizz can contribute to improving student learning outcomes.

This study aims to conduct a systematic literature review (*SLR*) regarding the use of Quizizz learning media on improving student learning outcomes. Through the SLR method, this study will identify, evaluate, and synthesize findings from various relevant studies. Thus, it is hoped that a comprehensive picture of the effectiveness of Quizizz in the context of learning and the factors that affect student learning outcomes can be obtained.

The research questions are made based on the needs of the chosen topic. The following are the research questions used in this study:

RQ 1 : Is there an increase in student learning outcomes in the use of Quizizz media?

RQ 2: How does the learning outcomes of students who use Quizizz compare with those who use traditional learning methods?

RQ 3 : Are there differences in student learning outcomes based on the subject of the subjects taught using Quizizz?

METHODS

The Search Process is used to obtain or search for relevant sources to answer *Research Questions* (RQ), and other related references using *the Search Engine Harzing Publis or Perish* with Google Scholar sources.

The method used by the researcher in this research process is *literature review*. *Literature review* is an important part of academic research that presents a summary and critical analysis of research or literature relevant to a particular topic. The goal is to provide a thorough understanding of the topic being researched, point out gaps in previous research, and underlie the arguments or hypotheses proposed in the new research (Haryadi et al., 2021). SLR is beneficial for researchers because the benefit of research with the SLR method is being able to identify, review, evaluate, and interpret all available research with a focus on specific interesting phenomena (Amam & Rusdiana, 2022). The research data was taken on May 14, 2024 from the Google Scholar database. Researchers take the google scholar database because of the benefits of google scholar can make scientific writing, because google presents a lot of scientific references from various fields of science, both books, abstracts, and articles. Google Scholar is widely used by academics such as students and students to find reference materials used in making their scientific writings. In Google Scholar there is a new system, namely Citations or commonly called citations from experts or trusted people that can be directly connected to Google Doc, with Google Scholar citations it can provide convenience, and speed, without having to *Copy and Paste* (Amam & Rusdiana, 2022). The researcher used keywords to find the references used, namely "the influence of Quizizz learning media". The mapping analysis procedure based on the provisions of PRISMA is shown in Figure 1.

Figure 1. PRISMA Flowchart
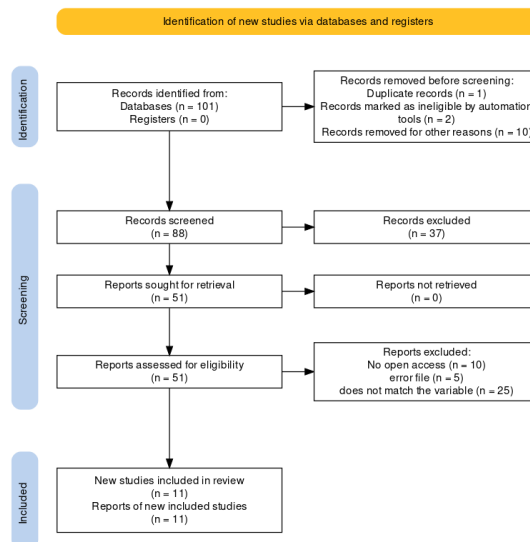
In this analysis, new studies were identified through the Google Scholar database. The total number of records identified from Google Scholar is 101, some records are deleted based on certain criteria. There were 1 record deleted for duplication, 2 records marked as ineligible by the automation tool, and 10 records deleted for other reasons. After the screening process, the remaining records to be processed are 88. However, there are 37 records that were excluded from this analysis. A total of 51 reports are sought for pickup.

Then, further screening was carried out on the reports that had been assessed. A total of 10 reports were excluded because there was no open access, 5 reports were excluded due to file errors, and 25 reports were excluded because they did not match variables. Finally, the end result of this analysis is the 11 new study reports included in the study.

RESULT AND DISCUSSION

Systematic *literature review* (SLR) research to find out the results of the use of Quizizz learning media on the improvement of student learning outcomes. By analyzing relevant previous studies, this study can provide a clear and comprehensive picture of improving student learning outcomes. The data used in this study is in the 2019-2024 time frame to maintain the up-to-date and up-to-date literature to be reviewed. The data was obtained through *the Search Engine Harzing Publis or Perish* with Google Scholar sources. The data used is only related to the use of Quizizz learning media and the Improvement of Student Learning Outcomes. The results of the 101 literature searches that were selected, 11 literatures were taken as sources or references by researchers to conduct *literature reviews*.

The results of the *Search Process* in the selected literature can be used as a reference to answer the questions in the study can be seen in table 1.

Tabel 1. *State of the art*

It	Article title	Author	Research design	Database, Year of publication	Result
1.	THE EFFECT OF QUIZIZZ MEDIA IN LEARNING ON STUDENT LEARNING OUTCOMES IN ANIMALIA MATERIAL CLASS X SMA RK BUDI MULIA PEMATANGSIANTAR T.A 2021/2022	NIDO JAYA SAMUEL SILALAHI, MASNI VERONIKA SITUMORANG, GUNARIA SIAGIAN	Experimental Quasy method with Noneequivalent Control Group Design to investigate the influence of Quizizz media on students' biology learning outcomes	(Silalahi et al., 2022)	This study found that the use of Quizizz media had a significant effect on the biology learning outcomes of science class X students at SMA RK Budi Mulia Pematangsiantar
2.	THE EFFECT OF QUIZIZ GAME LEARNING MEDIA ON ACCOUNTING	Hasanur al-Hayza, M. Ridwan Takula, Sahade	This research uses Experimental Design	(Azhizha et al., 2024)	These results show a significant improvement in learning outcomes when using

	PRACTICUM LEARNING OUTCOMES IN CLASS XI AKL SMKN 1 POLEWALI MANDAR				Quizizz game learning media compared to traditional methods. The experimental class showed better performance in achieving the minimum passing score, showing the effectiveness of the Quizizz game as a learning tool in improving accounting learning outcomes for grade XI students at SMKN 1 Polewali Mandar.
3.	THE EFFECT OF THE USE OF QUIZIZZ LEARNING MEDIA ON STUDENT LEARNING OUTCOMES IN ONLINE MATHEMATICS SUBJECTS IN ELEMENTARY SCHOOLS	ASHIMATUL WARDAH AL MAWADDAH, M THAMRIN HIDAYAT, SITI M. AMIN, SRI HARTATIK	Quantitative method, with pre-experimental research design	(Al Mawaddah et al., 2021)	The study shows that the use of Quizizz learning media positively affects student learning outcomes in mathematics through the *online platform* at SDIT Al Ibrah Gresik. The research findings highlight Quizizz's effectiveness in improving student engagement and understanding of math concepts, ultimately leading to improved academic performance.

| 4. | THE INFLUENCE OF "QUIZIZZ" MEDIA IN ONLINE LEARNING ON STUDENT BIOLOGY LEARNING OUTCOMES | NURUL SUKMAH, PERTIWI INDAH LESTARI, RIZKI AMALIA NUR | quasi-experimental method with Nonequivalent Control Group Design. | (Khasanah & Lestari, 2021) | Students in the experimental class, which used the Quizizz medium, showed higher learning outcomes compared to the control class that received traditional assignments. The n-gain test was used to measure the improvement in learning outcomes, revealing that the experimental class had a significantly higher N-gain score (0.70) compared to the control class (0.51). Hypothesis testing using the T-test showed significant differences between the experimental and control groups, with a tcount value of 4.399 exceeding the ttable value of 1.697 Overall, the results show that the use of Quizizz media positively affects the biology learning outcomes |

					of students in class X MIPA SMAN 3 Maros
5.	THE EFFECT OF THE USE OF QUIZIZZ INTERACTIVE LEARNING MEDIA ON STUDENT MOTIVATION AND LEARNING OUTCOMES IN BASIC PROGRAMMING SUBJECTS AT SMK NEGERI 3 MALANG	YULIA HUSNATHUL ZANAH, ADMAJA DWI HERLAMBANG, UUN HARIYANTI	This study uses an Experimental Design methodology with a Static Group Pretest-Posttest approach	(Zanah et al., 2024)	So it can be said that the results of the study show that the application of Quizizz interactive learning media has a positive impact on student learning outcomes in cognitive and psychomotor aspects. But
6.	THE EFFECT OF QUIZIZZ-ASSISTED LEARNING MEDIA ON ALGEBRA MATERIAL ON LEARNING OUTCOMES	NANDITA AYUNENGDYAH, SUHARNINGSIH, JAUHARA DIAN NURUL IFFAH	The research uses a quasi-experimental design with a control group and an experimental group	(Ayunengdyah et al., 2022)	showed that there was no significant difference in learning outcomes between the group that used Quizzz-assisted learning media and the group that did not. Therefore, the study concluded that there was no significant effect of Quizizz-assisted learning media on student learning outcomes
7.	THE EFFECT OF THE USE OF QUIZIZZ INTERACTIVE LEARNING MEDIA ON THE LEARNING	Krishna Wahiu Chaputra, Faizatul Amalia, Khalid Rahman	Quasy Experimental research method with Non-Equivalent Control	(Saputra et al., 2023)	These results show the positive impact of the use of Quizizz interactive learning media on the cognitive

	OUTCOMES OF GRADE 10 STUDENTS OF THE DKV SKILLS PROGRAM OF SMK NEGERI 10 MALANG		Group Design		aspects of learning outcomes for students in the DKV program at SMK Negeri 10 Malang
8.	THE EFFECT OF THE APPLICATION OF THE STUDENT TEAMS ACHIEVEMENT DIVISION LEARNING MODEL USING QUIZIZZ MEDIA ON THE MOTIVATION AND LEARNING OUTCOMES OF ECONOMICS LESSONS FOR CLASS X SOCIAL STUDIES STUDENTS AT SMA NEGERI 13 PADANG	AN NISA AKILA, ANNUR FITRI HAYATI	Quasi design Experiments conducted in the classroom focus on improving learning	(Akila & Hayati, 2023)	The findings of the study show different levels of student achievement in economics, emphasizing the need for a tailored approach to improve learning outcomes and motivation among students Overall, the study demonstrates the potential of the STAD model with Quizizz media in fostering learning motivation and improving academic performance in economics for 10th grade students, highlighting the importance of innovative pedagogical approaches in education.
9.	THE EFFECT OF QUIZIZZ-ASSISTED	NANDITA AYUNENGDYAH, NURUL	Quantitative	(Ayuneng dyah et al., 2024)	Based on the results and discussion, that is,

	DEFENSE MEDIA ON ALGEBRA MATERIAL ON LEARNING OUTCOMES	SUHARNINGSIH, DIAN JAUHARA			there is no influence of Quizizz-based learning media on learning outcomes in algebra element material. However, the experimental class had a higher average than the control class. Learning in experimental classes tends to be more active. Based on these results, the author said that Quizizz learning media can make students more interactive during learning so that the classroom atmosphere becomes conducive and not boring
10.	THE EFFECT OF COOPERATIVE LEARNING COMBINED WITH QUIZIZZ MEDIA ON STUDENT LEARNING OUTCOMES	FILLIANA ASRI LESTARI, SITI NUR FARIDAH, SYARIFATUL MAF'ULAH, FARIDA- TUL MASRUROH	Quantitative experimental studies with One Group Pretest-Posttest Design	(Lestari et al., 2023)	Research conducted on the influence of cooperative learning combined with Quizizz media on student learning outcomes showed a significant impact on student learning achievement This study used a quantitative

			31		experimental design with one group, focusing on grade VI students at MI Sulaimaniyah Kauman Mojoagung. The research sample consisted of 34 students from a total population of 122 grade VI students, and the data analysis was carried out using the average test of paired samples in SPSS The SPSS output showed a Sig. (2-tail) value of 0.012, which led to the rejection of the zero hypothesis and the acceptance of the alternative hypothesis, showing the difference in student learning outcomes with and without cooperative learning combined with Quizizz media In addition, The reliability of the research instrument is confirmed through an Alpha Cronbach value of 0.794, signifying the high

					reliability and consistency of the test questions for research purposes.
11.	THE EFFECT OF INTEREST IN EDUCATIONAL GAME-BASED LEARNING EVALUATION THROUGH QUIZIZZ AND KAHOOT! ON MATHEMATICS LEARNING OUTCOMES	MUSBIHIN, SAIFUL MAROM	Quantitative with correlational method	(Musbihin & Marom, 2022)	This study found a significant influence of interest in the evaluation of learning-based educational games on the learning outcomes of grade VIII students at MTs Agung Alim Blado for the 2020/2021 school year

Is there an increase in student learning outcomes in the use of Quizizz media?

Based on the analyzed study, the use of Quizizz media shows a significant increase in student learning outcomes in various contexts and subjects. Research by Azhizha et al. (2024) shows that the use of Quizizz game learning media results in a significant increase in student learning outcomes in accounting subjects at SMKN 1 Polewali Mandar. Experimental classes that use Quizizz show better performance in achieving a minimum passing score compared to traditional methods. A study by Al Mawaddah et al. (2021) found that the use of Quizizz positively affects student learning outcomes in mathematics through an *online platform* at SDIT Al Ibrah Gresik. The study shows that Quizizz improves student engagement and understanding of math concepts, which ultimately improves academic performance. Research by Sukma et al. (2021) revealed that students in experimental classes who used Quizizz showed higher learning outcomes compared to control classes. This result was obtained from the n-gain test which showed a higher score in the experimental class (0.70) compared to the control class (0.51). The hypothesis test also showed significant differences between the two groups Research by Saputra et al. (2023) showed a positive impact of the use of Quizizz interactive learning media on student learning outcomes on cognitive aspects in the DKV program at SMK Negeri 10 Malang. Overall, the results of this study consistently show that the use of Quizizz learning media has a significant positive impact on student learning outcomes in various subjects and levels of education. This shows that the integration of technology and interactive media such as Quizizz can be an effective tool in improving the quality of education and student learning outcomes.

How does the learning outcomes of students who use Quizizz compare to those who use traditional learning methods?

Based on the studies that have been analyzed, there is a comparison between the learning outcomes of students who use Quizizz with traditional learning methods, including;

Higher learning outcomes with Quizizz, A study by Sukma et al. (2021) showed that students in experimental classes using Quizizz media showed higher learning outcomes compared to control classes that used traditional methods. Measurement of improvement in learning outcomes with the n-gain test showed a higher N-gain score in the experimental class (0.70) compared to the control class (0.51), with a statistically significant difference. Research conducted by Azhizha et al. (2024) also showed a significant improvement in the learning outcomes of accounting students when using the Quizizz game learning media compared to traditional methods. The experimental class showed better performance in achieving the minimum passing score.

However, there were insignificant learning outcomes in a study conducted by Ayunengdyah et al. (2024) found that there was no significant difference in learning outcomes between the group that used Quizizz-assisted learning media and the group that used traditional methods. This suggests that in some cases, Quizizz may not provide a significant advantage over traditional methods.

Improving Motivation and Learning Outcomes, Research by Yulia Husnathul Zanah et al. (2024) concluded that the application of Quizizz interactive learning media has a positive impact on student learning outcomes on cognitive and psychomotor aspects, which shows that the use of Quizizz can increase student learning motivation.

Effectiveness in a variety of other study subjects shows that the use of Quizizz in a variety of subjects, such as biology and mathematics, positively affects student learning outcomes. For example, research by Al Mawaddah et al. (2021) shows that the use of Quizizz in online math learning increases student engagement and understanding of concepts, leading to improved academic performance

Overall, the results of the study suggest that the use of Quizizz can improve student learning outcomes compared to traditional learning methods, although there are some cases where the difference is not significant. Quizizz can also increase students' motivation to learn and engage in the learning process.

Are there differences in student learning outcomes based on the subject taught using Quizizz?

In a systematic analysis of the use of Quizizz as a learning medium, several studies have highlighted how student learning outcomes can vary based on the subject of the subject being taught. The following are some of the key findings from the study that have been analyzed. In science subjects, research by Silalahi et al. (2022) shows that the use of Quizizz in biology learning in class X SCIENCE SMA RK Budi Mulia Pematangsiantar has a significant effect on improving student learning outcomes. This interactive quiz method helps students understand biological concepts better compared to traditional methods. Other studies have also shown positive results in chemistry learning using Quizizz, where students are more engaged and motivated, which ultimately improves their learning outcomes.

Research by Akila & Hayati (2023) shows that the use of the Student Teams Achievement Division (STAD) learning model supported by Quizizz media can increase student motivation and learning outcomes in economics lessons. This shows that Quizizz can have a positive impact on subjects that involve understanding economic concepts and analysis.

According to research by Al Mawaddah et al. (2021), the use of Quizizz in mathematics learning at SDIT Al Ibrah Gresik significantly affects student learning outcomes. The use of this *platform* assists students in understanding math concepts through interactive and fun quizzes, which ultimately improves their academic performance

In the subject of accounting, research by Azhizha et al. (2024) indicates that the use of Quizizz in accounting practicum learning at SMKN 1 Polewali Mandar significantly improves student learning outcomes compared to traditional methods. This shows that gamification in learning can help students understand complex accounting concepts through a more interactive approach. In the context of programming lessons, the use of Quizizz also shows a positive impact on student learning outcomes at SMK Negeri 3 Malang, especially in cognitive and psychomotor aspects, which are important indicators in engineering learning

Based on the literature review that has been carried out, there are differences in student learning outcomes based on the subject subjects taught using Quizizz. In general, Quizizz has proven to be effective in improving learning outcomes in various subjects, both in science, mathematics, economics, accounting, and programming. This effectiveness is especially seen in increased motivation, active engagement, and better understanding of concepts by students. However, the success rate of using Quizizz can vary depending on the characteristics of each subject and how gamification elements are applied in the learning process.

CONCLUSION

Based on the literature analysis that has been carried out, the main conclusions that can be drawn from the research regarding the use of Quizizz learning media are Several studies show that the use of Quizizz can improve student learning outcomes compared to traditional learning methods. For example, research by Sukma et al., (2021) shows that students who learn using Quizizz have higher learning outcomes with significant N-gain scores. However, there are also studies that show that the difference in learning outcomes between the use of Quizizz and traditional methods is not significant. For example, research by Ayunengdyah et al. (2024) did not find significant differences in student learning outcomes between the group that used Quizizz and the control group. The use of Quizizz has been shown to increase student motivation and engagement in the learning process. This gamification-based learning media makes learning more interactive and fun, which in turn increases student engagement. Research by Zanah et al. (2024) shows that the use of Quizizz can increase student learning motivation and learning outcomes in cognitive and psychomotor aspects. Research by Silalahi et al. (2022) shows that the use of Quizizz in biology learning has a significant effect on improving student learning outcomes. Research by Al Mawaddah et al. (2021) shows that the use of Quizizz in mathematics learning improves students' understanding of concepts and academic performance. Research by Akila & Hayati, (2023) and Azhizha et al. (2024) show that the use of Quizizz in economics and accounting learning significantly improves student learning outcomes compared to traditional methods. Overall, research shows that Quizizz is an effective learning tool in improving student learning outcomes and motivation across a wide range of subjects, although its effectiveness may vary depending on the specific context and application in each subject.

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