

Literature Review: The Role of Quizizz Media in Improving Science Learning Outcomes of Fifth Grade Elementary School Students

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ABSTRAK

Era teknologi zaman sekarang menghadirkan tantangan baru dalam dunia pendidikan, termasuk dalam proses pembelajaran yang membutuhkan penggunaan beragam platform digital, seperti quizizz. Tujuan dari penelitian ini adalah untuk melakukan analisis literatur terkait pemanfaatan quizizz sebagai sarana pembelajaran dan alat evaluasi di tingkat sekolah dasar. Penelitian ini menerapkan tinjauan literatur secara sistematis melalui lima langkah, yakni penentuan topik kajian, pencarian artikel, pemilihan artikel, analisis literatur, dan pembuatan kesimpulan. Dalam penelitian ini, terdapat analisis terhadap 24 artikel yang relevan dengan fokus kajian, yaitu penggunaan quizizz dalam pembelajaran di sekolah dasar. Artikel-artikel tersebut terpilih dan diterbitkan antara tahun 2019 hingga 2024. Temuan dari kajian literatur menunjukkan bahwa: 1) Platform Quizizz dirancang sebagai alat pembelajaran karena menawarkan fitur presentasi dengan berbagai tampilan menarik yang menjadikannya lebih interaktif. 2) Secara umum, Quizizz digunakan sebagai alat evaluasi, di mana terdapat banyak fitur penilaian, seperti soal pilihan ganda, soal terbuka, soal menjodohkan, dan soal mengategorikan. Selain itu, platform ini juga menyediakan penilaian yang bersifat fleksibel dengan kemungkinan jawaban berupa gambar, video, dan audio. 3) Penggunaan platform quizizz umumnya berdampak positif terhadap peningkatan hasil belajar siswa; dengan kata lain, pemahaman siswa cenderung meningkat setelah mempelajari materi menggunakan quizizz. Selain itu, pemanfaatan quizizz juga berkontribusi terhadap motivasi belajar, antusiasme, dan pengembangan keterampilan siswa. Dengan demikian, Quizizz menjadi salah satu platform yang krusial bagi pengajar dalam menciptakan pembelajaran IPA yang inovatif untuk meningkatkan berbagai keterampilan dan mempersiapkan siswa menghadapi tantangan zaman serta perkembangan teknologi.

Kata Kunci: Quizizz; IPA; Pembelajaran

ABSTRACT

These The current technological era presents new challenges in the world of education, including in the learning process which necessitates the use of diverse digital platforms like Quizizz. The objective of this research is to conduct a literature analysis related to the utilization of Quizizz as a learning tool and evaluation instrument at the elementary school level. This study employed a systematic literature review through five steps: topic determination, article searching, article selection, literature analysis, and conclusion drawing. This research analyzed 24 articles relevant to the focus of the study, which is the use of Quizizz in elementary school learning. These articles were selected and published between 2019 and 2024. The findings from the literature review indicate that: 1) The Quizizz platform is designed as a learning tool because it offers presentation features with various attractive displays, making it more interactive. 2) Generally, Quizizz is used as an evaluation tool, providing numerous assessment features such as multiple-choice questions, open-ended questions, matching questions, and categorization questions. Furthermore, this platform also offers flexible assessments with possible answers including images, videos, and audio. 3) The use of the Quizizz platform generally has a positive impact on improving student learning outcomes; in other words, students' understanding tends to increase after learning material using Quizizz. Additionally, the utilization of Quizizz also contributes to students' learning motivation, enthusiasm, and skill development. Thus, Quizizz becomes a crucial platform for educators in creating innovative Science

(IPA) learning to enhance various skills and prepare students to face the challenges of the times and technological advancements.

Keywords: Quizizz; Science (IPA); Learning

INTRODUCTION

The development of digital technology has driven significant changes in the world of education, including in terms of learning methods and media used in the classroom. The use of digital media in education, particularly in Natural Sciences (IPA), plays a crucial role in creating a more engaging, interactive, and effective learning experience (Hendrick et al., 2024). Science learning is often perceived as a subject that requires complex conceptual understanding, which can leave students bored or unable to engage (Ansya & Salsabilla, 2024). Digital media such as educational games and technology-based learning platforms can make learning more enjoyable and engaging (Sari et al., 2023).

In the context of Natural Science (IPA) learning, the use of interactive media is crucial to help students understand abstract concepts through a fun and contextual approach. This is crucial for fifth-grade elementary school students who are at the concrete operational development stage (Abroto & Na'imah, 2025). One innovation widely used in interactive learning is digital quiz-based media such as Quizizz. Quizizz can increase students' motivation to learn because they feel more involved in the dynamic learning process (Pakudu & Rizal, 2024).

Quizizz is a game-based learning platform used to create interactive quizzes and engage students in fun learning (Dhamayanti et al., 2024). Quizizz allows teachers to create quizzes or assignments that students can access online, allowing them to participate in learning activities in a more engaging and competitive manner (Mukharomah, 2021). Students can access Quizizz quizzes through devices such as computers, tablets, or smartphones, providing flexibility in time and place (Lubis, 2022).

However, in reality, teachers still rely on conventional learning methods that do not fully utilize technology. This hinders the development of creativity in teaching and learning that can make students more involved and interested. The main problem behind the need to use Quizizz in science learning is the lack of student involvement and motivation in science learning, many students feel less interested in science subjects because they are considered difficult or boring (Abroto & Na'imah, 2025). Therefore, an in-depth literature study is needed to examine how the role of Quizizz media is empirically able to improve science learning outcomes in fifth-grade elementary school students.

This study aims to summarize various relevant previous research findings and provide a comprehensive understanding of Quizizz's contribution as an effective and applicable learning medium in the context of science learning at the elementary school level.

METHOD

This study employed a descriptive research approach, using a literature review. This research activity involved gathering information and data using various library materials, such as reference books, previous research results, articles, notes, and journals related to the problem being addressed (Rahmadhani & Ardi, 2024).

In this method, the researcher found articles related to this research topic, namely the impact of using the Quizizz application on student resilience in mathematics learning at the elementary school level. In the initial search, the researcher then filtered the articles to adjust to the research focus, especially for articles from the last 5 years, namely between 2019 and 2024. The results of this filtering produced 10 articles relevant to the research topic. First, the articles were grouped by year of publication to understand how research related to this topic has been conducted and published during that period. Then, the articles were also grouped by the percentage of research focuses such as learning motivation, learning interest, learning outcomes, problem-solving skills, learning independence, mathematical communication skills, and effectiveness, to determine the percentage of each focus. The final stage was grouping the articles based on focus, influence, and source, with the aim of comparing the findings from various articles and identifying patterns and relationships between the use of the Quizizz application and resilience in science phase C.

RESULTS

Based on the author's search results through literature review, compiling scientific articles, journals, seminar proceedings, books, and research reports from various sources such as Google Scholar and SINTA, published between 2021 and 2025 and peer-reviewed. The discussion consists of the main section, namely the role of Quizizz media in improving science learning outcomes in elementary schools and its results.

Table 1. Results of literature review

No	Author's	Title	Types of research	Hasil Penelitian	Conclusion
1	Melvi Khoerun Nisa et all 2025	The Influence of the Problem Based Learning Model Assisted by the Quizizz Application Media on Science Learning Outcomes in Grade III Elementary School Students	Quantitative approach research with quasi-experimental method and nonequivalent control group design.	The results of the study showed a significant increase in the learning outcomes of the experimental class, with an average pretest score of 61 increasing to 85.5 in the posttest. Meanwhile, in the control class, the average score only increased from 44.75 to 55.75. The results of the independent samples t-test showed a significant difference between the two classes, and the effect size value of 2.96 indicated a very high influence.	The results of the research conducted can be concluded that the Problem Based Learning (PBL) model assisted by the Quizizz application significantly improved the learning outcomes of third-grade students at SDN 162 Warung Jambu in the science subject. This is evidenced by an increase in posttest scores and an effect size value of 2.96,

					indicating a very high influence.
2	Saphira Aulia Ramadhani et all 2022	The Effect of the Picture and Picture Learning Model Assisted by Quizizz on Elementary School Student Learning Outcomes	This research used a quantitative experimental method using a pretest-posttest control group research design.	The data analysis technique used descriptive statistics, normality testing using the Liliefors test, homogeneity testing using the Fisher exact test, hypothesis testing using the t-test, and effect size testing. The results of the hypothesis test showed that $t\text{-count} > t\text{-table}$ ($4.5233 > 2.0452$), so H1 was accepted.	There is an effect of using the picture and picture learning model assisted by Quizizz on the science learning outcomes of fourth-grade elementary school students.
3	Daniel Dwi Saputra et all 2025	The Effect of Implementing the Problem-Based Learning Model Using Quizizz Media on Science Learning Outcomes in Fourth-Grade Elementary School Students	The method used is a quasi-experimental design with a nonequivalent control group design.	The sampling technique used was purposive sampling, which falls into the non-probability sampling category. Data analysis used a t-test, resulting in a calculated t value ($7.6770 > t$ table (1.6746)).	The application of the problem-based learning model using Quizizz media has an impact on the science learning outcomes of fourth-grade students at the UPTD of SD Negeri 1 Margajaya..
4	Rahma Annisa et all 2021	The Effect of Using the Quizizz Application on Students' Science Learning Outcomes in Elementary Schools	Quasi-Experimental Studies and Non-Equivalent Control Group Design Study Forms	Homogeneity test of experimental class between pretest and posttest d <i>Fhitung</i> $< tabel = 1.033 < 1.87$ is stated as homogeneous data. Calculation of control class between pretest and posttest <i>Fhitung</i> $< Ftabel = 1.73 < 2.96$ is stated as homogeneous data. The results of the hypothesis test	The Effect of Using the Quizizz App on Science Learning Outcomes of Fourth-Grade Students at SDN Sumur Batu 08, Central Jakarta, concluded that using the Quizizz app encourages student

				<p>$t_{hitung} > t_{tabel} = 3.289 > 2.000$, then H1 is accepted which means there is an influence in using the Quizizz application on the science learning outcomes of IV students at SDN Sumur Batu 08 Central Jakarta.</p>	<p>engagement due to the engaging text and images presented in the lesson, along with fun game-based exercises and quizzes. Furthermore, the Quizizz app is supported by Google Meet, allowing for collaborative Q&A sessions and practical application of learning in everyday life.</p>
5	D. Wulan Azzahra et all 2024	The Effect of Problem-Based Learning Model Supported by the Quizizz Application on Science Learning Outcomes of Class V Students at SDN 192 Inpres Takkalasi	Quantitative research using quasi-experimental with Non-Equivalent Control Group Design	The posttest of the control class only reached 67.28, while in the experimental class the average posttest score reached 91.40. Based on the results of the independent sample t-test hypothesis test, the sig. (2-tailed) equal variance assumed value obtained 0.000, which indicates that $0.000 < 0.05$, or in other words, H0 was rejected and H1 was accepted.	There is an influence of the problem-based learning model supported by the Quizizz application on the science learning outcomes of fifth grade students.
6	Maila Fazza et all 2025	The Effectiveness of Using Quizizz Paper Mode on Science Learning Outcomes in the Subject of States of Matter and Their	Quantitative research type: one group pretest-posttest	The t-test data shows that if the p-value is $0.001 < 0.05$, H0 is rejected, while Ha is accepted.	If the use of the Quizizz paper mode in learning is effective in improving learning outcomes in the Natural Sciences

		Changes in Fourth Grade Elementary School Students			(IPAS) material on the state of matter and its changes for fourth-grade students at SD N 1 Mindahan,
7	Rahmaa Ayu Erwindah Kusuma et all 2024	The Effect of Implementing the Problem Based Learning Model Assisted by Quizizz Media on Science Learning Outcomes in Elementary School Students	The research used is a Quantitative Experiment with a Posttest Only Control Group Design.	The data analysis technique used SPSS (Statistical Package for the Social Sciences) version 22, namely with validity tests, reliability tests, normality tests, and homogeneity tests using independent sample t-tests. The average value obtained by the control class was 61.83, while the average value obtained by the experimental class was 80.83.	There is an influence of the application of the Problem Based Learning Model assisted by Quizizz media on the science learning outcomes of grade 4 elementary school students.
8	Nisrokhah et all 2024	Improving Science Learning Outcomes Using Quizizz Media for Fourth Grade Students of Pedurungan Lor 01 Public Elementary School	Classroom Action Research	Classical student learning outcomes improved from 22% in the pre-cycle to 63% in the first cycle and 85% in the second cycle. Average student learning outcomes also improved. The pre-cycle average was 57.4%, the first cycle 75.2%, and the second cycle 82.2%.	The results of the study show that the use of Quizizz media for learning evaluation can improve student learning outcomes.
9	Nurin Nafi'ah et all 2024	Improving Student Motivation and Learning Outcomes Using AI Quizizz Paper Mode Evaluation Media in the Science Subject for Grade V at Khadijah 3	This research uses classroom action research.	In cycle 1, there was an increase in learning outcomes of 58% of the students' learning completion level and in cycle II, there was an increase of 96% successfully achieving the minimum	AI Quizizz Mode Paper evaluation media shows that students' experience in working on evaluation questions has proven effective in

		Elementary School, Surabaya		completion criteria (KKM).	improving their understanding of learning materials.
10	Entin Heryati 2022	Efforts to Improve Science Learning Activities and Outcomes in Online Learning Through the Quizizz Game Media for Fifth Grade Students of Cimanuk 1 Elementary School in the 2020-2021 Academic Year	Classroom Action Research	In cycle I, student activity showed a score of 67.5, classified as less active. In cycle II, it increased to 85, classified as very active.	The results of the study show that the use of the Quizizz educational game media can improve the activities and science learning outcomes of Class V students at Cimanuk 1 Elementary School.

Based on the results of the identification and review of articles that have been collected related to the use of the Quizizz application and its impact on learning outcomes, which are presented in table 1 above, Quizizz is a digital learning media that can be used by teachers to create interactive online quizzes that are interesting and fun for students. The Quizizz application is equipped with various features such as feedback, scoreboards, time allocation, and others. In general, the results of the literature study obtained indicate that the use of various evaluation tools in the learning process, especially in science learning that supports 21st century skills. Some modern technology-based evaluation tools that can be used by teachers to create quizzes or in evaluating student learning that are used as evaluation tools obtained such as Kahoot, Quizizz, Google Forms and so on.

CONCLUSION

The use of the Quizizz application has a major impact in improving various elements that build student resilience, such as motivation and engagement, interest in learning, academic achievement, problem-solving skills, independence in learning, and student communication skills. Quizizz media as a tool or main solution can make the teaching and learning atmosphere fun, and active learning because students have the opportunity to actively participate in involving themselves in learning activities and this affects student learning outcomes. It can be concluded that the application of quizizz media is more efficient to use in the classroom, the application of quizizz media can improve students' abilities in science learning phase C.

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The use of Quizizz is highly relevant given its potential to improve the quality of learning. This app is effective as an interactive learning tool, enabling teachers to present material with engaging visuals that students enjoy. As an assessment tool, Quizizz offers a variety of question types, from multiple-choice to matching, as well as the flexibility to incorporate images or audio, facilitating comprehensive assessments. Its use has been shown

to improve student learning outcomes, as material comprehension tends to improve after a Quizizz session. Furthermore, the platform significantly boosts student motivation and enthusiasm through its engaging gamification features. It also contributes to the development of important skills, such as problem-solving and critical thinking. Therefore, teachers are advised to regularly integrate Quizizz into various learning phases, from the introduction to the final assessment. It is also crucial to maximize the interactive features, including the reporting feature to analyze student understanding. Thus, Quizizz is not just a tool but a crucial platform for creating innovative learning that prepares students for the challenges of the digital age.

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