

Literature Review on the Quizizz Platform as a Mathematics Learning Media at the Middle School/Equivalent Level in Indonesia

Nadia Meidina Ayumi^{1*}

¹Universitas Muhammadiyah Sumatera Utara

*Corresponding Author. E-mail: nadiameidinaayumi@gmail.com

Article Info	ABSTRACT
<p>Keywords: <i>Quizizz Platform, Mathematics Learning Media, Middle School, Literature Review</i></p>	<p>This research is literature research using the Systemic Literature Review or SLR research method. The background to this research problem is that mathematics is a science that is studied at all levels of education, but students' mathematics learning outcomes in Indonesia are quite low, because mathematics is still considered a difficult or boring subject. Many researchers use technology-based mathematics learning media using the Quizizz platform to improve learning outcomes. Quizizz platform users from Indonesia rank second highest in the world in June 2024. Therefore, the aim of this research is to determine the causes of the popularity of Quizizz use in Indonesia, especially at the secondary school level. Through analysis of the results and discussion, it was found that the popularity of the Quizizz platform at the secondary school level in Indonesia was caused by two main factors, such as (1) ease of use and (2) benefits of use. Ease of use includes mobile friendly access, varied and interesting features, as well as a usage guide. Meanwhile, the benefits of using it include increasing students' knowledge aspects (such as problem solving abilities) and skills aspects (such as the ability to apply technology), motivation, etc. Apart from that, this application is also useful for educators in terms of time efficiency, both in terms of creating learning tools and evaluation.</p>

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INTRODUCTION

Mathematics is studied at every level of education, although in different sections according to the needs and goals of the educational institution. In the independent curriculum, in each learning phase there is also mathematics (Mulyati & Evendi, 2020) said that mathematics lessons must be studied so that students can think logically, analytically, systematically and critically. Even (Evans et al., 2015) in his research emphasizes that early numerical abilities (during childhood) provide the foundation for future academic and professional success in an increasingly technologically savvy society.

However, most researchers write that the mathematics learning outcomes of students at secondary school/equivalent level in their respective research locations are quite low, among those who think so are (Setiawan et al., 2019), (Astuti et al., 2022), and (Panggabean & Sinambela, 2023). Several factors that influence low mathematics learning outcomes include: (1) participants do not have an understanding of basic mathematics, such as the concept of multiplication (Safitri et al., 2023); (2) students use technology (HP) during class time but not for studying (Setiawan et al., 2019); (3) students consider mathematics difficult and unpleasant (Mulyati & Evendi, 2020); etc.

One innovation that has emerged in recent years to make learning more fun while taking advantage of existing technology is the use of digital platforms. A digital platform can be considered as a place for the exchange of information, goods or services between communities that interact with the platform digitally. Digital platforms are usually divided into three, such as for business purposes, social purposes and educational purposes (Watts, S: 2020). With devices such as cellphones, laptops, quotas and internet networks, anyone can access digital platforms.

Among the many digital platforms that can be accessed by educators and students, one that is quite popular is Quizizz. Quizizz has become known to academics since 2015, and has become increasingly popular during the pandemic as a distance learning medium. Quizizz users recorded in June 2024 were 12.8 million from all over the world and it turns out that Indonesia is the second largest user (ahrefs.com : 2024). Quizizz claims that Quizizz is a learning platform that offers a variety of tools to make classrooms fun, engaging, and interactive. Quizizz has features that can help educators and students to better master the knowledge they are studying. (Quizizz : 2023).

Seeing this phenomenon, researchers are interested in examining the popularity factors of the Quizizz Platform in Mathematics learning at secondary school/equivalent level in Indonesia.

RESEARCH METHOD

This research is a type of qualitative research with the Systemic Literature Review or SLR research method. The Systematic Literature Review (SLR) research method is a systematic and structured approach to reviewing literature relevant to a particular research question.(Waruwu, 2023)



Figure 1. SLR steps

By following the steps above, this research begins with the research topic, namely the Quizizz Platform. Then the research problem was formulated, namely "What is the cause of the popularity of the Quizizz Platform in Mathematics learning at secondary/equivalent school level in Indonesia?". Next, the research protocol design was limited to only relevant journals published in the last 7 years, namely from 2017 - 2024 with keywords. search: mathematics learning, quizizz, secondary school. Data was taken using documentation techniques, namely sourced from journals on Google Scholar and Dimension Ai.

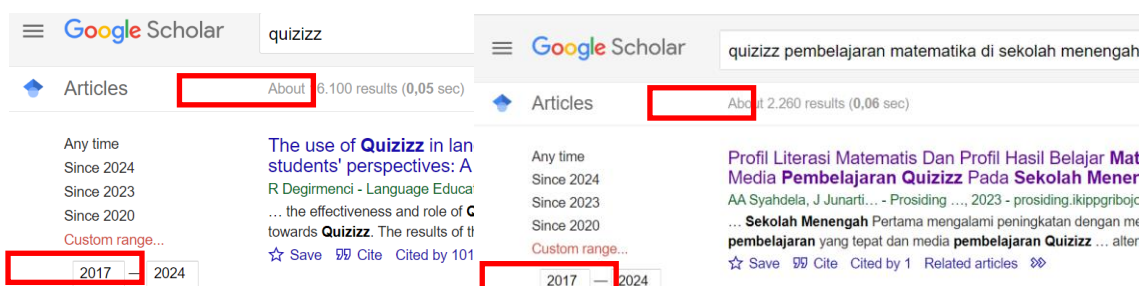


Figure 2. Process of searching for articles on Google Scholar

Next, from the journals obtained, a number of relevant journals were selected. In this process, the researcher only took 6 journals that met the limitations that the researcher wanted to extract the research results from and then checked the quality of the journals again. The next step is data analysis and synthesis to then report (publish) and finally, if possible, disseminate the results.

RESULTS AND DISCUSSIONS

Quizizz is a mobile friendly educational platform (Jahring et al., 2022). Just by opening the quizizz.com page and a smooth internet quota, we will find lots of material that can be a learning resource. Quizizz can be opened either with smartphone-based devices or with desktop-based devices. The forms of training offered can be done in groups or individually. It can also be competed with a maximum of 100 participants with interesting features such as the availability of avatars, scoreboards, memes, music as if the students were playing a game. The format of the questions also varies, not only multiple choice models, there are also forms of filling in, matching, tables, and even answering with voice messages. Questions can be accompanied by images, sounds and even videos.

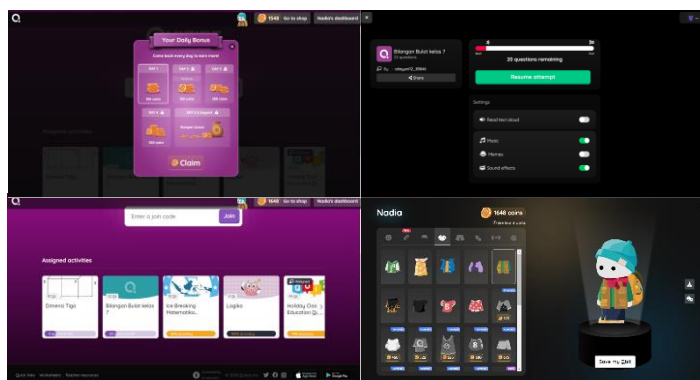


Figure 3. Example of the Quizizz platform display on the desktop screen for Quizizz participants

Educators who want to use the Quizizz platform can also learn how to use it quite easily. Quizizz provides a guide for educators to use the platform with options accompanied by explanations.

		activities were categorized as good, and in cycle III teacher activities and student activities were categorized as very good.
4	(Fadhlorrohman et al., 2020)	Based on the results of media validity tests on mathematics lecturers and mathematics teachers, an average rating of 13.5 was obtained with a percentage of 90% in the very valid category. According to students, the product developed is also practical to use in learning activities with an average rating of 87.5 and a percentage of 82.9.
5	(Rizky et al., 2022)	Based on the research results, it was found that the use of Quizizz in mathematics learning in the mathematics learning process in the group of students with low learning outcomes (B1) and the group of students with high learning outcomes (B2) was felt to be useful, easy to use and easy to learn. These results can also show that students who have high learning outcomes can easily learn and use Quizizz developed by researchers than groups of students with low learning outcomes. The B1 student group and the B2 student group both felt that using Quizizz as a learning tool could help the mathematics learning process.(Rafi et al., 2022).
6.	(Asria et al., 2021)	Based on the research results, it can be concluded that student enthusiasm which includes response, attention, concentration, willingness and awareness to involve themselves in learning evaluations on trigonometry material via the Quizizz platform is quite good with a percentage of 62.38%. By using Quizizz, students feel more enthusiastic about carrying out evaluations because its features attract students' attention. Apart from that, the presence of a leaderboard that shows student performance results makes students more motivated to achieve high evaluation results. So it can be concluded that the Quizizz platform can be an alternative for teachers in carrying out evaluations of student learning outcomes in order to increase student enthusiasm in learning evaluations, as well as creating a fun and interesting evaluation atmosphere for students to participate in.

Looking at the research results of the six journals, the use of the Quizizz platform in mathematics learning at secondary school level in Indonesia has the following benefits: (1) improving mathematics problem solving skills; (2) increase student enthusiasm and activity; (3) increase learning independence and (4) improve mathematics learning outcomes. Apart from that, Quizizz can also be used as (5) a tool for educators to integrate learning media with technological developments and (6) to help educators carry out efficient evaluations.

(Mcculloch et al., 2018)also said that the biggest factor for educators using learning media technology is because of its ease of use for both educators and students.In line with opinion(Kalahatu, 2021)that using Quizizz is very easy with various options so that it can help create innovation in mathematics learning. In this research it was also found that the use of the Quizizz platform is in great demand because this platform is easy to use and easy to learn(Rizky et al., 2022), practical, effective, interesting and fun(Mulyati & Evendi,

2020).

CONCLUSION

Through analysis of the results and discussion, it was found that the popularity of the educational platform, Quizizz at the secondary school level in Indonesia, was caused by two main factors, (1) ease of use and (2) benefits of use. Ease of use includes mobile friendly access, varied and interesting features, as well as a usage guide. Meanwhile, the benefits of using it include increasing students' knowledge aspects (such as problem solving abilities) and skills aspects (such as the ability to apply technology), motivation, etc. Apart from that, this application is also useful for educators in terms of time efficiency, both in terms of creating learning tools and evaluation.

This research is still in the form of literature research, it is recommended that further research would be studied in more depth by conducting quantitative research, or in other subjects. Apart from that, with current technological advances, it is also recommended that educators throughout Indonesia learn to make the best use of educational platforms.

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