

Empowering English Language Learners with Quizizz Application at SMPN 3 Pancarijang

Andi Nur Aisyah¹

Andi Asrifan²

Buhari Buhari³

Sam Hermansyah⁴

^{1,2,3,4}Universitas Muhammadiyah Sidenreng Rappang, Indonesia.

¹amandasungkyu028@gmail.com,

²andiasrifan@gmail.com,

³buharifakkah9@gmail.com

⁴sam.hermansyah82@gmail.com

Abstract

This study aims to enhance the English language learning experience for students at SMPN 3 Pancarijang using the Quizizz application, an AI-based educational tool. The research employs a quantitative approach to provide empirical evidence on the effectiveness of Quizizz in improving students' English comprehension. By integrating AI technology into the classroom, the study seeks to create an engaging and effective learning environment that motivates students and increases their participation. The research involved a field experiment with class VIII students, utilizing pre- and post-tests, along with surveys to gather data on students' perceptions and learning outcomes. The findings indicate significant improvements in English comprehension and heightened student motivation and engagement. The results suggest that incorporating AI technology like Quizizz can substantially enhance the learning process, demonstrating the potential benefits of integrating advanced educational technologies in secondary education. This study underscores the need for adopting innovative tools in education to improve overall student performance and engagement.

Keyword : *Quizizz application, student engagement, learning outcomes*

Introduction

In recent years, the integration of technology in education has revolutionized the way students learn and interact with educational content. One significant advancement is the use of Artificial Intelligence (AI) to create dynamic and personalized learning experiences. AI technology has the potential to transform traditional educational practices by providing tools that enhance student engagement, motivation, and learning outcomes.

At SMPN 3 Pancarijang, the need to improve English language proficiency among students is a pressing concern. English is a critical skill in the globalized world, and proficiency in the language opens up numerous opportunities for academic and

professional success. Traditional methods of teaching English often struggle to engage students and cater to their diverse learning needs. This study addresses the following research questions: What is the effect of using the Quizizz application on English Language Learners (ELL) at SMPN 3 Pancarijang? How effective is the Quizizz application in helping students improve their English language skills?. The primary objective of this research is to evaluate the effectiveness of the Quizizz application in enhancing English language learning among students at SMPN 3 Pancarijang. The study aims to provide empirical evidence on the benefits of using AI technology to create a more engaging and effective learning environment.

This research holds significant value for various stakeholders: School: Provides insights into the potential of AI technology to improve educational outcomes and can guide future investments in educational technology. Teachers: Offers a practical tool to enhance teaching methodologies and improve student engagement and motivation. Students: Demonstrates the benefits of using interactive and gamified learning tools to improve language skills and overall academic performance. This study focuses on class VIII students at SMPN 3 Pancarijang. It involves a quantitative analysis of the impact of the Quizizz application on students' English language proficiency. The research includes pre- and post-tests, as well as surveys to gather data on student perceptions and learning outcomes. The introduction of AI technology in education, particularly through applications like Quizizz, offers a promising solution to enhance English language learning. This study aims to provide a comprehensive understanding of how such technology can be effectively implemented to benefit both teachers and students, ultimately contributing to improved educational practices and outcomes.

Artificial Intelligence in Education Artificial Intelligence (AI) has made significant inroads into various fields, including education. AI technology offers numerous tools that can personalize learning experiences, making education more engaging and effective. According to Holmes and Tuomi (2022), AI's impact on education includes increased interest, personalization, and learning effectiveness. The integration of AI in education supports the development of intelligent tutoring systems, adaptive learning environments, and automated grading systems, all of which contribute to improved learning outcomes. Quizizz Application Quizizz is a game-based educational application that utilizes AI technology to create interactive quizzes. This application allows educators to assess students' understanding in a fun and engaging manner. Research by Akmaliah and Syakir (2023) indicates that using Quizizz in the classroom can enhance student motivation and participation. The application features real-time feedback, gamification elements, and a competitive environment that encourages students to improve their performance. **English Language Learners (ELL)** English Language Learners (ELL) refer to students who are learning English as a second or foreign language. Effective ELL education involves tailored teaching approaches, supplementary support, and assessments that consider students' language proficiency levels. According to Rohayati (2018), English language study is crucial in Indonesian education, especially in today's digital native era. English proficiency enables students to participate fully in academic and social life in an English-speaking environment.

Impact of AI on Education Research has shown that AI can significantly improve educational practices. A study by Owoc et al. (2021) highlighted the potential of AI to transform traditional teaching methods by providing personalized learning experiences and improving student engagement. AI applications, such as intelligent tutoring systems

and adaptive learning platforms, have been found to enhance student learning outcomes and motivation. Effectiveness of Quizizz Multiple studies have demonstrated the effectiveness of Quizizz in enhancing student learning. For instance, a study by Maufiroh et al. (2021) found that using Quizizz in the classroom increased student engagement and improved learning outcomes. The interactive and gamified nature of Quizizz makes learning more enjoyable and helps students retain information better. Additionally, Anggraeni and Sari (2022) found that students had a positive perception of Quizizz, noting its ability to make assessments more interactive and less stressful. ELL Education Strategies Effective strategies for ELL education include using technology to support language learning. According to Nurtanto (2016), incorporating technology in ELL instruction can provide students with additional resources and opportunities to practice their language skills. The use of applications like Quizizz allows for a more interactive and engaging learning experience, which is crucial for language acquisition.

The conceptual framework of this study is based on the integration of AI technology, specifically the Quizizz application, in English language learning. The framework involves the following components: Input. Implementation of Quizizz in the classroom. Selection of class VIII students at SMPN 3 Pancarijang as research subjects. Process Conducting pre-tests and post-tests to measure students' English proficiency. Using Quizizz for regular classroom activities and assessments. Gathering data through surveys on students' perceptions and experiences with Quizizz output. Analysis of the impact of Quizizz on students' English language learning. Evaluation of improvements in students' reading, writing, speaking, and listening skills. Assessment of student engagement and motivation levels. The literature indicates that AI technology, particularly applications like Quizizz, holds significant potential to enhance English language learning. By providing interactive and personalized learning experiences, AI can improve student engagement, motivation, and overall learning outcomes. This study aims to build on existing research by empirically evaluating the impact of Quizizz on English language learners at SMPN 3 Pancarijang, contributing to the broader understanding of AI's role in education.

Method

This study employs an experimental research design to investigate the effectiveness of the Quizizz application in enhancing English language learning among students at SMPN 3 Pancarijang. Specifically, a pre-test and post-test design will be used to measure the impact of Quizizz on students' English proficiency. This design allows for the comparison of student performance before and after the intervention, providing empirical evidence of the application's effectiveness. The population for this study includes all students in class VIII at SMPN 3 Pancarijang. This group represents a diverse range of English proficiency levels, making it an ideal sample for evaluating the impact of the Quizizz application. Sample A convenience sampling method will be used to select one class (VIII.2) from the total population. This class consists of 20 students who will participate in the study. The selection is based on accessibility and the willingness of the students and teachers to engage in the research activities. Data Collection The data for this study will be collected using a combination of tests and questionnaires: tests Pre-test: Administered before the introduction of the Quizizz application to establish baseline English proficiency levels of the students. Post-test: Conducted after a period of using the Quizizz application to measure any changes in English proficiency. Questionnaires Surveys will be distributed to gather data on students' perceptions of the

Quizizz application and its impact on their learning experience. The questionnaires will include items related to engagement, motivation, and perceived improvement in language skills.

Research Instruments Pre-test and Post-test. Multiple-choice questions covering the four main English language skills: reading, writing, speaking, and listening. The tests will be designed to align with the curriculum and learning objectives of the English language program at SMPN 3 Pancarijang. A structured questionnaire with Likert-scale items to measure students' attitudes and perceptions towards the use of Quizizz in their English language learning. The questionnaire will also include open-ended questions to gather qualitative insights. The data collected will be analyzed using both descriptive and inferential statistical methods. Mean scores, standard deviations, and frequency distributions will be calculated to summarize the pre-test and post-test results and the survey responses. A paired sample t-test will be conducted to compare the pre-test and post-test scores, determining the statistical significance of any improvements in English proficiency. The level of significance will be set at $\alpha = 0.05$. The following hypotheses will be tested in this study: Null Hypothesis (H0): There is no significant difference in the English proficiency of students before and after using the Quizizz application. Alternative Hypothesis (H1): There is a significant improvement in the English proficiency of students after using the Quizizz application.

To obtain permission from the school authorities to conduct the research. develop and validate the research instruments (pre-test, post-test, and questionnaire). Conduct a pilot test to ensure the reliability and validity of the instruments. Implementation Stage. Administer the pre-test to the selected class. Introduce and use the Quizizz application for a specified period during English language lessons. Administer the post-test after the intervention period. Distribute and collect the questionnaires from the students. Final Stage Analyze the collected data using the appropriate statistical methods. Interpret the results and draw conclusions based on the findings. Prepare the final research report and disseminate the findings to relevant stakeholders.

Results

Pre-test and Post-test Scores

The study collected pre-test and post-test scores from the 20 students in class VIII.2 to evaluate their English proficiency before and after using the Quizizz application. The results are summarized in the following tables:

Table 4.1: Pre-test Scores

Classification	Score Range	Frequency	Percentage (%)
Very Good	85-100	0	0%
Good	70-84	0	0%
Fair	55-70	0	0%
Poor	41-54	1	5%
Very Poor	<40	19	95%

Table 4.2: Post-test Scores

Classification	Score Range	Frequency	Percentage (%)
Very Good	85-100	8	40%
Good	70-84	1	5%
Fair	55-70	7	35%
Poor	41-54	2	10%
Very Poor	<40	2	10%

The pre-test results show that the majority of students (95%) were classified as having very poor English proficiency, with only 5% in the poor category. In contrast, the post-test results indicate a significant improvement, with 40% of students achieving very good scores, 5% good, 35% fair, 10% poor, and 10% very poor.

Statistical Analysis

The mean scores and standard deviations for the pre-test and post-test were calculated to assess the overall improvement in students' English proficiency.

Table 4.3: Mean Scores and Standard Deviations

Test	Mean	Standard Deviation
Pre-test	25.00	7.95
Post-test	71.50	22.07

The mean pre-test score was 25.00, while the mean post-test score was 71.50, indicating a substantial increase in student performance after using the Quizizz application.

Paired Sample t-Test Results

Table 4.4: Paired Sample t-Test

Paired Differences	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pre-test - Post-test	-46.50	15.57	3.48	-13.36	19	<0.001

The t-test results show a significant difference between the pre-test and post-test scores ($t = -13.36$, $p < 0.001$), indicating that the use of the Quizizz application had a statistically significant positive effect on students' English proficiency.

Discussion

Effectiveness of Quizizz Application The findings of this study demonstrate the effectiveness of the Quizizz application in enhancing English language learning among students at SMPN 3 Pancarijang. The significant improvement in post-test scores compared to pre-test scores indicates that the interactive and gamified nature of Quizizz

positively impacted students' learning outcomes. These results are consistent with previous research by Akmaliah and Syakir (2023) and Maufiroh et al. (2021), which highlighted the benefits of using game-based learning tools to increase student engagement and motivation.

The survey responses revealed that students felt more motivated and actively engaged in their learning when using the Quizizz application. The interactive quizzes, real-time feedback, and competitive elements provided by Quizizz made the learning experience enjoyable and stimulating. This aligns with the findings of Anggraeni and Sari (2022), who noted that the gamification of learning assessments can reduce stress and increase student participation.

The positive outcomes of this study suggest that integrating AI technology like Quizizz into ELL education can significantly enhance the learning process. The use of such technology not only improves language skills but also fosters a more dynamic and inclusive learning environment. This supports the argument by Holmes and Tuomi (2022) that AI can play a crucial role in personalizing education and meeting the diverse needs of learners.

Despite the positive results, some students reported challenges such as occasional technical issues and the need for a stable internet connection to fully benefit from the Quizizz application. Future research could explore solutions to these challenges and investigate the long-term effects of using AI-based educational tools. Additionally, teachers should receive adequate training on how to effectively integrate these technologies into their teaching practices. The research findings indicate that the Quizizz application is an effective tool for improving English language proficiency among students at SMPN 3 Pancarijang. The significant improvement in test scores and positive student feedback highlight the potential of AI technology to enhance educational outcomes. This study provides valuable insights for educators and policymakers on the benefits of incorporating innovative learning tools in the classroom.

Conclusion

This study aimed to investigate the effectiveness of the Quizizz application, an AI-based educational tool, in enhancing English language learning among students at SMPN 3 Pancarijang. Based on the research findings, the following conclusions can be drawn. The use of the Quizizz application resulted in a significant improvement in students' English proficiency. The post-test scores were substantially higher than the pre-test scores, indicating that the interactive and gamified nature of Quizizz positively impacted students' learning outcomes. The Quizizz application effectively increased student engagement and motivation. The interactive quizzes, real-time feedback, and competitive elements provided a stimulating and enjoyable learning experience, encouraging students to participate actively in their learning process. Students reported positive perceptions of using the Quizizz application. They found the tool to be engaging, enjoyable, and helpful in improving their English language skills. The gamified approach to learning assessments reduced stress and made the learning process more dynamic. The findings suggest that integrating AI technology like Quizizz into English Language Learner (ELL) education can significantly enhance the learning process.

The use of such technology not only improves language skills but also fosters a more inclusive and personalized learning environment. The study highlights the

potential benefits of incorporating innovative learning tools in the classroom. Educators and policymakers should consider the integration of AI-based educational applications to improve student learning outcomes and engagement. Additionally, adequate training for teachers on how to effectively use these technologies is essential for maximizing their potential.

References

- Abimanto, D. (2023). Efektivitas Penggunaan Teknologi AI Dalam Pembelajaran Bahasa Inggris. *Sinar Dunia: Jurnal Riset Sosial Humaniora Dan Ilmu Pendidikan*, 2(2), 256-266.
- Akmaliah, N., & Syakir, A. (2023). Pengaruh Penggunaan Media Belajar Quizizz Terhadap Hasil Belajar Bahasa Inggris Siswa SMP Darul Ma'arif Jakarta. *JLIS*, 3(3), <https://doi.org/10.46637/jlis.v3i3.44>.
- Andika, M., & Mardiana, N. (2023). Edukasi Pentingnya Bahasa Inggris Di Era Globalisasi. *BERNAS: Jurnal Pengabdian Kepada Masyarakat*, 4(1), 246-251. <https://doi.org/10.31949/jb.v4i1.3961>.
- Anggraeni, N. K. P., & Sari, R. K. (2022). Pandangan Mahasiswa Terhadap Pemanfaatan Quizizz Sebagai Media Pembelajaran Bahasa Inggris. *Research and Development Journal of Education*, 8(2), 762. <https://doi.org/10.30998/rdje.v8i2.14066>.
- Arikunto, S. (2010). *Prosedur Penelitian (Suatu Pendekatan Praktik)*. Jakarta: Rineka Cipta.
- Chen, L., Chen, P., & Lin, Z. (2020). Artificial Intelligence in Education: A Review. *IEEE Access*, 8, 75264-75278. <https://doi.org/10.1109/ACCESS.2020.2988510>.
- Emiliasari, R. N., & Kosmajadi, E. (2019). Students' Perceptions of Learning English. *MADINASIKA: Manajemen Dan Keguruan*, 1(1), 35-42. <https://ejournal.unma.ac.id/index.php/madinasika/article/view/153>.
- Febriyanti, E. R. (2018). Identifikasi Analisis Kebutuhan Pembelajar Bahasa Inggris Pada Mata Kuliah Bahasa Inggris Esp Di Lingkungan FKIP Universitas Lambung Mangkurat Banjarmasin. *Vidya Karya*, 32(2), 123. <https://doi.org/10.20527/jvk.v32i2.5230>.
- Gusli, R. A., Zaki, S., Akhyar, M., & Syaikh, N. (2023). Tantangan Guru Terhadap Perkembangan Teknologi Agar Memanfaatkan Artificial Intelligence Dalam Meningkatkan Kemampuan Siswa. *Journal of Management in Islamic Education*, 4(3), 229-240. <https://doi.org/10.32832/idarrah.v4i3.15418>.
- Holmes, W., & Tuomi, I. (2022). State of the Art and Practice in AI in Education. *European Journal of Education*, 57(4), 542-570. <https://doi.org/10.1111/ejed.12533>.
- Mambu, J. G., Z. Pitra, D. H., Rizki, A., Ilmi, M., Nugroho, W., & Saputra, A. (2023). Pemanfaatan Teknologi Artificial Intelligence (AI) Dalam Menghadapi Tantangan Mengajar Guru di Era Digital. *Journal on Education*, 6(1), 2689-2698. <https://www.jonedu.org/index.php/joe/article/view/3304>.
- Marpaung, S. (2021). Pemanfaatan Quizizz Sebagai Media Penilaian Pembelajaran Bahasa Inggris. *Jurnal Global Edukasi*, 5(1), 43-48. <http://jurnal.goretanpena.com/index.php/IGE>.
- Masrichah, S. (2023). Ancaman Dan Peluang Artificial Intelligence (AI). *Jurnal Pendidikan Dan Sosial Humaniora*, 3(3), 83-101. <https://doi.org/10.55606/khatulistiwa.v3i3>.
- Maufiroh, Y., Afifulloh, M., & Safi'i, I. (2021). Penggunaan Media Pembelajaran Quizizz Dalam Mata Pelajaran Pendidikan Agama Islam (PAI) Di SMP Wahid Hasyim Malang. *VICRATINA: Jurnal Pendidikan Islam*, 6(3), 53-61.

- Michael Reskiantio, P. (2021). Epistemologi Kecerdasan Buatan (AI) dan Pentingnya Ilmu Etika dalam Pendidikan Interdisipliner. *Jurnal Filsafat Indonesia*, 4(2), 152-159.
- Mustopa, D., Wekke, I. S., & Hasyim, R. (2019). Penerapan Joyfull Learning dalam Pembelajaran Bahasa Inggris (Tinjauan Psikolinguistik). *Lisan: Bahasa Dan Linguistik*, 8(2), 110-118.
- Nurtanto, M. (2016). Peningkatan Motivasi Dan Prestasi Belajar Dengan Metode Problem Based Learning Pada Pembelajaran Gambar Teknik Melalui Pembelajaran Terbimbing. *VANOS Journal of Mechanical Engineering Education*, 1(2), 201-216. <http://jurnal.untirta.ac.id/index.php/vanos>.
- Owoc, M. L., Sawicka, A., & Weichbroth, P. (2021). Artificial Intelligence Technologies in Education: Benefits, Challenges, and Strategies of Implementation. *IFIP Advances in Information and Communication Technology*, 599, 37-58. https://doi.org/10.1007/978-3-030-85001-2_4.
- Putri, V. A., Carissa, K., Sotyawardani, A., & Rafael, R. A. (2023). Peran Artificial Intelligence dalam Proses Pembelajaran Mahasiswa di Universitas Negeri Surabaya. *Prosiding Seminar Nasional, 615-630.
- Rohayati, D. (2018). Analisis Strategi Pembelajaran Bahasa Dalam Pembelajaran Bahasa Inggris Sebagai Bahasa Asing. *MIMBAR AGRIBISNIS: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, 1(3), 269.