# IMPROVING ENGLISH GRAMMAR SKILLS THROUGH ISLAMIC CONTENT AND TECHNOLOGY FOR SECONDARY SCHOOL STUDENTS IN ISLAMIC BOARDING SCHOOLS

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| Article Info | Abstract |
|---|---|
| | *Mastering English grammar is essential for effective communication, academic success, and professional growth. As one important language element, grammar helps learners in expressing ideas more clearly, avoiding misunderstanding, and engaging in meaningful interactions. Yet, many secondary school students in Islamic boarding schools (pesantren) face challenges in mastering grammar due to traditional teaching methods and a lack of engaging learning sources. This study examines the effectiveness of integrating Islamic content and technology into English grammar teaching to enhance students' learning experiences and outcomes. In particular, the research investigates the impact of the Quizizz platform as an interactive gamified learning tool for grammar instruction. A pre-experimental design with pre- and post-tests was employed to measure the student's progress in grammar proficiency after exposure to Islamic content-based instruction and interactive digital platforms such as Quizizz. In its statistical analysis, the test results revealed a significant improvement in grammar proficiency, with an Asymp.Sig. (2-tailed) value of 0.000 < 0.05, confirming the hypothesis that using Quizizz positively impacts student learning outcomes. The findings demonstrate that integrating technology into grammar instruction can enhance engagement, understanding, and application of grammar concepts. This study underscores the potential integrating religious content with technology-driven instruction to facilitate effective grammar learning in Islamic boarding school settings. Future studies with broader sample sizes, long-term treatment, and control group comparison is needed to strengthen the generalizability of the research results.* |

## INTRODUCTION

English proficiency, particularly grammar mastery, plays a crucial role in students' academic and professional success. A strong foundation in grammar enhances students' ability to construct clear and coherent sentences, improving both written and spoken communication. In academic settings, proper grammar usage is essential for understanding complex texts, writing essays, participating in discussions effectively, and enhancing their overall language proficiency (Normawati & Nugrahaeni, 2024; Nurdin et al., 2024; Sulistyaningrum & Avianka, 2021; Wu et al., 2023). It enables students to express their thoughts with clarity and precision, reducing the risk

of written and oral misinterpretation (Healey & Gardner, 2021). Beyond academics, grammar mastery significantly impacts professional success. In the global job market, effective communication skills are highly valued, and grammatical accuracy reflects professionalism and attention to detail. Whether writing emails, reports, or delivering presentations, individuals with strong grammar skills are more likely to be perceived as competent and credible. Moreover, proficiency in English grammar opens doors to higher education opportunities, international collaborations, and career advancements.

For students in Islamic boarding schools, mastering English grammar is particularly beneficial as it equips them with the linguistic tools necessary to engage with a broader range of academic resources, participate in global discussions, and enhance their career prospects. In Islamic boarding schools (pesantren), where English is often taught alongside religious studies, English is given less emphasis and mastering grammar remains a challenge due to limited exposure to interactive learning resources and a traditional teacher-centered approach (Eliawati et al., 2024; Fakhrudin et al., 2024; Hasyim et al., 2023; Taib et al., 2021). Many students struggle with grammar retention and application, making it difficult for them to develop strong written and spoken communication skills (Behbahani et al., 2024). However, with the increasing need for English proficiency in both academic and professional contexts, integrating effective grammar instruction into the pesantren curriculum is essential.

To address this issue, technology-enhanced learning has emerged as a promising solution. Digital platforms such as Quizizz, which integrate gamification, interactive exercises, and immediate feedback, offer engaging alternatives to conventional grammar instruction. Using such tools, students can practice grammar concepts in a more dynamic and motivating environment (Kiran, 2021; Negoescu & Mitrulescu, 2023). Integrating technology-based learning tools into grammar instruction can further support students in developing their skills in an interactive and engaging manner, ensuring they are well-prepared for future academic and professional challenges (Sahla & Altalhab, 2022) such as in writing capabilities (Faisal & Carabella, 2023; Vu, 2024). Mastering English grammar in Islamic boarding schools is not just about passing exams; it has long-term benefits for students' academic and professional success. It highlights that English proficiency can help pesantren graduates pursue higher education, engage in international scholarly discussions, and access global job opportunities. Furthermore, it allows them to communicate effectively with non-Indonesian Muslim communities, broadening their horizons in religious and professional contexts.

Current research on technology-assisted language learning especially Quizziz in teaching English grammar highlights the benefits in improving engagement and comprehension. An exploration of previous related research on Scopus database using this keyword 'quizizz AND teaching AND grammar' has found 5 documents. Three of which examine the effectiveness of quizizz in improving leaners' English grammar achievement in university setting (Jiemsak & Jiemsak, 2020; Mukhamadiarova & Nizamutdinova, 2023; Pham, 2023); whilst, one paper investigates teachers' use on quizizz app to teach English language elements and skills (Van Pham & Pham, 2023), and one paper explores the application of quizizz in teaching Malay grammar at Tamil school (Munuyandi et al., 2021).

However, while there have been numerous studies on technology-assisted grammar learning, research on integrating Islamic content into English grammar instruction at Islamic boarding school (pesantren) setting remains underexplored. The Islamic boarding school setting is where unique educational and cultural factors can influence learning dynamics. This study bridges the gap between language education and Islamic studies by proposing an Islamic content-based and

technology-enhanced grammar learning model tailored for Islamic school learners. This research contributes to the exploration of how Islamic content can enhance students' learning on grammar skill and providing practical recommendations for English teachers in Islamic boarding school to implement contextually relevant and technology-driven grammar instruction.

This study fills that gap by examining the pre- and post-test results of students using Quizizz for grammar training, providing empirical evidence of its effectiveness. This study investigates the effectiveness of Quizizz as a grammar-learning tool for secondary school students in Islamic boarding schools, aiming to determine its impact on grammar proficiency. By incorporating statistical analysis, this research contributes to the growing body of knowledge on digital learning tools in faith-based education systems. The findings offer practical insights for educators and policymakers on integrating technology into English instruction, ultimately enhancing grammar proficiency among secondary school students in Islamic boarding schools.

## RESEARCH METHOD
### Research Design
This study uses a pre-experimental design with a one-group pre-test and post-test approach to assess the effectiveness of Quizizz in improving English grammar skills among secondary school students in Islamic boarding schools. By measuring students' grammar proficiency before and after using Quizizz, the study aims to identify any significant changes in their skills. The pre-test allows for an initial evaluation of students' grammar knowledge, while the post-test measures any improvements after the intervention. This design helps evaluate the potential of technology-assisted learning, particularly Quizizz, in enhancing students' understanding and application of English grammar in a structured, engaging manner.

### Participants
The participants in this study are secondary school students from an Islamic boarding school in Indonesia. A total of 26 students were selected through purposive sampling, ensuring that they had comparable levels of grammar proficiency at the start of the study. This selection method was used to maintain consistency and reduce variability in their initial grammar skills. While the students had received basic English instruction in the past, their exposure to interactive grammar-learning tools, such as Quizizz, was limited. This background allows the study to focus on the impact of incorporating technology in enhancing their grammar skills in an engaging way.

### Data Collection
Data collection was conducted in the following stages: The Pre-Test was implemented before the intervention; students took a grammar proficiency test to assess their initial understanding of grammar concepts. Secondly, intervention Using Quizizz was conducted through students' participation in technology-enhanced grammar training using Quizizz over a period of 4 weeks. The sessions incorporated gamified quizzes, interactive exercises, and real-time feedback to reinforce grammar rules and application. Next, post-test was carried out after the intervention, the same grammar test was administered to measure any improvement in student performance. Lastly, observations and student feedback were administered.

### Data Analysis
In analyzing the data, a quantitative approach was employed to measure the effectiveness of the intervention. Specifically, the pre-test and post-test scores were analyzed using statistical methods, with the paired-sample t-test being the primary statistical tool used to assess whether the observed improvement in grammar skills was statistically significant. This test compares the mean scores of the pre-test and post-test for the same group of students, determining if any changes in

performance were likely due to the intervention rather than random chance. The significance level was set at 0.05, meaning that any p-value lower than this would indicate a statistically significant improvement. This rigorous statistical analysis ensures that the study provides not only measurable learning outcomes but also meaningful insights into the impact of technology-assisted learning tools, such as Quizizz, in enhancing English grammar skills. Ultimately, this approach offers a solid foundation for evaluating the role of technology in English grammar instruction within the context of Islamic boarding schools.

## RESEARCH FINDINGS AND DISCUSSION
## RESULTS

The results of the training on improving English grammar skills through technology for secondary school students in Islamic boarding schools showed a notable enhancement in students' grammar proficiency. Pre- and post-test scores were analyzed to measure the effectiveness of the training program.

To determine whether the data set generated from this study follows a normal distribution or not, a test of normality was done. Testing for normality helps researchers decide whether parametric test or non-parametric tests will be implemented. As the sample used in this study is relatively small <50, thus, Shapiro-Wilk Test was applied.

Table 1
Test of Normality

|  | Shapiro-wilk | | |
| --- | --- | --- | --- |
|  | Statistic | df | Sig. |
| Pre-test | .966 | 26 | .513 |
| Post-test | .915 | 26 | .035 |

Based on the provided table, it is known that the significance value (SIG) for the Shapiro-Wilk test for the pre-test value is > 0.05, which is 0.513. Meanwhile, the post-test value is < 0.05, which is 0.035. Therefore, it can be concluded that the research data is not normally distributed.

To evaluate the effectiveness of the Quizizz method in improving students' grammar proficiency with Islamic content, a pre-test and post-test were administered to a group of 26 students from an Islamic Boarding School. The collected data were analyzed using the Wilcoxon Signed-Rank Test, which is appropriate for comparing paired samples, especially when the data distribution is not assumed to be normal. The following table presents the ranking summary, which illustrates the direction and magnitude of score changes from the pre-test to the post-test. The rank output highlights the number of students whose scores improved, declined, or remained unchanged after the intervention. The rank output of pre-test and post-test score is detailed as follows.

Table 2
The Rank Output of Pre-test and Post-test Score

| Rank | | | N | Mean Rank | Sum of Ranks |
| --- | --- | --- | --- | --- | --- |
| POSTTEST - PRETEST | | Negative Ranks | 0[a] | .00 | .00 |
|  |  | Positive Ranks | 26[b] | 13.50 | 351.00 |
|  |  | Ties | 0[c] |  |  |
|  |  | Total | 26 |  |  |
| a. posttest < pretest | | | | | |
| b. posttest > pretest | | | | | |
| c. posttest = pretest | | | | | |

Table 2 presents the analysis of the differences between the pre-test and post-test scores. The negative rank, or the negative difference between the two sets of scores, is 0 in terms of N (number of cases), Mean Rank, and Sum. This indicates that there was no decrease in students' scores from the pre-test to the post-test, meaning no student performed worse after the intervention. The positive rank, or the positive difference, shows that all 26 students (N = 26) experienced an improvement in their scores, demonstrating a positive outcome from the intervention. The mean rank of 13.50 reflects the average degree of improvement, while the Sum of Ranks of 351.00 is the total of all the individual improvements in scores. The ties value, which represents cases where the pre-test and post-test scores were identical, is 0, meaning that no student's performance remained the same between the two tests. This suggests that the intervention had an effect on all participants, with each showing some level of improvement in their grammar skills. The data points confirm that Quizizz, as a learning tool, led to measurable gains in students' English grammar proficiency within the context of the study.

Table 3
Results of Z-value Test

| Statistics Test[a] | |
|---|---|
| | POSTTEST - PRETEST |
| Z | -4.459[b] |
| Asymp. Sig. (2-tailed) | .000 |
| a. Wilcoxon Signed Ranks Test | |
| b. Based on negative ranks. | |

Decision-Making Basis for the Wilcoxon Test: If the Asymp.Sig value < 0.05, the hypothesis is accepted. If the Asymp.Sig value > 0.05, the hypothesis is rejected. The Wilcoxon Signed-Rank Test was conducted, which is a non-parametric test. It is used to compare two related samples — in this case, pre-test and post-test scores. This test is typically applied when the data are not assumed to be normally distributed, but sometimes researchers still use it to confirm changes, even when the sample is small or the distribution is unclear. Also, the Z-value of -4.459 indicates a significant shift in scores from pre-test to post-test. The p-value (Asymp. Sig.) is 0.000, which is less than the conventional threshold of 0.05.

Based on the "Statistics Test" output, it is known that the Asymp.Sig. (2-tailed) value is 0.000 < 0.05, thus it can be concluded that "the hypothesis is accepted. This means that there is a statistically significant difference between the pre-test and post-test scores of students. The data show that all students experienced an increase in scores after using the Quizizz method for Grammar lessons with Islamic content. This suggests that the use of Quizizz was effective in enhancing students' grammar performance at the Islamic Boarding School.

**Discussion**

The findings of this study indicate that integrating Islamic content and technology into English grammar instruction significantly enhances students' grammar proficiency, engagement, and motivation in Islamic boarding schools. The statistical analysis of pre- and post-test scores revealed a significant improvement in grammar skills, suggesting that contextually relevant learning materials combined with interactive digital tools lead to better learning outcomes. Furthermore, qualitative feedback from students highlighted that learning grammar through Islamic content made lessons more relatable and meaningful, while gamified learning platforms like Quizizz increased participation and motivation.

The improvement in students' grammar performance suggests that culturally relevant content and interactive technology are effective strategies for overcoming traditional barriers in English

grammar instruction. The use of Islamic texts, sourced from Quranic narration and Hadith helped students see grammar as an integral part of their broader religious and academic learning, making it less abstract and more applicable to their daily lives. Moreover, the gamified and interactive nature of digital tools provided immediate feedback and active learning opportunities, which are essential for reinforcing grammar rules and encouraging self-directed learning. The study also found that students who previously struggled with grammar due to rote memorization techniques showed increased confidence and comprehension when grammar concepts were presented within familiar Islamic narratives. This suggests that learning in a culturally responsive context enhances retention and conceptual understanding, aligning with previous research on Content-Based Instruction (CBI) and Culturally Responsive Teaching (CRT).

This study is similar to many research which indicates that incorporating cultural contexts into educational practices actively enhances students' engagement and understanding, as evidenced by Sprowles et al. (2023), who documented notable improvements in academic achievements and retention rates for students from racially minoritized groups in STEM fields when curriculums reflected cultural relevance and indigenous perspectives. Furthermore, the findings of Maqsood et al. (2024) emphasized the intricate relationship between language education and cultural context. This research underscores how understanding cultural aspects of the English language correlates extensively with proficiency and retention, reinforcing the idea that language learning is enhanced through cultural immersion. Likewise, the work of Raihana and Nurkhamidah (2022) explored local culture-based materials in English language education, illustrating how these materials can cultivate a stronger identity and enhance comprehension of subject content. This idea resonates with findings from Ghoulam et al. (2024), which documented that culturally adapted educational strategies provide students in developing nations with meaningful and engaging learning experiences, thus enhancing retention and academic performance. The shared insights from these studies culminate in a compelling narrative that highlight the transformative power of culturally responsive approaches to education, demonstrating that they not only facilitate retention but also promote a holistic understanding of content among Muslim student populations.

In addition, in terms of technology driven aspect, the finding of this study indicates that gamified and interactive digital tools within language education is obviously recognized for their efficacy in improving self-directed learning, motivating students, and providing immediate feedback that reinforce grammar rules. This finding aligns with previous studies highlighting the effectiveness of technology-assisted language learning. For instance, number of studies found that many features such as immediate feedback in gamified platform not only enhance learners' language performance but also foster enjoyment, autonomy, and a strong self-concept (Castillo-Cuesta, 2020; Eslit, 2023; Guerra, 2023; Karimpour et al., 2025; Liu et al., 2024; Shortt et al., 2023). This indicates that grammar instruction that integrates the use of technology can effectively bring a positive impact to students' academic achievement.

However, unlike most existing research that focuses on technology-enhanced learning in secular educational settings, this study specifically examines its application in Islamic boarding schools, where English is often a secondary priority. While prior research has shown that interactive learning enhances English grammar acquisition, studies on the role of Islamic content in English grammar instruction remain scarce. The result of this study has expanded the current literature by demonstrating that integrating religious content with grammar instruction provides a dual benefit—improving both language proficiency and religious literacy.

The synthesis of these findings across recent literature establishes that learning within a culturally responsive framework not only enriches the educational experience but also significantly

contributes to improved retention rates and a deeper conceptual understanding. Such integrative approaches in pedagogy are instrumental in aligning educational practices with the diverse cultural backgrounds of students, enhancing both learning and retention effectively.

Nevertheless, this study is still limited in some areas such as limited sample size to draw generalizability. The study focused on a single Islamic boarding school, which may not represent all pesantren in Indonesia or other Muslim-majority countries. Future research should involve a larger and more diverse sample to enhance generalizability. Further, this study was conducted in a short-term assessment which measured immediate enhancement in grammar instruction but did not assess long-term retention. Lastly, this study used only one-class as sample, it did not compare the results with a control group using traditional grammar instruction.

## CONCLUSION

Based on the results of the Wilcoxon Signed-Rank Test, it can be concluded that the implementation of the Quizizz method in Grammar lessons with Islamic content had a significant effect on students' learning outcomes. The statistical analysis revealed that all 26 participants demonstrated an increase in their post-test scores compared to their pre-test scores, with no students experiencing a decline and no cases of tied scores. The obtained Asymp. Sig. value of 0.000, which is lower than the significance level of 0.05, indicates a statistically significant difference between the pre-test and post-test results. These findings provide strong evidence that the use of the Quizizz platform contributed positively to improving students' mastery of grammar within the context of Islamic Boarding School education. Therefore, the integration of interactive digital tools such as Quizizz is recommended as an effective strategy for enhancing students' engagement and performance in English grammar learning.

This study highlights the potential of integrating Islamic content and technology in English grammar instruction within Islamic boarding schools. The findings suggest that culturally relevant and technologically supported teaching methods can improve students' grammar skills, motivation, and engagement. Future research can address the limitation found in this study. By addressing these gaps, future research can contribute to developing more effective and inclusive English language teaching models that align with the cultural and religious backgrounds of students in Islamic educational settings.

## FUNDING

This study was conducted without any external funding. All aspects of the research, including data collection, analysis, and report writing, were carried out using personal resources. Despite the lack of funding, the study was completed successfully, relying on available tools and a cost-effective approach to gather and analyze the necessary data.

## INFORMED CONSENT STATEMENT

Participation in this study is entirely voluntary. By agreeing to take part, the participants acknowledge that they have been informed about the purpose, procedures, potential risks, and benefits of the study. Participants understand that their identity are kept confidential and that all information they provide are used solely for research purposes.

## DATA AVAILABILITY STATEMENT

The data utilized in this study cannot be made publicly available due to strict adherence to privacy concerns and ethical obligations that safeguard participant confidentiality. This ensures compliance with ethical research standards and data protection regulations.

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