



Enhancing Arabic Language Proficiency Through Interactive Digital Learning Platforms: A Quasi-Experimental Study in Higher Education

تعزيز إتقان اللغة العربية من خلال منصات التعلم الرقمي التفاعلية: دراسة شبه تجريبية

في التعليم العالي

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ABSTRACT

The integration of digital technology has increasingly transformed language learning practices in higher education. However, empirical evidence regarding the effectiveness of interactive learning platforms in Arabic language instruction remains limited. This study aimed to examine the impact of an interactive digital learning platform on university students' Arabic language proficiency. The research employed a quasi-experimental design using a one-group pre-test-post-test approach. A total of 40 undergraduate students enrolled in an Arabic language course at UIN Saifuddin Zuhri, Purwokerto participated in the study. Students' language proficiency was measured through standardized tests assessing four language skills: reading, listening, writing, and speaking. The data were analyzed using descriptive statistics, paired sample t-test, and effect size (Cohen's d). The findings revealed a significant improvement in students' Arabic language proficiency after the implementation of the interactive learning platform. The average scores increased across all four language skills, with the most substantial improvement observed in speaking ability. Statistical analysis indicated that the difference between pre-test and post-test scores was statistically significant ($p < 0.01$). Furthermore, the calculated effect sizes ranged from 1.18 to 1.56, indicating a strong practical impact of the learning intervention. These findings suggest that interactive digital platforms can effectively enhance students' engagement and language learning outcomes. The study highlights the pedagogical potential of integrating Computer-Assisted Language Learning (CALL) and Mobile-Assisted Language Learning (MALL) approaches into Arabic language instruction. The results provide important insights for educators and institutions seeking to improve the effectiveness of Arabic language learning in higher education.

Keywords: Arabic Language Learning, Interactive Learning, Language Proficiency, Digital Learning.

مستخلص البحث

أدى دمج التكنولوجيا الرقمية إلى إحداث تحول متزايد في ممارسات تعلم اللغات في التعليم العالي. ومع ذلك، لا تزال الأدلة التجريبية المتعلقة بفعالية منصات التعلم التفاعلية في تدريس اللغة العربية محدودة. تهدف هذه الدراسة إلى فحص تأثير منصة التعلم الرقمية التفاعلية على إتقان طلاب الجامعة للغة العربية. استخدمت الدراسة تصميمًا شبه تجريبي يعتمد على نهج الاختبار المسبق والاختبار اللاحق لمجموعة واحدة. شارك في الدراسة ما مجموعه ٤٠ طالبًا جامعيًا مسجلين في دورة اللغة العربية في إحدى الجامعات الإسلامية الإندونيسية. تم قياس إتقان الطلاب للغة من خلال اختبارات موحدة تقيّم أربع مهارات لغوية: القراءة، والاستماع، والكتابة، والتحدث. تم تحليل البيانات باستخدام الإحصاء الوصفي، واختبار تي للعينات المزدوجة، وحجم التأثير (d كوهين). أظهرت النتائج تحسناً ملحوظاً في إتقان الطلاب للغة العربية بعد تطبيق منصة التعلم التفاعلية. وارتفع متوسط الدرجات في جميع المهارات اللغوية الأربع، مع ملاحظة التحسن الأكبر في مهارة التحدث. وأشار التحليل الإحصائي إلى أن الفرق بين درجات الاختبار التمهيدي والاختبار النهائي كان ذو دلالة إحصائية ($p < 0.01$). علاوة على ذلك، تراوحت أحجام التأثير المحسوبة بين ١,١٨ و ١,٥٦،

مما يشير إلى تأثير عملي قوي للتدخل التعليمي. تشير هذه النتائج إلى أن المنصات الرقمية التفاعلية يمكنها تعزيز مشاركة الطلاب ونتائج تعلم اللغة بشكل فعال. وتسلط الدراسة الضوء على الإمكانيات التربوية التي ينطوي عليها دمج نهج «تعلم اللغة بمساعدة الحاسوب» (CALL) و«تعلم اللغة بمساعدة الأجهزة المحمولة» (MALL) في تدريس اللغة العربية. وتقدم النتائج رؤى مهمة للمعلمين والمؤسسات التي تسعى إلى تحسين فعالية تعلم اللغة العربية في التعليم العالي.

الكلمات المفتاحية: تعلم اللغة العربية، التعلم التفاعلي، الكفاءة اللغوية، التعلم الرقمي

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INTRODUCTION

Language education is widely recognized as a cornerstone for fostering effective communication, cultural understanding, and intellectual development. In Indonesia, Arabic occupies a unique position due to its religious, academic, and cultural significance. Mastery of Arabic is indispensable for accessing religious texts, engaging in scholarly discourse, and promoting intercultural dialogue (Siregar et al., 2025; Asy'ari et al., 2024; Lubna Farah & Abdurrehman Mudassir, 2025). Consequently, Arabic language instruction has become a central component of Islamic educational institutions, particularly at universities such as Universitas Islam Negeri (UIN) Saifuddin Zuhri, Purwokerto.

Despite its importance, Arabic education in Indonesia continues to face substantial challenges. The linguistic complexity of Arabic, including its morphology, syntax, and diglossia, presents difficulties for learners. For example, students often struggle with root-pattern derivation in morphology, applying grammatical agreement (*i'rab*) in sentence construction, and distinguishing between Modern Standard Arabic and colloquial varieties used in authentic communication. Limited exposure to real communicative contexts further exacerbates these challenges, leading to difficulties in both comprehension and language production. Traditional pedagogical approaches, often reliant on rote memorization, fail to stimulate meaningful interaction and engagement, thereby restricting communicative competence (Ritonga et al., 2021; Taha Thomure, 2019; Ismail & Shazwan, 2025). This pedagogical gap underscores the urgency of adopting innovative teaching strategies that resonate with the technological proficiency and interactive learning preferences of contemporary students (Ainun Nufus & Azis, 2025).

The integration of technology into language education has emerged as a promising response to these challenges. Digital tools and platforms provide learners with access to authentic materials, interactive environments, and opportunities for communication practice, aligning with active and contextual learning principles essential for language acquisition (Gallagher, 2011). Empirical evidence demonstrates that technology-enhanced instruction improves student motivation, engagement, and language skills (Shadieff & Yang, 2020). This transformation reflects a broader pedagogical shift toward learner-centered approaches that prioritize participation and contextual relevance.

Among the various technological innovations, interactive platforms such as Raptivity have attracted attention for their potential to enrich language learning. Raptivity offers simulations, games, quizzes, and multimedia content, enabling learners to apply knowledge, receive immediate feedback, and engage in experiential learning. Studies highlight the effectiveness of such platforms in enhancing language skills, increasing engagement, and improving learner satisfaction (Roseni & Muho, 2024). Evidence from English and Spanish language contexts demonstrates improvements in speaking, writing, and vocabulary retention through interactive learning (Babayev, 2025).

In Arabic language education, similar technology-based approaches have yielded promising outcomes. Mobile applications have facilitated Arabic learning among non-native speakers (Amara, 2018), while digital tools have been shown to enhance motivation and support self-directed learning (Munapi et al., 2025). Raptivity's adaptability is particularly relevant for addressing challenges in Arabic instruction, such as grammar intricacies and script complexities ((Koshel, 2021; Ellis, 2005); Albirini, 2014; Moorhouse & Kohnke, 2021).

Despite the growing body of literature on technology in language education, specific research on the application of Raptivity in Arabic instruction remains limited. This study, conducted at UIN Saifuddin Zuhri-Purwokerto, aims to investigate the impact of Raptivity on Arabic language learning outcomes (Yurianto & Aliah, 2024). The research seeks to determine whether interactive activities facilitated by Raptivity can enhance comprehension, speaking, reading, and writing skills among students. The study also explores how the platform's interactive nature aligns with modern

pedagogical approaches and addresses traditional instructional limitations (Praba. R & Sanjai. S, 2025).

The integration of interactive platforms such as Raptivity represents a strategic response to the evolving educational landscape, particularly in addressing the challenges of Arabic language learning. Empirical findings from this study indicate that Raptivity enhances student engagement through interactive activities, including vocabulary games, sentence construction tasks, and listening exercises. These features support diverse learning styles while promoting active participation and providing immediate feedback. In addition, classroom observations and performance data reveal increased student motivation and measurable improvements in post-test scores compared to pre-test results. These findings demonstrate the practical effectiveness of Raptivity in improving both learner engagement and Arabic language proficiency, thereby supporting its integration into technology-enhanced language instruction.

Furthermore, leveraging students' familiarity with digital technologies enables educators to create more engaging and effective learning environments (Alshammary & Alhalafawy, 2023). The interactive and customizable features of Raptivity align with contemporary pedagogical frameworks that emphasize active learning, practical application, and real-world language use (Urbaite, 2024; Zhao & Zhang, 2024; Zhou, 2023; Mei et al., 2024). This alignment highlights the critical role of technology in sustaining student motivation and participation, while also addressing the limitations of traditional instructional approaches (Garrison, 2000; GARRETT, 2009; Suvorova et al., 2021).

In conclusion, Arabic language education in Indonesia is undergoing a paradigm shift from traditional, text-heavy methods toward interactive, technology-driven approaches. The integration of platforms such as Raptivity offers a transformative pathway to address linguistic challenges, enhance student engagement, and improve learning outcomes. This study contributes to the growing discourse on technology-enhanced pedagogy by examining the potential of Raptivity to advance Arabic language instruction in higher education.

RESEARCH METHOD

This article employs a quantitative approach with a quasi-experimental design to evaluate the effectiveness of using an interactive learning platform in improving students' Arabic language proficiency. Methodologically, this study adopts a one-group pre-test-post-test design, in which students' language proficiency is measured before and after the implementation of a technology-based learning intervention. This design allows the researcher to identify changes in language proficiency that occur after students participate in learning through the digital platform. A quantitative approach was chosen because it provides an objective and measurable analytical framework for changes in language proficiency through statistical data analysis, thereby allowing the effectiveness of the intervention to be evaluated empirically.

The participants in this study were 40 students in the Arabic Language Education program at a state Islamic university in Indonesia who were enrolled in a technology-based Arabic language course. Participants were selected using purposive sampling, specifically students who were directly involved in classes utilizing an interactive learning platform. Student participation was voluntary, and all participants provided consent to participate in the study. The diverse educational backgrounds of the students, ranging from madrasahs to public schools, provided a more comprehensive context for assessing the effectiveness of technology integration in Arabic language learning at the university level.

The primary instrument of this article is an Arabic language proficiency test designed to measure four core skills: listening, speaking, reading, and writing, administered as a pre-test and a post-test. The reading and listening tests consist of comprehension questions regarding Arabic texts and audio, while the writing and speaking tests are used to assess written and oral language production skills. The study was conducted over one semester in three main phases: the administration of the pre-test, the implementation of instruction using an interactive platform that provides various activities such as digital quizzes, vocabulary exercises, text comprehension, and conversation simulations, and the administration of the post-test. The data obtained were then analyzed using descriptive statistics to describe the mean pre-test and post-test scores, as well as inferential statistics via a paired-sample t-test to test the significance of the difference between the two scores. Additionally, an effect size calculation using

Cohen's d was performed to measure the strength of the learning intervention's impact on improving students' language proficiency, with a significance level set at $p < 0.05$.

RESULT

Pre-Test and Post-Test Across Four Arabic Language Skills

This section presents the results of an analysis of the impact of using an interactive learning platform on improvements in students' Arabic language proficiency. The analysis was conducted by comparing pre-test and post-test scores across the four main language skills: reading, listening, writing, and speaking. This comparison aims to identify changes in students' proficiency following a learning process that utilizes an interactive platform. Methodologically, this approach allows researchers to assess the effectiveness of the learning intervention by examining the differences in achievement before and after the use of learning technology.

To support this interpretation, descriptive statistical analysis was used to illustrate trends in changes in students' average scores for each language skill. Through descriptive statistics, a pattern of skill improvement following the implementation of the interactive learning platform can be observed. Additionally, simple statistical analysis was conducted to test the significance of the score increases achieved by students after the learning intervention took place. Thus, the analysis not only demonstrates quantitative changes in scores but also provides an argumentative basis regarding the extent to which the use of the interactive learning platform contributes to the improvement of students' Arabic language proficiency. The results of the comparison between pre-test and post-test average scores for each language skill are systematically presented in Table 1, thereby facilitating the identification of improvement patterns across each aspect of language proficiency.

Table 1. Table 1. Average Pre-Test and Post-Test Scores

No	Skills	Pre-Test Mean	Post-Test Mean	Improvement
1	Reading	65	77	+12
2	Lestening	68	82	+14
3	Writing	72	84	+12
4	Speaking	75	97	+22

The results in Table 1 show that all language skills improved after students participated in interactive platform-based learning. Score improvements were consistently observed across all measured skills. Speaking skills showed the greatest improvement, by 22 points, indicating significant progress in students' oral communication abilities. Meanwhile, listening skills improved by 14 points, while reading and writing skills each improved by 12 points. To provide a visual representation of these score changes, Figure 1 shows a comparison of the mean pre-test and post-test scores across four Arabic language skills.

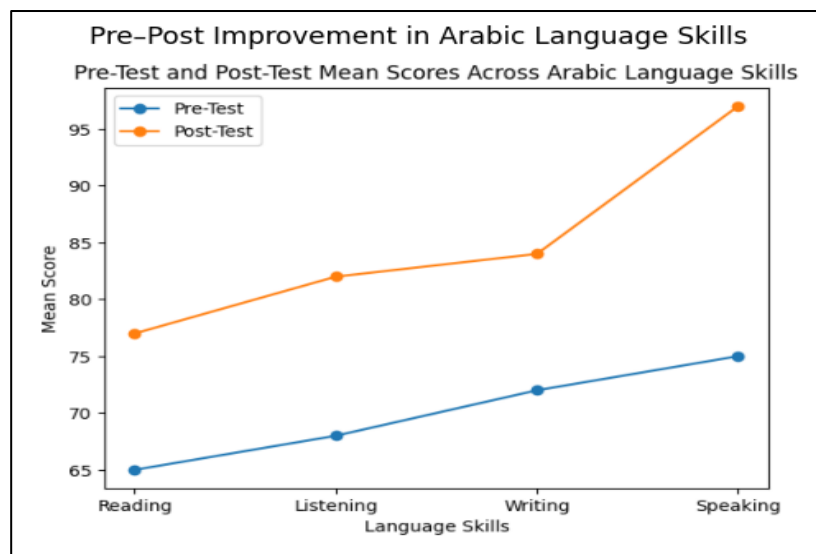


Image 1. Mean scores of Pre-Test and Post-Test Across Four Arabic language skills.

The data visualization in the figure shows a consistent upward trend between pre-test and post-test scores across all language skills. The most striking difference is observed in speaking skills, which showed the most significant improvement compared to the other skills. This improvement indicates that interactive learning activities on digital platforms provide students with greater opportunities to actively practice language use.

Overall, these descriptive statistical findings indicate that the integration of interactive learning technology has a positive impact on students' Arabic language proficiency. Improvements observed across all language skills suggest that digital platforms not only support receptive skills such as reading and listening but also enhance productive skills such as writing and speaking. Furthermore, the findings highlight that students' varied educational backgrounds influence both their initial

proficiency and their engagement with technology. Students with prior exposure to Arabic, typically from Islamic educational backgrounds, tend to demonstrate stronger baseline performance. In contrast, students from public school backgrounds, although initially less proficient in Arabic, often show higher adaptability to digital learning environments and experience notable improvement over time.

These differences also shape students' perceptions of technology, where learners with higher digital familiarity exhibit more positive attitudes and active participation in technology-enhanced learning. Comparative performance data further indicate that, with appropriate support, students from diverse educational backgrounds can achieve significant progress, thereby reinforcing the effectiveness of interactive platforms in bridging proficiency gaps and enhancing overall learning outcomes.

Paired Sample t-Test

To determine whether the increase in scores was statistically significant, a paired sample t-test was conducted comparing the pre-test and post-test scores.

Table 2. Results of the Paired Sample t-Test

No	Skills	Mean Difference	t	p
1	Reading	12	5.12	<0.01
2	Lestening	14	5.67	<0.01
3	Writing	12	4.88	<0.01
4	Speaking	22	6.43	<0.01

The results of the analysis indicate that all language skills showed a statistically significant improvement ($p < 0.01$). This suggests that the use of an interactive learning platform has a significant impact on improving students' Arabic language proficiency.

Effect Size

To determine the strength of the learning intervention's effect, an effect size calculation was performed using Cohen's d.

Table 3. Effect Size (Cohen's d)

No	Skills	Cohen's d	Interpretation
1	Reading	1.21	Large
2	Lestening	1.34	Large

3	Writing	1.18	Large
4	Speaking	1.56	Very Large

A Cohen's d value greater than 0.8 across all skills indicates that the use of interactive learning platforms has a strong impact on improving students' language proficiency. The largest increase in effect size was found in speaking skills, suggesting that interactive learning activities provide students with greater opportunities to actively practice language use.

Visualization of Score Increases

The data visualization shows that post-test scores were consistently higher than pre-test scores across all language skills. This improvement indicates that technology-based learning interventions have a positive impact on the development of students' language skills. This pattern of improvement suggests that interactive technology-based learning can support the development of both receptive skills (reading and listening) and productive skills (writing and speaking).

Summary of Findings

Overall, the results of the study indicate that the use of interactive learning platforms has a positive impact on students' Arabic language proficiency. All language skills showed a significant increase in scores following the learning intervention. Furthermore, the large effect size indicates that these improvements are not only statistically significant but also have a strong practical impact. These findings suggest that the integration of interactive technology into language learning can enhance the effectiveness of the learning process and help students develop their communication skills in Arabic.

DISCUSSION

This study aims to analyze the effect of using an interactive learning platform on improving students' Arabic language proficiency. The results indicate that the use of this digital platform has a positive impact on students' language proficiency across the four core skills: reading, listening, writing, and speaking. Statistical analysis indicates that the

average post-test scores were significantly higher than the pre-test scores ($p < 0.01$). Furthermore, the effect size (Cohen's $d > 1.0$) indicates that the learning intervention had a strong effect on improving students' language proficiency.

These findings indicate that the integration of digital technology into language learning can enhance the effectiveness of the learning process. Interactive platforms enable students to actively engage in various learning activities, such as vocabulary exercises, digital quizzes, conversation simulations, and text comprehension exercises. These activities not only increase the frequency of language practice but also help students gain a deeper understanding of the learning material.

The findings of this study align with Computer-Assisted Language Learning (CALL) theory, which emphasizes that digital technology can enhance the quality of language learning through the use of multimodal media. In a CALL-based learning environment, students can access learning materials that combine text, audio, visuals, and interactive activities. This combination of various modalities helps students understand the language more comprehensively and increases their engagement in the learning process. Previous research has shown that the use of digital technology in language learning can improve students' linguistic skills and learning motivation (Chen, 2022).

The improvement in language proficiency observed in this study can also be explained through the Mobile-Assisted Language Learning (MALL) approach. The MALL approach emphasizes the use of digital devices to support flexible, student-centered language learning. By using digital learning platforms, students can access learning materials anytime and anywhere. This flexibility allows students to engage in more intensive language practice outside of formal classroom instruction (Sutrisna, 2025).

Several recent studies indicate that mobile technology-based language learning can improve students' communication skills by providing greater opportunities for independent language practice. In this study, the most significant improvement was observed in speaking skills, suggesting that interactive activities within the learning platform offer students greater opportunities to actively practice language use. This suggests that digital technology can help create a learning environment that supports the development of communication skills (Benlaghrissi & Ouahidi, 2024).

In addition, the results of this study also highlight the importance of interactive learning in the language learning process. Interactive learning emphasizes students' active engagement in the learning process through various collaborative and participatory activities. In an interactive learning environment, students do not merely passively receive information but are also actively involved in the process of language exploration and practice.

The learning platform used in this study provides various interactive activities such as digital quizzes, educational games, and simulation-based communication exercises. These activities help increase student engagement in the learning process. Qualitative data from student interviews indicate that they find learning more engaging and less monotonous when using the digital platform. Students also reported that the real-time feedback feature helps them understand the language errors they make (Roseni & Muho, 2024).

These findings support previous research indicating that interactive learning can enhance students' motivation and participation in the language learning process. When students are actively engaged in learning activities, they tend to grasp language concepts more easily and feel more confident in using the target language.

The results of this study also have several important implications for the development of Arabic language instruction in higher education. First, the findings suggest that the integration of digital technology can be an effective strategy for improving students' language proficiency. Therefore, educational institutions should consider incorporating learning technologies as part of language curriculum innovation (Faiza Amaliyah & Hasan, 2025).

Second, this study indicates that the effectiveness of technology-based learning depends not only on the use of technology itself but also on the design of learning activities that encourage student engagement. Consequently, instructors should design interactive and collaborative learning activities to ensure students can make optimal use of technology.

Third, the use of learning technology can help create a more flexible and adaptive learning environment. Students can learn independently according to their individual needs and learning pace. This is particularly important in language learning because each student has different proficiency levels and learning styles.

Although this study makes an important contribution to the development of technology-based Arabic language learning, there are several limitations that need to be noted. First, this study was conducted on a limited sample size, so generalizing the results requires caution. Future research could involve a larger sample size and different educational institutions to obtain a more comprehensive picture.

Second, this study only measured improvements in language proficiency over a relatively short period of time. Future research could explore the impact of educational technology on the long-term development of language proficiency. Third, this study has not yet thoroughly analyzed individual factors that may influence the effectiveness of technology-based learning, such as learning motivation, digital literacy, and students' learning strategies. Future research could examine these factors to gain a deeper understanding of how technology can be optimally utilized in language learning.

Overall, the findings of this study indicate that the use of interactive learning platforms can significantly improve students' Arabic language proficiency. This improvement is evident across all language skills, with the greatest improvement observed in speaking skills. These results provide empirical evidence that the integration of digital technology into language learning can enhance the quality of the learning process and help students develop communication competencies in Arabic (Maryani et al., 2024; Nikhlatunnuha et al., 2025).

Thus, this study confirms that the application of digital technology in language learning is not only a pedagogical innovation but also a critical necessity in addressing educational challenges in the digital age. The integration of appropriately designed learning technologies can help create a more interactive, flexible, and effective learning environment for students.

The significant improvement in language proficiency scores observed in the experimental group reinforces the potential of interactive platforms to enhance Arabic language learning outcomes. These results validate previous research findings demonstrating the effectiveness of interactive platforms in improving language skills. Substantial improvements in reading comprehension, speaking, writing, and listening skills indicate that the platform's engagement and interactivity contribute to a more holistic language learning experience (Lazuardi & Syarif Muhammad Syaheed, 2024).

The quantitative evidence aligns with the theoretical framework guiding this

study, which integrates constructivist principles, technology-mediated learning, and interactive pedagogy. Students actively engage with the platform, construct knowledge through interaction, and benefit from immediate feedback. This alignment underscores the potential of technology-enhanced learning to foster constructivist practices and promote active engagement among students (Feyzi Behnagh & Yasrebi, 2020; LAM et al., 2021).

Qualitative data further enriches the discussion, providing different insights into students' perceptions and attitudes toward this platform. The positive feedback, expressed through interviews and surveys, reflects the alignment of the interactive platform with students' learning preferences and the principles of interactive pedagogy (Singh et al., 2025). Students' descriptions of increased motivation, self-confidence, and practical language application reflect the benefits highlighted in the literature review (Chen, 2022; Liu et al., 2020).

The combination of quantitative improvements in language proficiency scores and positive qualitative feedback highlights the importance of integrating the Raptivity interactive platform into Arabic language instruction. Quantitative results show substantial improvements in reading comprehension, speaking, writing, and listening skills among participants in the experimental group. These improvements align with previous research highlighting the positive impact of interactive platforms on language learning outcomes.

Qualitative evidence further enriches our understanding of its impact. Students' perceptions and attitudes reveal that interactive platforms not only enhance language skills but also transform the learning experience. Participants appreciated the platform's interactivity, instant feedback, and simulations of real-world language use. This aligns with theoretical frameworks that emphasize constructivist learning, technology-mediated instruction, and interactive pedagogy (Kamaruddin et al., 2025; Lazuardi & Syarif Muhammad Syaheed, 2024).

These findings are collectively consistent with the broader literature on technology-mediated language education. The integration of technology, such as the Raptivity platform, aligns with the shift toward learner-centered, interactive, and contextual pedagogy. The results of this study reinforce the role of technology in addressing the challenges of traditional Arabic language instruction by providing

engaging, learner-centered experiences that encourage active learning and the application of skills (Ainun Nufus & Azis, 2025; Hady et al., 2025).

The purpose of this study is to explore the potential of the Raptivity platform in enhancing Arabic language instruction. The findings indicate that the platform aligns with this objective by significantly improving language proficiency scores. Positive qualitative feedback reinforces the platform's potential to foster motivation, engagement, and practical language application.

This discussion extends to the broader literature on technology in language education. The integration of technology, particularly interactive platforms, is consistent with trends toward experience-based and learner-centered learning (Zhang & Zou, 2022). The positive results observed reflect sentiments expressed in previous research emphasizing the role of technology in bridging the gap between traditional teaching methods and the expectations of contemporary learners (Kessler, 2018; Thorne, 2024).

These findings have implications for Arabic language educators at UIN Saifuddin Zuhri, Purwokerto and the surrounding area. The integration of the Raptivity platform offers an effective strategy for addressing challenges related to language teaching. It caters to students' diverse learning styles, enhances motivation, and provides authentic language practice. However, this study also encourages further investigation into the long-term sustainability and scalability of this intervention, as well as potential challenges in its implementation.

In conclusion, the results of this study underscore the significant impact of the Raptivity interactive platform on Arabic language instruction. The findings demonstrate that technology can foster more engaging, interactive, and effective learning experiences, thereby contributing to the growing body of knowledge on technology-enhanced language learning. However, this study is limited to a single institutional context and a specific group of learners, which may affect the generalizability of the findings. Therefore, future research is needed to replicate this study across different educational settings, regions, and demographic groups. Such efforts would provide a more comprehensive understanding of the effectiveness of interactive platforms in diverse contexts and further inform educators and institutions in implementing technology-based language instruction.

CONCLUSION

This study demonstrates that the use of interactive learning platforms is highly effective in improving students' Arabic language proficiency. This improvement is evident from a comparison of pre-test and post-test scores across the four core language skills—reading, listening, writing, and speaking—which showed significant progress following the implementation of technology-based learning. Statistical analysis reveals that post-intervention scores were higher than pre-intervention scores, indicating a tangible change in language proficiency. The magnitude of the effect size further reinforces that learning interventions utilizing interactive platforms have a strong practical impact on the development of students' language competencies. These findings confirm that the integration of digital technology into Arabic language learning creates a more engaging, participatory, and student-centered learning environment, thereby encouraging active student involvement in the learning process and expanding opportunities for more intensive language practice.

The use of interactive learning platforms has also been shown to strengthen learning motivation and increase student engagement in learning activities. This indicates that digital technology serves not only as a technical tool but also as a pedagogical strategy capable of enhancing the quality of the language learning process in higher education. Thus, the results of this study provide empirical evidence that the integration of technology into Arabic language learning is a relevant and effective approach to supporting the development of students' communication competencies. Based on these findings, educational institutions should consider utilizing learning technologies as part of innovations in language curriculum development. Although this study has limitations regarding sample size and scope—being confined to a single institution—the results still provide a strong argumentative foundation for further research with a broader participant base and the exploration of more innovative learning technologies in Arabic language instruction.

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