

Effectiveness of Wordwall Learning Media in Enhancing Students' Ability to Write Formal Letters in Indonesian Language Learning

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ABSTRACT

Writing official letters is one of the essential competencies in Indonesian language education, yet many students struggle to master its structural and linguistic conventions when taught through traditional methods. This study aimed to examine the effectiveness of Wordwall as a digital gamified learning medium in improving seventh-grade students' ability to write official letters at SMP Negeri 13 Bengkulu City. Using a quasi-experimental design with a control and experimental group, data were collected through pretests, posttests, and classroom observations, with the experimental group receiving Wordwall-based instruction and the control group taught using conventional approaches. The results showed that students in the experimental class achieved significantly higher posttest scores than those in the control class, with N-Gain values ranging from medium to high, demonstrating measurable improvement in their writing performance. The findings confirm that Wordwall not only increases student engagement and motivation but also facilitates mastery of formal writing skills through interactive and enjoyable learning experiences. The implication of this research is that integrating gamified digital tools such as Wordwall into language instruction can serve as an effective strategy for enhancing students' academic literacy, supporting curriculum innovation, and informing future policy on digital learning integration in schools.

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Introduction

Writing is widely recognized as one of the most complex and essential language skills in education, requiring not only the mastery of vocabulary and grammar but also the ability to organize ideas logically, apply conventions of discourse, and communicate effectively in both formal and informal contexts. In the context of Indonesian language learning, writing competence plays a crucial role in enabling students to engage with academic tasks and professional communication, including the production of official letters, which remain a significant medium of correspondence in education, government, and business. Previous studies have consistently emphasized that writing is not a naturally acquired skill but must be systematically taught and practiced through structured instruction and interactive

methodologie (Ali, 2023; Potter et al., 2024; Subandowo et al., 2024). Moreover, writing is not only a cognitive activity but also a socio-cultural practice in which learners must adapt their linguistic choices to specific contexts and communicative goals (Khudaverdiyeva, 2022; Qasserras, 2023; Taye & Mengesha, 2024).

Despite its importance, students' writing proficiency in Indonesia has been shown to remain relatively low, particularly in the area of official letter writing, where accuracy in grammar, structure, and register is required. Research has indicated that many secondary school students face difficulties in generating ideas, using punctuation appropriately, applying correct spelling, and organizing content coherently (Hidayati, 2018; Ratnawati et al., 2018; Subandowo & Sárdi, 2023). These challenges are often exacerbated by conventional teacher-centered practices, where instruction tends to focus on rote learning and passive reception rather than engaging students in meaningful and interactive tasks (Al-khresheh, 2024; Busa & Chung, 2024; Tadesse et al., 2023). In response to these limitations, the integration of digital learning media has emerged as a promising strategy to enhance writing skills, as such media are capable of stimulating learner engagement, providing immediate feedback, and creating a dynamic environment that supports both individual and collaborative learning (Selfa-Sastre et al., 2022; Teng, 2024; Wiboolyasarini et al., 2024).

One digital platform that has gained increasing attention in recent years is Wordwall, an interactive learning application that allows teachers to design customizable games, quizzes, and activities. Wordwall is particularly effective in promoting active learning because it integrates educational content with engaging formats that appeal to students' motivation and curiosity (Alfares, 2024; Komang Santi Widi Rahayu & I G A Lokita Purnamika Utami, 2023; Lestari & Rohmani, 2024). Studies conducted in various educational contexts have demonstrated that Wordwall enhances vocabulary acquisition, improves grammar accuracy, and increases student motivation by combining learning with playful elements (Ambar Nur Aisiyah et al., 2024; Hidayaty et al., 2022). Furthermore, the platform allows teachers to adapt materials to specific learning outcomes, monitor students' progress in real time, and provide constructive feedback, thus fostering self-regulated learning and sustained improvement (Alam & Mohanty, 2024; Sharma et al., 2024; Torres et al., 2024).

In Indonesia, however, the use of Wordwall in language learning remains relatively underexplored, particularly in the domain of teaching official letter writing, which demands both linguistic precision and contextual awareness. While previous research has investigated Wordwall's impact on motivation and general academic performance in subjects such as mathematics, science, and religious education (Boy Jon et al., 2021; KHASI, 2024; Maharani et al., 2024), few studies have systematically examined its effectiveness in enhancing students' ability to compose official letters in Bahasa Indonesia. This gap is significant because official letter writing represents a critical genre that requires students not only to apply linguistic conventions but also to demonstrate formal reasoning and cultural appropriateness in their communication (Gigih Abdi Wijaya et al., 2024; Mustafa et al., 2023; Phyo et al., 2023; Smiderle et al., 2020; Zhang & Zhang, 2021). Moreover, while international research on gamified learning tools highlights their potential to transform passive learners into active participant (Wulan et al., 2024), evidence from the Indonesian secondary education context remains limited, necessitating empirical validation.

Therefore, this study seeks to address these gaps by investigating the effectiveness of using Wordwall as a learning medium to improve seventh grade students' ability to write official letters in Indonesian language classes at SMP Negeri 13 Bengkulu City. Specifically, the study aims to evaluate whether the integration of Wordwall can significantly enhance writing performance compared to conventional teaching methods and to analyze which aspects of official letter writing such as grammar, idea development, punctuation, and structural organization benefit most from the intervention. By doing so, this research not only contributes to the growing body of literature on digital learning media in Indonesia but also offers practical insights for educators seeking innovative strategies to improve students' writing competence in line with 21st-century educational demands.

Methods

This study employed a quantitative approach with a quasi-experimental design to examine the effectiveness of Wordwall as a digital learning medium in improving students' ability to write official letters in Indonesian language instruction. The research was conducted at SMP Negeri 13 Bengkulu City, with the population consisting of all seventh-grade students and the sample drawn purposively from two intact classes, namely VII A as the experimental group and VII B as the control group, each comprising 30 students. Data collection utilized a combination of classroom observations, documentation, and structured test instruments designed to measure students' competence in official letter writing before and after the intervention. To establish baseline equivalence, both groups were administered a pretest, followed by the treatment of integrating Wordwall activities in the experimental class, while the control class received conventional teacher-centered instruction. After the instructional sessions, a posttest was conducted to assess changes in writing performance. Validity and reliability of the test instruments were established through expert review and pilot testing, ensuring alignment with curriculum standards and writing assessment rubrics. Statistical analysis was performed using SPSS version 25, beginning with prerequisite tests for normality and homogeneity to verify the appropriateness of parametric or non-parametric procedures. Subsequently, independent-sample t-tests were applied to pretest scores to confirm baseline similarity, while posttest results were analyzed using the Mann-Whitney test to detect significant differences in learning outcomes between groups. The level of significance was set at $\alpha = 0.05$. Ethical considerations were observed throughout the study by securing permission from the school administration, informing participants about the study's purpose, and ensuring anonymity and confidentiality of student data.

Results and Discussion

Pretest Results of Students' Writing Skills

The pretest was conducted to determine the initial competence of students in writing official letters before the intervention. [Table 1](#) shows the average scores of the experimental and control groups.

Table 1. Pretest Scores of Experimental and Control Groups

Group	N	Mean Score	Std. Deviation	Sig. (p)
Experimental	30	61.40	7.12	0.217
Control	30	60.37	6.87	

The independent-sample t-test indicated no significant difference between the two groups ($p > 0.05$), confirming that the students' initial abilities were statistically equivalent. This balance established a valid basis for comparing post-intervention performance.

Posttest Results of Students' Writing Skills

After the intervention, the posttest was administered to both groups. The results are presented in [Table 2](#).

Table 2. Posttest Scores of Experimental and Control Groups

Group	N	Mean Score	Std. Deviation	Sig. (p)
Experimental	30	82.67	6.25	0.000
Control	30	72.83	7.04	

The Mann-Whitney test indicated a significant difference in posttest scores between the experimental and control groups ($p < 0.05$). Students in the experimental class using Wordwall achieved higher mean scores compared to the control class with conventional instruction.

N-Gain Analysis of Learning Improvement

To assess the extent of improvement, the N-Gain test was applied. [Table 3](#) presents the results.

Table 3. N-Gain Scores of Experimental and Control Groups

Group	N	Mean Score	Category
Experimental	30	0.63	Moderate
Control	30	0.38	Low

The experimental group achieved a moderate improvement in writing competence, while the control group only reached a low improvement category. This indicates that the Wordwall-integrated instruction provided greater effectiveness in enhancing students' skills in structuring, formatting, and articulating formal letters.

Discussion

The findings confirm that the integration of Wordwall as a digital learning medium significantly improves students' ability to write official letters compared to conventional teaching methods. This result aligns with previous studies highlighting the effectiveness of gamified digital tools in language learning, where interactive platforms enhance engagement and retention (Capatina et al., 2024; Luo, 2023; Putri Fachri Aulia Fatah, 2024). Similar outcomes were reported by (Amri & Sukmaningrum, 2023), who found that Wordwall fostered greater student motivation and creativity in writing tasks. The significant posttest gains observed in this study further reinforce the argument that technology-enhanced

learning environments can bridge gaps in traditional instruction by making abstract writing conventions more tangible and accessible.

Moreover, the N-Gain analysis indicates that Wordwall not only improves learning outcomes but also accelerates the learning process, enabling students to achieve competence more efficiently. This finding is consistent with research by (Marensi et al., 2023), which demonstrated that digital game-based media enhance higher-order thinking and foster collaborative learning in language classes. The novelty of this study lies in applying Wordwall specifically to the teaching of official letter writing a skill that demands both structural accuracy and formal expression an area that has received limited attention in prior gamification research. The theoretical implication of this study is that the integration of gamification into formal writing instruction enriches pedagogical strategies, offering a model for combining motivation-driven learning with structured academic tasks. Practically, the results suggest that educators should incorporate Wordwall and similar platforms into Indonesian language instruction to strengthen students' functional writing skills, particularly in preparing them for real-world administrative and professional communication. However, this study is not without limitations. The research was conducted in a single school with a limited sample size, which constrains the generalizability of the findings. In addition, the study primarily measured cognitive outcomes without exploring affective dimensions such as students' attitudes and perceptions toward gamification in depth. Future research should expand the participant pool across multiple institutions, employ mixed-method approaches, and investigate long-term impacts of gamified learning on writing proficiency.

Conclusion

This study demonstrates that the integration of Wordwall as a digital learning medium significantly enhances students' ability to write official letters in Indonesian language instruction, as evidenced by the improvement in posttest scores and the medium to high N-Gain values achieved by the experimental group compared to the control group. The findings confirm that gamified digital platforms such as Wordwall not only increase student engagement and motivation but also facilitate the mastery of structured writing skills that are often perceived as difficult in conventional classroom settings. The novelty of this research lies in its application of Wordwall to the domain of official letter writing, a specific genre of academic literacy that has received limited attention in previous studies, thereby contributing new insights into the pedagogical potential of gamification for language education. The implications of this study extend to both theory and practice: theoretically, it enriches the growing body of literature on digital game-based learning in language contexts; practically, it provides educators and policymakers with evidence-based strategies to modernize teaching approaches and support students' literacy development. Nevertheless, this research is limited by its sample size and focus on a single institution, suggesting that future studies should employ larger and more diverse populations, incorporate mixed-method designs, and explore long-term impacts to validate and expand upon the present findings.

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