Investigating the effectiveness of implementing the Wordwall platform in teaching vocabulary to non-English majored students at NTTU

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Abstract

This study aimed to investigate the effectiveness of using the Wordwall platform for teaching vocabulary to non-majored students at Nguyen Tat Thanh University. A total of 200 participants were assigned to the experimental group (n=100) and test group (n=100) for a pretest-posttest design, followed by a questionnaire at the end of the study. The study was conducted over three two-week periods, during which the test group engaged in vocabulary learning activities on the Wordwall platform, while the control group utilized traditional learning methods. Vocabulary proficiency was assessed through pretest and posttest evaluations. The results revealed that students using Wordwall showed greater improvements in vocabulary learning compared to those using conventional methods. Additionally, the use of Wordwall not only enhanced students' ability to learn new words, but also fostered higher levels of engagement and motivation. These results suggest that integrating the Wordwall platform into English vocabulary instruction could significantly improve learning outcomes for non-English majored students at Nguyen Tat Thanh University.

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Keywords

Wordwall platform, traditional teaching methods, non-English majored students, vocabulary teaching

1 Introduction

1.1 Background to Study

Digital platforms like Wordwall have become popular in teaching English, offering customized games and interactive ways for ESL learners to acquire vocabulary [1]. These platforms can improve language proficiency and broaden skills by promoting academic vocabulary and enhancing comprehension. Some universities have adopted this method to support non-English majored students, as traditional methods often struggle to engage learners and ensure long-term retention of vocabulary [2, 3].

Wordwall provides customized activities and games tailored to learners' needs [3]. Its appealing design and template offerings make learning more interesting and dynamic [4], thus enhancing vocabulary acquisition.

Despite the growth of technology in teaching English, studies on Wordwall's effectiveness for non-English majored students in Vietnamese universities remain limited. This study aims to evaluate Wordwall's effectiveness on teaching vocabulary to non-English majored students at Nguyen Tat Thanh University (NTTU).

1.2. Literature Review

1.2.1 Teaching Vocabulary

Vocabulary acquisition brings considerable benefits to the language learning process by improving language comprehension and production, helping learners master a new language effectively. It serves as an indicator for teachers and researchers to evaluate learners' progress, especially in speaking and writing. However, traditional vocabulary learning methods often lead to passive information reception and limited engagement.

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Technology tools, particularly in vocabulary teaching, address issues like learner motivation and engagement, making classrooms more student-centered through interactive learning experiences [3, 4]. These tools allow individuals to learn at their own pace, recognize mistakes, and evaluate their progress [3]. Consequently, teachers use the Wordwall platform in vocabulary lessons for non-English majored students

1.2.2 Overview of Wordwall Platform

Before the introduction of Wordwall, vocabulary was mainly taught using traditional, teacher-centered methods such as memorization, translation, repetition, and textbook-based activities [5]. These methods remain common due to time constraints and a focus on exam scores. However, with advances in technology, modern tools like Wordwall have become accessible to both teachers and students.

Wordwall is an online platform that enables teachers to create various interactive activities such as quizzes, crosswords, and matching exercises. It is widely used in vocabulary teaching for its ability to boost student motivation [5, 11]. The platform supports self-paced learning and provides instant feedback, helping prevent fossilized errors − features that are particularly useful in large university classes. Moreover, it fosters collaboration through group-based activities, encouraging interaction and engagement. Research suggests that platforms like Wordwall can enhance vocabulary retention and application more effectively than traditional methods [2].

1.2.3 Empirical Studies on Implementing Wordwall to Teach Vocabulary

Many previous studies have demonstrated that implementing Wordwall in vocabulary development is highly effective and offers significant potential in various aspects of learning, including:

1.2.3.1 Enhancing Students' Vocabulary Range

Integrating Wordwall into vocabulary development has significantly enhanced students' lexical resources. Students using Wordwall demonstrated greater improvement in English vocabulary compared to those taught with traditional methods [5, 9]. This progress can be attributed to several factors.

Firstly, Wordwall provides immediate feedback, helping students identify and correct mistakes while reinforcing new vocabulary [1, 10]. The platform's feedback and scoring system also helps teachers monitor progress and identify areas requiring further practice. Additionally, activities that encourage repeated writing of words improve spelling proficiency, providing a strong foundation for literacy and writing skills [10]. The platform's diverse game designs allow teachers to customize tasks, enabling students to learn at their own pace and promoting autonomous, personalized learning experiences [7, 10].

1.2.3.2 Boosting Learners' learning Motivation

To address challenges related to students' lack of enthusiasm for vocabulary learning, the Wordwall platform captures students' interest by a range of engaging learning activities. Through Wordwall, learning is subtly integrated into various fun and dynamic individual or team games, enriched with lively animated graphics and catchy audio, to create an exciting and interactive learning atmosphere [5, 11]. Moreover, the platform fosters a safe and supportive learning environment where mistakes are accepted, allowing students to consolidate their knowledge through failures and repetition without experiencing anxiety [1]. These appealing features make Wordwall a preferred choice for many students over traditional activity-based lessons [5, 10]. Students even express a desire to repeat this enjoyable learning method [8].

1.2.3.3 Increasing Learners' Participation

The Wordwall platform eliminates class size barriers which can prevent learners from participating in learning activities [1] as it can accommodate up to 100 students simultaneously. This ensures equal engagement opportunities and enhances learning efficiency. With a link provided by teachers, students can easily revisit lessons, anytime and anywhere, fostering independent learning outside the classroom [1, 10]. Many students voluntarily use teacher-prepared games to review and practice at home [1].

Although numerous studies have examined the use of Wordwall as a supplementary tool for vocabulary instruction, none have specifically investigated its implementation or impact on vocabulary improvement among students at Nguyen Tat Thanh University. Therefore, this study aims to explore the effectiveness of Wordwall platform in enhancing the lexical resources and learning experiences of non-English majored students at the university through quantitative research and a quasi-experimental design.

2 Research Method

2.1 Research Design

This study employed a quasi-experimental design, and a questionnaire to evaluate the effectiveness of the Wordwall platform in enhancing students' vocabulary mastery. The research was conducted in four stages: pre-test, intervention, post-test, and questionnaire.

A total of 200 participants were recruited and evenly divided into test and control groups. The intervention lasted six weeks and was organized into three two-week phases. At the beginning of each phase, all participants completed an initial vocabulary test to assess their proficiency (pretest). During each two-week period, the test group participated in six 30-minute vocabulary training sessions using various interactive activities on Wordwall to help them memorize and understand word usage. In contrast, the control group followed traditional learning methods with the same frequency. These included completing different types of written vocabulary exercises from textbooks, translating words or sentences, and playing in-class vocabulary games. Due to time constraints and large class sizes, students have few opportunities to engage in game-based learning activities. Each session concluded with a review of vocabulary lists from the textbook to reinforce retention.

This process was repeated for three training periods. At the end of the study, participants in the test group completed a questionnaire to share their perceptions of learning with Wordwall. Finally, the collected data were analyzed to assess the platform's effectiveness.

2.2 Participants

The study involved 200 non-English majored students at NTTU, whose primary field of study was not English Linguistics. These individuals were selected because many showed less interest in English and struggled with vocabulary retention. All participants were enrolled in General English Level 1, the first level of the school's curriculum, which corresponds to A2 on the Common European Framework of Reference (CEFR). Ensuring that all students shared the same proficiency level allowed researchers to compare the effects of different teaching methods while maintaining consistent learning content.

Before the pretest, participants provided personal and research-related information, and each was assigned a random ID number to ensure privacy. All collected data was securely stored and accessible only to the researchers and NTTU, who funded the study.

2.3. Research Tools

2.3.1 Vocabulary Test

The researchers administered pre-tests and post-tests via the Liveworksheet platform, which automatically checks answers for fixed-response questions, saving time in assessing participants' work. However, researchers manually evaluated participants' responses for open-ended questions. Both tests in each period followed the same format and sourced vocabulary from the same word lists but featured different questions to prevent participants from simply memorizing answers. The vocabulary was drawn from the 50 new words introduced in each unit of the book '*Personal Best A2A'*. Over the course of the study, six units were evenly distributed across three testing periods, with each test assessing participants' ability to use vocabulary from two units. The tests comprised 50 questions in various formats, including multiple-choice, word spelling, and sentence construction, ensuring that students not only recognized and recalled the words but also applied them correctly.

2.3.2 Wordwall Platform

This research was conducted using the Wordwall Pro version, which required a monthly subscription of 165,000 VND. This version was chosen over the basic and standard plans as it provided full access to all activities and exclusive features unavailable in the other packages.

2.3.3 A Questionnaire

After the training session, the researchers designed a 10-question survey using a 5-point Likert scale. The questionnaire was divided into two sections: students' perspectives on Wordwall (items 1-5) and comparisons of Wordwall with traditional methods (items 6-10). Participants could choose from five response options (1-5), ranging from "1-Strongly Disagree" to "5-Strongly Agree," with three intermediate choices representing varying levels of agreement or disagreement. The survey aimed to assess students' attitudes toward Wordwall beyond its effectiveness.

2.3.4 SPSS Software

SPSS version 20.0 was used to analyze the pre- and post-test results from each training period, as well as the questionnaire data, to address the two research questions.

2.4 Procedure of Data Collection

Participants were first briefed on the study's procedures and given instructions for completing the tests. They then took three sets of pretests and posttests during three two-week training sessions. Test scores were marked both automatically and manually and recorded for later analysis. On the scheduled dates, 100 participants received Vietnamese-translated questionnaires, all of which were completed and deemed valid, resulting in a 100% response rate.

2.5 Data Analysis

The analysis phase began after data collection was completed. Researchers first entered participants' vocabulary scores and questionnaire responses into Excel before analyzing the quantitative data using SPSS version 20.0.

To answer the first research question, independent sample T-tests and paired T-tests were performed to examine the impact of the training sessions on participants' vocabulary knowledge. For the second question, students' responses from the questionnaire were analyzed and categorized according to predetermined themes, such as their perceptions of the Wordwall and comparisons between the Wordwall and traditional vocabulary teaching methods.

3 Results

3.1 Test Results

3.1.1 Before the Intervention

Before the intervention, three pre-tests were administered to assess the initial vocabulary knowledge of both groups. The results showed that the control group scored an average of 7.2 on the first test, 8.2 on the second, and 7.7 on the final test (Table 1), while the experimental group scored an average of 7.7; 7.6 and 7.3 (Table 1), respectively. The p values for the three tests were 0.2; 0.2, and 0.3 (Table 1), all greater than 0.05, indicating that there were no significant differences in vocabulary knowledge between the two groups prior to the intervention.

Table 1 Independence T-test for 3 pretest scores of control and test groups

Test	Control group (n = 100)		Test group (n = 100)		t	p
	M	SD	M	SD		
Pretest 1	7.2	2.1	7.7	3.2	−1.4	**0.2**
Pretest 2	8.2	3.1	7.6	2.5	1.3	**0.2**
Pretest 3	7.7	2.4	7.3	2.5	1.1	**0.3**

3.1.2 After the Intervention

After each 2-week training session, the mean scores of students in the control groups increased from 7.2 in the first test, 8.2 in the second, and 7.7 in the final test to 33.6; 33.5, and 35.0, respectively (Table 2). Meanwhile, those in the test groups in three consecutive tests were 7.7; 7.6, and 7.3, growing to 43.2 ; 43.8 and 43.7 (Table 2) after learning with Wordwall in two weeks. When comparing the result of the pretest and posttest in each separate test, all showed a p value of 0.0 (Table 2), which was less than 0.05, indicating a significant difference between pre- and post-test scores. This suggests that learning through traditional methods and using Wordwall led to higher vocabulary scores.

Table 2 Paired T-tests of control groups and test groups in three periods

Training Period	Pairs	Group	Pretest		Posttest		t	df	p
			M	SD	M	SD			
1	Pretest1-posttest1	Control (n = 100)	7.2	2.1	33.6	3.6	−60.9	99	**0.0**
		Test (n = 100)	7.7	3.2	43.2	3.1	−78.1	99	**0.0**
2	Pretest2-posttest2	Control (n = 100)	8.2	3.1	33.5	3.7	−52.2	99	**0.0**
		Test (n = 100)	7.6	2.5	43.8	2.9	−124.9	99	**0.0**
3	Pretest3-Posttest3	Control (n = 100)	7.7	2.4	35.0	3.9	−61.2	99	**0.0**
		Test (n = 100)	7.3	2.5	43.7	2.3	−09.5	99	**0.0**

However, when comparing the post-test results of the control and test groups, the independent samples t-test revealed that the p values for all three tests were below 0.05 (Table 3), indicating significant differences between the two groups. Specifically, the test group scores were approximately 23% higher than those of the control group.

Table 3 Independence T-tests for 3 posttest scores of control and test groups

Test	Control group (n = 100)		Test group (n = 100)		t	p
	M	SD	M	SD		
Posttest 1	33.6	3.6	43.2	3.1	−20.2	**0.0**
Posttest 2	33.5	3.7	43.8	2.9	−21.8	**0.0**
Posttest 3	35.0	3.9	43.7	2.3	−19.5	**0.0**

3.2 Students' Attitudes

This part illustrates the results of the collected data analyzed by the SPSS software version 20.0 to answer the research question "What are students' perceptions of the Wordwall platform for vocabulary learning?

3.2.1 Students' Perspectives towards Wordwall.

The first group (item 1 to 5) was designed to investigate participants' attitudes towards Wordwall. The chart 1 below presents the results of the first group.

Figure 1 Students' perspectives towards Wordwall

Generally, the majority of participants had a positive perception of learning vocabulary by Wordwall, particularly in terms of engagement as well as motivation. Regarding the use of Wordwall to engage participants in the learning process, Item 1 received the highest score (Mean = 4.5), indicating that students felt more engaged through Wordwall activities. In terms of learning motivation, the results showed that Wordwall effectively stimulated students' interest by allowing them to learn at their own pace (Mean = 4.0). Additionally, Wordwall provided a comfortable learning environment, as students were not afraid of making mistakes during the learning process (Mean = 4.5, the highest score in this category). When mistakes occurred, Wordwall's instant corrections were helpful in identifying errors and reinforcing students' understanding of new words (Mean = 4.1). By creating a fun and supportive learning atmosphere, students expressed a desire for more Wordwall activities in future classes (Mean = 4.5).

3.2.2 Students' Perspectives towards Wordwall and Traditional Methods

The second group of items (6 to 10) was designed to explore participants' attitudes towards Wordwall compared to traditional vocabulary learning methods.

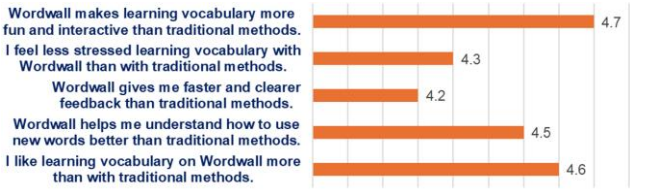

Figure 2 Students' perspectives towards Wordwall and traditional methods

Overall, participants expressed more positive attitudes toward Wordwall than traditional methods, particularly in terms of engagement, motivation, and learning consolidation. Firstly, all participants agreed that Wordwall provided a more engaging learning environment, describing it as both enjoyable and interactive (Mean = 4.7). In terms of motivation, learning through Wordwall helped students feel less anxious about vocabulary learning (Mean = 4.3). Regarding learning consolidation, Wordwall offered faster and clearer feedback (Mean = 4.2), which supported students in understanding and using vocabulary more accurately (Mean = 4.5). Finally, students showed a stronger preference towards learning vocabulary through Wordwall compared to traditional methods (Mean = 4.6).

4 Discussion

4.1 The Effectiveness of Wordwall in Enhancing students' vocabulary and their using experience

The aim of this study was to investigate the effectiveness of Wordwall for vocabulary learning and to compare this platform with traditional learning methods. Regarding its effectiveness, the results revealed that students in the test group performed better after a six-week intervention period. Moreover, their scores surpassed those of the control group, aligning with previous findings in this field [2, 6, 8, 9]. These results indicate that using Wordwall to teach vocabulary can have positive effects on student learning outcomes.

One contributing factor to these improved results is the immediate feedback provided by Wordwall. Unlike traditional classrooms, where students often have to wait for teacher responses, Wordwall enables learners to receive instant feedback after each answer. This function helps them quickly identify and correct their mistakes, reducing the risk of fossilized errors and encouraging more accurate and appropriate vocabulary use [6, 8, 9, 11].

In addition, consistent with previous studies, the students' progress was also supported by the opportunity to practice newly learned vocabulary through various activities at their own pace. This not only helped them memorize new words but also contributed to their ability to use the vocabulary effectively in different contexts [7, 10].

The improved learning outcomes can also be attributed to the platform's personalization feature. Wordwall allows teachers to customize interactive activities to suit students at varying proficiency levels, enabling all learners in large classrooms to participate simultaneously. Educators can adjust the difficulty of tasks − assigning simpler activities to lower-level students while providing more challenging ones to advanced learners. This differentiated approach is particularly beneficial in situations where teachers face time constraints in reviewing assignments and offering individualized feedback [7, 10]

In terms of students' perceptions of Wordwall, several positive aspects were identified. Firstly, the user-friendly interface of the platform attracted learners' attention and created a more engaging and enjoyable learning environment. The interactive games available on Wordwall helped re-direct the students' focus toward learning tasks, minimizing distractions from external stimuli such as mobile phones or social media. The appealing visuals and sound effects embedded in Wordwall templates also contributed to increased enjoyment and helped foster a more positive attitude toward learning foreign languages [5 ,11].

The use of Wordwall in vocabulary instruction also promoted collaboration and interaction among students. Learners could work in pairs or small groups to complete assigned tasks, enhancing opportunities for peer interaction and observational learning. This collaborative approach encouraged students to discuss vocabulary usage, which in turn helped them identify more accurate answers. Furthermore, the competitive elements of some activities boosted learner motivation and introduced a sense of friendly rivalry. As a result, the classroom atmosphere became more dynamic and supportive. These findings are consistent with previous research [5, 11], which suggests that Wordwall makes vocabulary learning an enjoyable challenge, thereby increasing student engagement.

Secondly, Wordwall supports self-paced learning, allowing lower-level learners to progress at their own speed and reducing anxiety when compared to their peers. Additionally, students have the opportunity to repeat activities to improve their scores and reinforce vocabulary retention. This aspect of the platform also aligns with findings from earlier studies [1, 11], which emphasize the importance of learner autonomy and flexibility in vocabulary acquisition.

4.2 Research Limitations

All participants in this study had CEFR A1–A2 English proficiency, which limits the generalizability of the findings to higher proficiency levels. The vocabulary used was also relatively simple and concrete, appropriate for CEFR A1–A2 English proficiency; therefore, further consideration is needed when using Wordwall to teach more abstract or complex vocabulary. Technically, the platform's dependence on a stable internet connection occasionally disrupted students' learning experiences, reducing both instructional time and learner motivation.

5 Conclusion

This study explored many advantages in the context of NTTU to understand how Wordwall can help non-English major students in acquiring vocabulary. The results of this study show that applying Wordwall in teaching vocabulary is useful for non-English major students in NTTU because of its benefits such as enhancing vocabulary, engaging students and gaining students attention. However, technical problems such as slow internet connection could affect students' attitudes. Moreover, this study was conducted to a small group and only one field was investigated, which may lead to biased research. Therefore, future research can include more student participants and conduct interviews to have a deeper understanding.

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References

1. Vnucko, G., & Klimova, B. (2023). Exploring the potential of digital game-based vocabulary learning: A systematic review. *Systems*, *11*(2), 57. https://doi.org/10.3390/systems11020057

2. Pham, Quynh. (2022). Maximizing vocabulary retention with gamification tools. *Scientific Journal of Tan Trao University*. 8(4). https://doi.org/10.51453/2354-1431/2022/837.
3. Lam, M. A. Using Wordwall online tool to Engage HUFLIT first-year students with Learning English Vocabulary. *Journal of Educational Equipment: Applied research, 2*(307).
4. Nation, I. S. (2013). *Learning vocabulary in another language Google*. Cambridge University Press. https://doi.org/10.1017/CBO9781139524759
5. Hazar, E. (2020). Use of digital games in teaching vocabulary to young learners. *Educatia 21*, (19), 98-104. https://doi.org/10.24193/ed21.2020.19.12
6. Sedaghatkar, M. (2018). The effect of Computer-assisted Language Learning (CALL) on immediate and delayed retention of vocabularies in general English course. *International Journal of Applied Linguistics and English Literature*, 7(1), 231-238.
7. Kazu, İ. Y., & Kuvvetli, M. (2023). A triangulation method on the effectiveness of digital game-based language learning for vocabulary acquisition. *Education and Information Technologies*, *28*(10), 13541-13567. https://doi.org/10.1007/s10639-023-11756-y
8. Pradini, P. C., & Adnyayanti, N. L. P. E. (2022). Teaching english vocabulary to young learners with Wordwall application: An experimental study. *Journal of Educational Study*, *2*(2), 187-196. https://doi.org/10.36663/joes.v2i2.351
9. Nurammida, N., Nizarrahmadi, N., & Yolanda, A. (2024). The effectiveness of Wordwall game as media to teach students English vocabulary mastery of eighth grade. *Jurnal Jendela Pendidikan*, *4*(03), 283-292. https://doi.org/10.57008/jjp.v4i03.937
10. Hazar, E., Pudyastuti, Z. E., & Molewe, K. (2024). Enhancing English vocabulary through game-based learning: a case study of the Scramword application. *International Journal in Information Technology in Governance, Education and Business*, *6*(1), 109-121. https://doi.org/10.32664/ijitgeb.v6i1.141
11. Nguyen, T. H. M. & Nguyen,, D. T(2024).Using Wordwall as an online teaching tool to enhance vocabulary competence for 10th Graders. *TNU Journal of Science and Technology*, *229*(08),474-480. https://doi.org/10.34238/tnu-jst.10132

Hiệu quả của việc ứng dụng nền tảng Wordwall vào giảng dạy từ vựng cho sinh viên không chuyên tiếng Anh tại Trường Đại học Nguyễn Tất Thành

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Tóm tắt Từ vựng tiếng Anh là nền tảng để phát triển các kỹ năng khác, tuy nhiên nhiều sinh viên không chuyên gặp nhiều khó khăn trong việc ghi nhớ và hiểu được cách sử dụng từ vựng mới. Với sự phát triển của công nghệ, hiện nay, nhiều nền tảng trực tuyến như Wordwall, Quizziz, Blooket, ..., có thể hỗ trợ giáo viên trong giúp học sinh tiếp thu và học từ vựng tiếng Anh hiệu quả hơn. Do đó, nghiên cứu này muốn tìm hiểu hiệu quả của việc sử dụng nền tảng Wordwall trong việc dạy từ vựng cho sinh viên không chuyên tại Trường Đại học Nguyễn Tất Thành. Trong nghiên cứu này, 200 sinh viên tham gia được chia thành hai nhóm để tham gia các bài kiểm tra trước − sau, và khảo sát. Nghiên cứu được chia thành ba giai đoạn, mỗi giai đoạn kéo dài hai tuần, trong mỗi giai đoạn nhóm thử nghiệm tham gia các hoạt động học từ vựng trên nền tảng Wordwall, trong khi nhóm đối chứng sử dụng phương pháp học truyền thống. Hiệu quả học tập của sinh viên được đánh giá qua các bài kiểm tra đầu và cuối mỗi giai đoạn. Kết quả cho thấy sinh viên học với Wordwall có sự tiến bộ rõ rệt hơn trong việc học từ vựng so với nhóm học bằng các phương pháp truyền thống. Hơn nữa, việc sử dụng Wordwall còn khích lệ sự tham gia và động lực học tập của học sinh. Những kết quả này khuyến khích việc tích hợp nền tảng Wordwall vào giảng dạy từ vựng tiếng Anh để cải thiện kết quả học từ vựng tiếng Anh cho sinh viên không chuyên tại Trường Đại học Nguyễn Tất Thành.
Từ khóa Nền tảng Wordwall, phương pháp giảng dạy truyền thống, sinh viên không chuyên, dạy từ vựng