

APPLYING WORDWALL TO ENHANCE ENGLISH VOCABULARY RETENTION OF GRADE 3 STUDENTS AT BAN MAI PRIMARY SCHOOL

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Abstract: *This study investigates the effectiveness of Wordwall as a supplementary tool for enhancing young learners' vocabulary retention. The study was conducted with one class at grade 3 in Ban Mai primary school in Ha Noi in eight weeks in the frame work of a classroom action research, focusing on their ability to learn and retain new English words with the adoption of Wordwall games. A pre-test and post-test design were implemented to measure the students' vocabulary improvement, supported by student questionnaires to find out their attitude towards the use of of Wordwall-based learning activities. The findings indicate a significant increase in students' vocabulary retention, with the average post-test score improving from 5.0 to 6.4 and 87.5 % of them got positive gain (>0) in the post-test. More than 90 % of students reported high engagement and motivation towards Wordwall activities. The study concludes that Wordwall serves as a useful and motivating tool for teaching vocabulary, supporting young learners' language development. The findings emphasize the value of incorporating game-based digital resources into early language education to improve vocabulary learning and enrich students' overall learning experiences.*

Keywords: *Attitude; enhance; primary students; vocabulary retention; wordwall games*

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1. INTRODUCTION

Vocabulary is a core component of language, essential for effective communication, intellectual development, and proficiency in understanding, speaking, reading, and writing (Anderson, 1976; DeCarrico, 2001). Teaching vocabulary is essential for EFL learners. Wilkins (1972, p.111) emphasized that while grammar allows limited communication, vocabulary is indispensable since nothing can be conveyed without it. Since vocabulary acquisition is fundamental to language learning, teachers should support students not only in recognizing new words but also in reusing them across varied contexts and through multiple techniques to ensure long-term retention. Vocabulary retention is one of the concerns for teachers to teach young learner especially at elementary level whose characteristics are normally curious, active, and imaginative, with short attention spans and they tend to enjoy learning through play and hands-on experience, concrete activities rather than abstract concepts.

Among the numerous vocabulary teaching methods, incorporating interactive games has become increasingly favored by foreign language instructors. This study set out to explore the question: "To what extent do Wordwall tool enhance Grade 3 school students' English vocabulary retention?". In addition, this study also aims to figure out the students' attitude towards the application of Wordwall in vocabulary lesson. Due to time constraints and limitations related to teaching schedules and administrative factors, the research concentrated specifically on students' retention of vocabulary for grade 3 learners.

2. CONTENT

2.1. Literature review

2.1.1. Definition of vocabulary retention

Richards & Schmidt (2002, p.457) defined vocabulary retention as “the ability to recall or remember things after an interval of time. Retention, in learning and memory, refers to the ability to maintain information over time so it can be recalled when needed (Wixted & Ebbesen, 1991). Retention of vocabulary is crucial for EFL learners. Effective retention is influenced by both external and internal factors. Instructional elements such as focused attention, motivation, timely feedback, and sufficient practice can strengthen or weaken memory (Dempster, 1996).

2.1.2. Definition of games

Salen and Zimmerman (2004) define games as systems in which players engage in artificial conflict, governed by rules and leading to measurable outcomes, emphasizing the key components of players, rules, outcomes, and conflict. Koster (2004) adds that games are interactive experiences designed to create enjoyment and engagement through clear objectives and feedback. Similarly, Juul (2010) highlights rules as essential, as they shape the possibility space of games and guide meaningful player choices.

Numerous studies have been implemented to explore the effect of games on learning. Hwang, Lai, and Wang (2015) note that these digital resources can enhance motivation, increase participation, and improve academic performance. Other research also supports the positive impact of game-based learning, for instance, Yunda et al. (2023) found that communicative games significantly improved eighth graders’ speaking skills, particularly vocabulary and pronunciation, while Maulidina (2022) reported that using games in EFL classrooms increased adult learners’ motivation to learn English. Together, these studies highlight the effectiveness of digital and game-based tools in promoting engagement and improving language learning outcomes.

2.1.3. Definition of Wordwall

Wordwall was originally created in 2008 by a UK secondary school English teacher, initially launched as a tool packaged with interactive whiteboards. It was gradually developed to become an official website, Wordwall.net in 2016 when it became more popular to a number of audience beyond high-tech classrooms. One of the dominant key features was the ‘switch’ template, which lets users to swap the only content into different interactive activities. Therefore, it could be applied to teach young learners whose short-term concentration is common to avoid their boredom and distraction.

As a game-based application, it allows teachers to generate educational tools from ready-made templates by simply entering their content, which Wordwall transforms into interactive tasks. The platform helps save preparation time, enhance online learning, reduce reliance on paper worksheets, support student-paced learning, and track progress (Novianti, 2023). Research also highlights its pedagogical benefits, noting that Wordwall increases motivation and engagement, reduces boredom, provides repeated exposure to vocabulary (Umar et al., 2023), and offers immediate feedback that supports learner autonomy and improves vocabulary retention (Safitri et al., 2022).

2.1.4. Definition of attitude

Attitudes are commonly described as evaluative mechanisms that help individuals classify people, objects, events, activities, or ideas as positive or negative. Wenden (1991) identifies three components of attitudes: the cognitive element, which involves beliefs and thoughts shaping one’s perception; the affective element, which includes emotions and feelings such as liking or disliking; and the behavioral element, which reflects observable actions or responses.

Previous studies have explored learners’ attitudes toward language learning tools. Wang and Smith (2013) found that positive attitudes toward mobile-assisted language learning enhance engagement and perceived effectiveness, while Stockwell (2010) emphasized that attitudes toward computer-assisted tools are key to their successful use. Jarvis and Achilleos (2013) further noted that attitudes toward digital platforms depend on factors such as accessibility, interactivity, and perceived language improvement. These findings highlight the importance of positive attitudes for effective adoption of learning tools. In Vietnam, Trinh and Tran (2022) reported that both teachers

and students view Digital Games (DGs) as highly beneficial for vocabulary instruction when used properly, as they boost digital literacy, engagement, motivation, and long-term vocabulary retention.

2.1.5. Previous studies

Wordwall has been widely studied to prove that it is an effective tool for enhancing vocabulary learning in diverse EFL contexts. Research by Irmayani and Sari (2025), Oña et al. (2024), Kaldarova (2025), and Oktarini et al. (2025) showed that the Wordwall technique supports vocabulary mastery and engagement among learners. Similarly, Alfares (2025) highlighted the platform's role in promoting meaningful, learner-centered environments that enhance vocabulary acquisition and retention. In addition, Rohmatin (2023) demonstrated improved vocabulary skills in topics like descriptive texts and pronouns through Wordwall-based educational games. In summary, these studies highlight Wordwall's strong potential to enhance vocabulary acquisition, engagement, and motivation across various age groups and learning settings.

In Vietnam, research has demonstrated that the digital educational tool Wordwall is effectively used across various educational levels to enhance learning, particularly in vocabulary acquisition, learner autonomy, and engagement. Studies indicate that Wordwall's interactive templates allow teachers to differentiate instruction to meet diverse student needs, contributing to more positive learning outcomes. For example, Chuyen et al. (2025) found that integrating Wordwall into university curricula improved vocabulary retention and fostered positive student attitudes, while Do and Huynh (2024) reported that EFL students valued the platform for actively memorizing new vocabulary. Similarly, Nhu and Ngan (2025) observed that non-English major university students using Wordwall outperformed peers relying on traditional methods, with increased engagement and motivation. Nguyen (2025) further highlighted that Wordwall supports learner autonomy, enabling students to make purposeful choices in content and activities, which enhanced both motivation and learning outcomes. Overall, these findings underscore Wordwall's potential as a versatile, engaging, and effective tool for enhancing language learning in Vietnam.

Although these research employed various methodologies, the findings have consistently showed that Wordwall effectively enhances students' vocabulary learning and is positively received by learners. However, most studies have focused on secondary and higher education, leaving limited evidence on its impact with primary students. The present study aims to address this gap by exploring the effective use of Wordwall in teaching English to younger learners.

2.2. RESEARCH METHOD

2.2.1. Research design

Various authors have proposed different models of action research, each offering distinct advantages and limitations. This study adopts the Classroom Action Research (CAR) approach. According to Wallace (2006), "Classroom Action Research is a form of classroom-based inquiry conducted by teachers to address problems or seek solutions to context-specific issues." In this research, the MacIsaac (1995) action research framework was selected, as it aligned well with the researcher's study context and supports the collection of the most accurate and relevant results. The model consists of two cycles; however, due to time constraints, only the first cycle was implemented. Each cycle in the action research process includes four stages: planning, action, observation, and reflection.

In the planning phase, the detailed eight-week lesson plans and prepared Wordwall activities were designed. These activities supported vocabulary introduction, practice, and review, aligning with the course book and the pre-A1 Starters wordlist. In the action phase, the eight-week lessons which integrated Wordwall activities to support vocabulary retention were implemented in classroom. A pre-test was administered to assess students' prior knowledge, after that the teacher followed the planned instructional steps. Wordwall links were also shared with students for additional practice at home. The observation was conducted at the same time of the teaching process as the teacher noted and documented students' reactions to using Wordwall. Observations focused on how the games affected performance and engagement, providing data for later analysis. In the final phase, collected data was analyzed by utilized multiple methods to interpret the findings and assess Wordwall's impact on vocabulary acquisition. The resulting insights supported clear

conclusions and informed evidence-based recommendations for future teaching practices.

2.2.2. Participants

The participants of the study were grade 3 students, consisting of 14 boys and 10 girls. This class was chosen because the researcher had been assigned to teach them the previous year, which facilitated the implementation of the study. Moreover, according to the previous academic report, the students had shown relatively low vocabulary retention that made them suitable participants for the research. The researcher also served as the classroom teacher to ensure that the use of Wordwall followed the planned instructional framework.

2.2.3. Instrument

Data was collected through a combination of students' pre-tests, post-tests, and questionnaire. The pre-test and post-test results will be analyzed to determine if progress has been made with the implemented strategies. The pre-test was given at the beginning of the study, while the post-test was administered at the end to gather data for the first research question. The test was based on the Pre-A1 Starters level, which contains vocabulary appropriate for grade 3 students.

Another instrument employed in this study was questionnaire. The questionnaires were completed by 24 students at the end of this course to collect the data. These questionnaires consisted of two parts. The first part was designed to collect students' responses about to what extent Wordwall helped them improve their English vocabulary retention. The later part was aimed to examine the students' attitudes towards the use of Wordwall games. The questionnaire was translated into Vietnamese to help students answer in the most comfortable way. The questionnaire was printed and distributed to the students in the classroom. The researcher read the statements aloud to ensure that all students clearly understood them before allowing time to complete the questionnaire.

2.2.4. Data Collection procedure

The study followed the steps as presented the in the diagram.

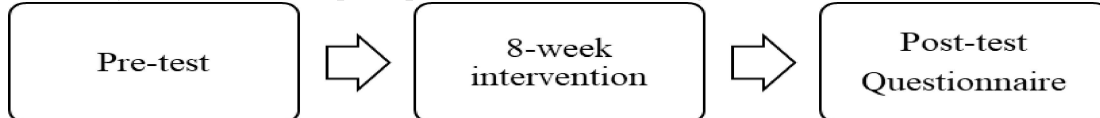


Figure 1. Data collection procedure

At the beginning of first week of the study, the pre-test was administered to the students followed by the intervention. In the following 8 weeks, the students participated in the lessons with the application of Wordwall games. In the last week of the study, the students took part in the post-test and answered the questionnaire.

2.2.5. Data Analysis

The raw data collected from both the tests and the questionnaires were analyzed quantitatively using Microsoft Excel. This analysis aimed to compare students' band scores and evaluate their attitudes toward using Wordwall. Specifically, descriptive and inferential statistics were applied to compare the pretest and post-test results. The descriptive statistics included frequency, mean, gain, and percentage. Moreover, percentage comparisons were used to analyze students' attitudes, and all calculations were performed in Excel.

3. RESULTLS AND DISCUSSIONS

3.1. Findings of the study

3.1.1. Research question 1: Effects of Wordwall games on students' vocabulary retention.

Table 1. The pre-test result

Scores	Frequency	Percentage	Category	Mean
0 - 3.4	8	33.4 %	Very poor	5
3.5 - 4.9	3	12.5 %	Poor	
5.0 - 6.4	6	25.0 %	Average	
6.5 - 7.9	2	8.3 %	Good	
8.0 - 10	5	20.8 %	Excellent	

Total	24	100%		
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The table reported the pre-test results before the intervention of Wordwall. It could be obviously seen that the overall level of students' vocabulary achievement was still rather limited. One third of the students (33.4%, 8 students) fell into the very poor band (0–3.4), and 3 students taking up 12.5% were categorized as poor (3.5–4.9). Furthermore, almost half of the sample started from a low proficiency level. Another 25% of them achieved average scores (5.0–6.4), while only a small proportion reached the good (6.5–7.9) and excellent, 8.3 % and 20.8% respectively. In addition, more than 50 % of students got the score from 5.0- 10. The mean score of around 5.0 confirms that the group's initial performance gathered between "poor" and "average" levels rather than at the upper end of the scale. In summary, the distribution indicates that before using Wordwall, a significant number of students faced challenges with English vocabulary, highlighting considerable potential for improvement throughout the class.

Table 2. The post-test result

Scores	Frequency	Percentage	Category	Mean
0 - 3.4	3	12.5 %	Very poor	6.4
3.5 - 4.9	3	12.5 %	Poor	
5.0 - 6.4	6	25.0 %	Average	
6.5 - 7.9	4	16.7 %	Good	
8.0 - 10	8	33.3 %	Excellent	
Total	24	100%		

Table 2 demonstrated a noticeable improvement in students' vocabulary performance after the application of Wordwall. Although the total number of students and the overall percentage stayed unchanged, the score distribution changed significantly. The proportion of students in the very poor group (0–3.4) decreased considerably from 33.4% to 12.5%. The percentage of students in the poor category (3.5–4.9) stayed at 12.5%, while the good (6.5–7.9) and particularly the excellent (8.0–10) categories saw an increase. The excellent group rose to 33.3%, making it the largest category overall. The average band (5.0–6.4) was maintained at 12.5%. In addition, 18 students (75%) got the score from 5.0- 10. There was an upward in the mean score from 5.0 to 6.4.

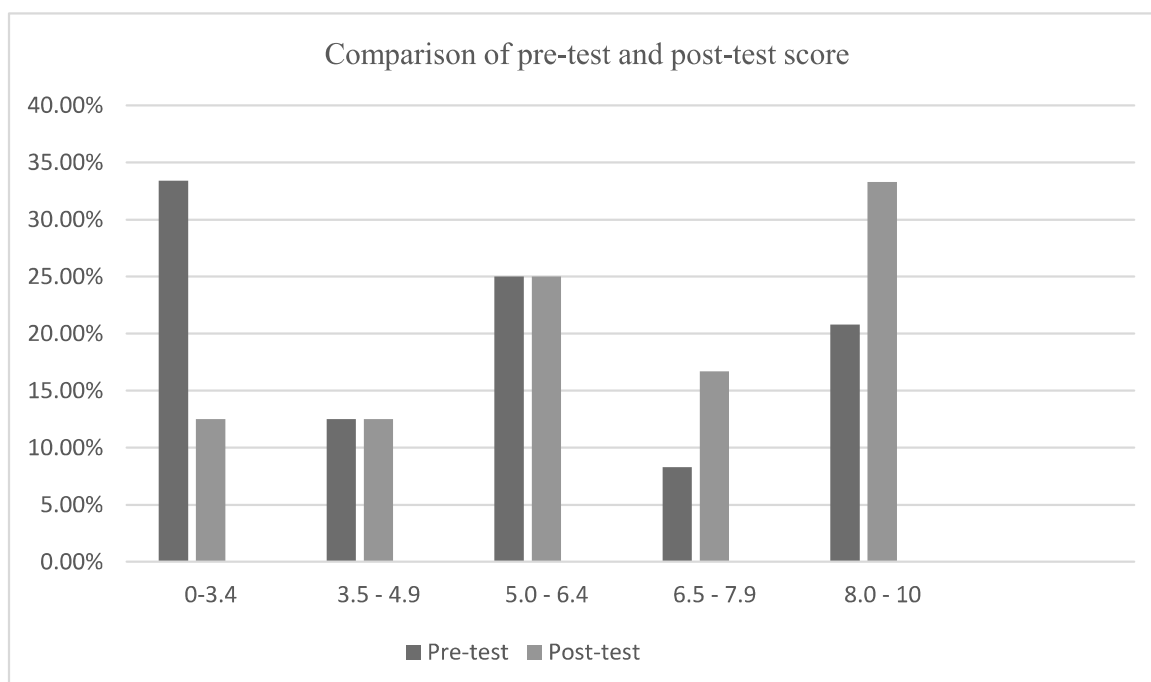


Figure 2. Comparison of students' score in the pre-test and post-test

Figure 2. Display the comparison chart of pre-test and post-test results in the vocabulary

improvement under the application of Wordwall. It could be drawn that the ‘very poor’ group (0-3.4) took up the largest proportion (33.4 %) in the pre-test whereas the highest rate was ‘excellent’ group (8.0-10.0) after the intervention (33.3%). Although, the number of students who got ‘poor’(3.5-4.9) and ‘average’ (5.0- 6.4) level stayed unchanged, those of whom got (6.5- 10) in ‘good’ and ‘excellent’ group shifted significantly from 29.1 % to 50 %. This shift was also reflected in the change in the average mean score, which rose from 5.0 in the pre-test to 6.4 in the post-test. In practical terms, this meant that the “typical” student could move from a borderline poor–average level to a clearly higher level of performance. It could be concluded that the students had better vocabulary retention after the use of Wordwall activities in vocabulary lesson.

Table 3. Student score's gain

No	Pre-test	Post-test	Gain
1	6	6.4	0.4
2	7.6	8.4	0.8
3	6.4	8	1.6
4	6	8	2.0
5	8	7.6	-0.4
6	3.2	5.6	2.4
7	6	7.2	1.2
8	0.4	2.4	2.0
9	2.4	4.8	2.4
10	8.4	8.4	0.0
11	6	7.6	1.6
12	5.2	7.2	2.0
13	8.8	9.2	0.4
14	4	5.2	1.2
15	8.8	8.4	-0.4
16	0	1.2	1.2
17	0.8	3.2	2.4
18	8.4	9.2	0.8
19	3.2	6	2.8
20	2	4.4	2.4
21	4.8	6.4	1.6
22	2	4.8	2.8
23	7.6	8.8	1.2
24	4	5.2	1.2

The improvement of individual learner's score was displayed in Table 3. It could be reported that the majority of learners showed positive gains, with 21 out of 24 students improving to some extent. On average, scores improved by approximately 1.4 points on a 10-point scale, with many students achieving gains ranging from 1.0 to 2.8 points. Certain students, such as Students 19 and 22, improved by as much as 2.8 points, demonstrating significant progress in vocabulary acquisition. A few students exhibited no variation, for instance, Student 10 or a minor drop of 0.4 points such as Students 5 and 15, though such cases were rare and not typical. In general, the gain score pattern aligned with the distributional shift seen in the pre- and post-test tables: the largest proportion of students made progress from the intervention, while only a small number experienced minimal or negative changes.

In conclusion, based on the data analyzed above, the findings clearly indicate that both the post-test results and the overall gains improved substantially following the implementation of

Wordwall. This evidence demonstrates that the integration of Wordwall has exerted a significant positive influence on students' vocabulary enhancement.

3.1.2. Research question 2: Students' attitude towards the application of Wordwall

Questionnaire results

Table 4. Students' overall attitudes towards the use of Wordwall to learn English vocabulary (%). (SD- Strongly Disagree, D- Disagree, N- Neutral, A- Agree, SA- Strongly Agree)

No	Statement	SD	D	N	A	SA
1	Wordwall helps me remember new English words.	0.0	0.0	12.5	29.2	58.3
2	I understand new words better after playing Wordwall games.	0.0	0.0	20.8	37.5	41.7
3	I can use the new words after learning them with Wordwall.	0.0	4.2	12.5	41.7	41.7
4	Wordwall makes learning new words easy and fun for me.	0.0	0.0	8.3	33.3	58.3
5	I learn new words faster when I use Wordwall.	0.0	0.0	4.2	33.3	62.5

The table 4. summarized the questionnaire results from question 1 to 5 which illustrated students' attitudes towards the use of Wordwall for learning English vocabulary. 24 students were asked to give opinion on a five-point Likert scale, from "strongly disagree" to "strongly agree", with percentages summing to 100% for each statement. Among the five statements, students' responses were obviously grouped around the "agree" and "strongly agree" categories, reflecting an overall favorable attitude of using Wordwall in learning. Specifically, 87.5% indicated that Wordwall had assisted them in retaining new English vocabulary, while 79.2% reported that they had gained a better understanding of new words after engaging with Wordwall activities. In terms of vocabulary application, 83.4% affirmed that they had been able to use the words acquired through Wordwall though there were some of them (4.2 %) struggled to use new words. The items related to enjoyment and learning pace received the highest levels of support: 91.6% was in favor that Wordwall had made learning new words both easy and enjoyable, and 95.8% stated that they had learned new vocabulary more quickly when using the tool.

These findings suggested that students not only recognized cognitive benefits, or better understanding and use of word, but also appreciated the motivational and affective advantages of the tool, which likely contributed to their improvement in the test performance.

Table 5. Student's opinion towards Wordwall games

No	Statement	SD	D	N	A	SA
6	I think games on Wordwall are interesting and easy to complete.	0.0	0.0	4.2	58.3	41.7

Regarding question 6 to question 10, students were asked about their attitude towards using Wordwall in learning. To begin with statement 6, when being asked to evaluate how Wordwall games were, their feedback were different. 1 of them gave a neutral answer, whereas the rest agreed and strongly agreed that games on Wordwall were interesting and easy to complete. In contrast, none of them disagreed or strongly disagree this stamen. This result revealed that students tended to be positive to use Wordwall activities could be friendly-user and feasible for young learners.

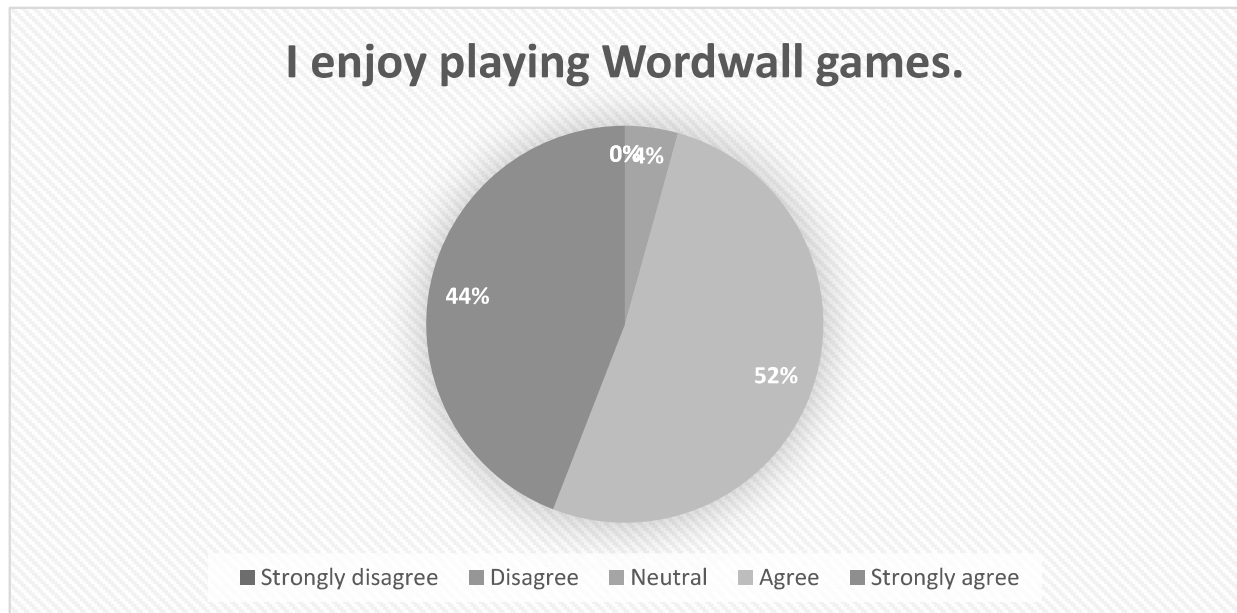


Figure 3. Students' enjoyment to Wordwall games

In response to the statement 7 about their enjoyment towards Wordwall games, the majority of students expressed positive attitudes. Specifically, 50% of the participants selected 'agree' and 45.8% chose 'strongly agree', indicating that over 95% of the sample demonstrated favorable perceptions toward the integration of Wordwall activities in language learning. Only 4.2% of respondents reported a neutral stance, and none of them showed their disagreement. These findings suggest that Wordwall games are widely regarded as engaging and beneficial tools in English instruction, reinforcing the potential of gamified learning platforms to enhance student motivation and classroom participation.

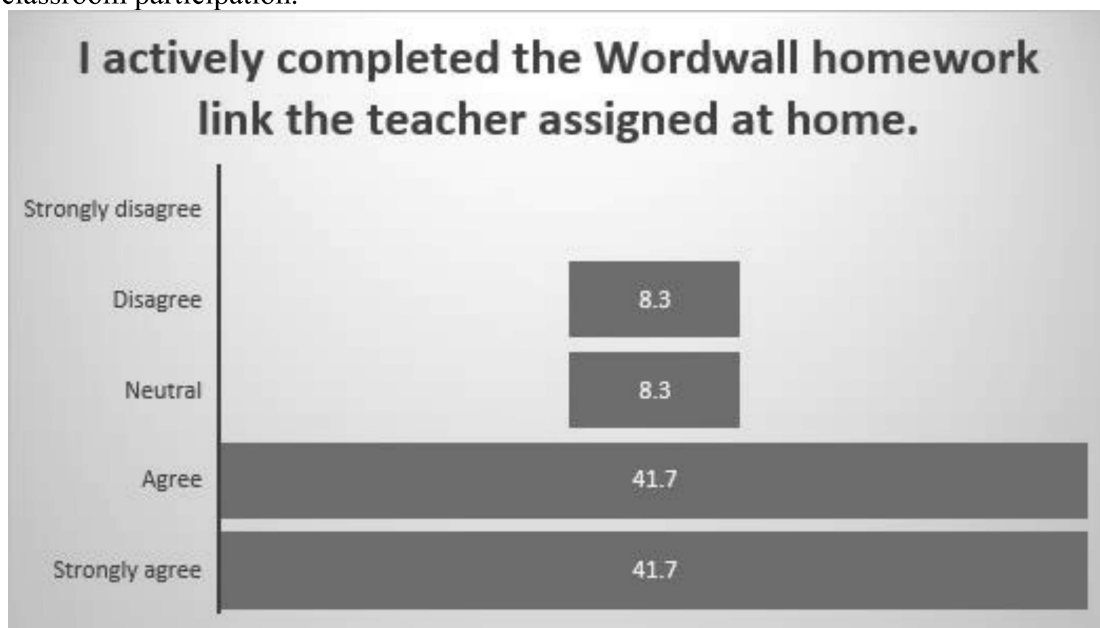


Figure 4. Students' attitude towards completing Wordwall homework

When being asked about their learning autonomy in statement 8, the students responded differently. In detail, 83, 4 % of respondents (20 students) agreed and strongly agreed that they were active to complete teacher's homework link. Meanwhile, 8.3% expressed a neutral stance, and 8.3% admitted that they did not complete homework links. These findings suggest that Wordwall homework links are generally well-received and actively completed by students, reflecting a strong level of motivation to boost their learning autonomy.

Regarding what students enjoyed most about playing Wordwall in English class, their responses revealed various common themes. Many stated that the games were fun and easy to engage with, which enhanced their enjoyment and made the activities more accessible. They also pointed out that the activities helped them feel at ease and that being able to see their scores boosted both comfort and motivation. Social interaction was a key point, as some liked playing with friends, while others noted the interactive aspect of the platform. Cognitive advantages were highlighted, with comments like it helped them remember the words and that the material was easy to recall, indicating that Wordwall aided vocabulary retention. The visual aspects were appreciated, with mentions of appealing images, and practical features like speed and mobile compatibility were well-received. A few students mentioned having no opinion, indicating that not every participant had a specific preference. Overall, the feedback indicated that Wordwall was viewed as engaging, beneficial for learning, and flexible in meeting students' needs.

In relation to their experiences with Wordwall, 30% of them reported encountering difficulties, while 70% stated they had no issues. Among those experiencing challenges, the most prevalent problems were related to access and technology. Several students mentioned that they occasionally lacked internet connection, while others pointed out that certain games took a long time to load. Some respondents shared that when they wanted to do the homework link they had to use their parents' phones to complete tasks, and when their parents were absent, they had no device on hand to play. These comments revealed that the primary obstacles to using Wordwall were not the platform itself but rather external factors, such as internet connectivity and device availability. On the other hand, the majority of students indicated that their experience was smooth, implying that Wordwall was typically accessible and functional for most learners.

3.2. Discussion

It could be said that the mean score students had significant improvement when comparing the pre-test and the post-test (from 5.0 to 6.4). Moreover, the remarkable progress in score interval was obvious that the group of 'average to excellent' went beyond the expectation from 54 % in the pre-test to 75% in the post-test. This finding was in line with the conclusion of Hwang, Lai, and Wang (2015) and Yunda et.al (2025) which stated that digital tools and games could improve student's academic performance. In addition, the two test results has proved that under the intervention of Wordwall the students' enhancement in vocabulary retention increased. This finding aligned with Irmayani & Sari (2025) and Oktarini et al. (2025) in terms of promote vocabulary mastery. Significantly, a large majority of students (87%) experienced gains, with their scores rising from 0.4 to 2.8. These improvements suggest that Wordwall games had a positive effect on many students' vocabulary recall abilities. However, not every participant showed progress. Some students exhibited no changes, while a few encountered a slight decline in their post-test scores. Schmitt & Webb (2008, as cited in Chuyen et al. (2025)) indicate that various factors influence vocabulary retention, such as learner motivation, practice frequency, learning styles, and exposure. As a result, while Wordwall was effective for many, it should be integrated into a more comprehensive, varied instructional strategy.

Based on the data collected from the post-questionnaire, students regarded Wordwall as a fun and impactful resource. Over 95% of participants either agreed or strongly agreed that they found playing Wordwall games enjoyable during their English lessons. These results correspond with research conducted by Maulidina (2022) and Yunda et al. (2023), which support the integration of gamified and interactive platforms in language education to boost student involvement and motivation. In addition, around 80 and 90 % of them shared that they could remember and use new word after they played Wordwall games. Approximately 90 % found that Wordwall games were fun and easy to help them remember new words better. In terms of vocabulary memorization, 87 % of the participants shared that they could remember new words after playing Wordwall games. This result is in accordance with Do and Huynh (2024) in improve vocabulary memorization through Wordwall. These results indicated that students had a positive attitude towards using Wordwall in learning vocabulary as well as they recognized the advantages of this application.

In terms of their learning autonomy, over 90% of the young learners shared that they actively finished the homework assignments provided by the teacher via Wordwall. This observation aligns with Nguyen (2025), who demonstrated that Wordwall effectively promotes learner autonomy in an English as a Foreign Language (EFL) classroom environment.

Although the study brought positive outcomes, there were several limitations. Firstly, the sample consisted of only 24 students, and the intervention period lasted a duration of eight weeks. Moreover, the actual time students spent on their Wordwall assignments was not thoroughly monitored or regulated. Furthermore, it would be perfect if each student were facilitated a mobile phone or a computer. The participants were at a young age, so they needed the support of device from their parents. Some cases could not have completed Wordwall tasks without their parents' device. Future studies could benefit from a larger, more varied sample and a closer tracking of user engagement.

To sum up, the use of Wordwall had a positive effect on vocabulary retention among grade 3 learners. The platform not only enhanced the test performance for students but also received high ratings in terms of enjoyment, motivation, and effectiveness. Compared to prior research with tertiary and secondary level, this study has contributed new evidence from a Vietnamese primary context, emphasizing the potential of Wordwall as a supplementary digital tool in vocabulary instruction.

4. CONCLUSION

The study was conducted at a primary school, Ban Mai school in Ha Noi with the objectives of investigating the effectiveness of Wordwall application in boosting vocabulary retention. The participants of the study were 24 students from class 3 who participated in the lessons applied Wordwall games in 8 weeks. There were research questions raised at the beginning of the study which were to what extent Wordwall could enhance English vocabulary for primary pupils and what are the students' attitudes towards the use of Wordwall in English lessons.

Firstly, regarding the first research question, the use of Wordwall significantly enhanced vocabulary retention for grade 3 pupils. After 8 weeks of the study, the results from pre-test and post-test indicated that the mean score that the students in grade 3 increased considerably (from 5 in the pre-test to 6.4 in the post-test). In addition, 21 out of 24 students, 87,5% , got positive gain (> 0) from 0.4 to 2.8 in the post-test together with the proportion of 'good and excellent' group progressed from 29% to 50% of student. Therefore, it can be concluded that the application of Wordwall is a teaching method that can enhance students vocabulary retention.

Secondly, in terms of the second question, students had positive attitudes towards Wordwall games. This answer was due to the fact that 95% of the students strongly agreed and agreed that they enjoyed playing Wordwall games in English lessons. In addition, a high proportion of students (more than 90%) agreed and strongly agreed that Wordwall games were interesting and fun for them. It was reported that they not only could remember the words but also use them in communication. Moreover, some of them mentioned among the best experiences with Wordwall were interactive, immediate score feedback, eye-catching picture, fun tasks, etc. More than 80% of them admitted that they actively finished Wordwall homework task. Thus, it could be affirmed that students found Wordwall games an effective way of learning English and Wordwall could support their learning autonomy and learning motivation.

Implications of the study

The research was aimed at examining how Wordwall games impact vocabulary retention among primary students, as well as assessing students' attitudes towards this application. The results showed that incorporating Wordwall in English lessons proved to be an effective strategy for both teachers and students. It is advised that teachers should consider using such game-based learning tools as a blended technique together with their traditional vocabulary instruction to enhance engagement and enjoyment for learners. Repetitive practice is particularly crucial for students, especially younger learners; teachers can utilize Wordwall links to motivate more students to repeatedly complete homework tasks, also foster their autonomy at home. In addition, teachers can

monitor student scores on the Wordwall app, which supports in evaluating students' progress following each homework assignment. Furthermore, Students can take advantage of Wordwall as a valuable online learning resource where each topic and lesson is organized, preventing feelings of boredom or overwhelm. It can be a useful tool for students to practice at home.

Limitations of the study

This study still had several limitations, including a small number of participants, a focus limited to third-grade students, and a short research duration that did not cover Cycle 2 of the action research process. Limited access to mobile devices or computers also prevented students from using Wordwall simultaneously, and the time they spent on the outside- classroom-Wordwall activities was not closely monitored. These factors should be considered when interpreting the findings, and future studies should address these issues to provide stronger evidence of Wordwall's effectiveness in supporting vocabulary retention. Despite these constraints, the study still contributes valuable insights into the use of game-based tools like Wordwall to enhance vocabulary learning among young learners.

Recommendations

Further research could be strengthened by expanding the number of participants, involving students from various grade levels, and extending the study duration to better capture the long-term effects of using Wordwall. It can be suggested that further studies can implement in the way which includes a control group taught through traditional methods would allow clearer comparisons of effectiveness, while further investigations could also explore the tool's impact on other language skills such as grammar, reading, writing, and speaking.

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ỨNG DỤNG WORDWALL ĐỂ NÂNG CAO KHẢ NĂNG TIẾP THU TỪ VỰNG TIẾNG ANH CHO HỌC SINH LỚP 3 TẠI TRƯỜNG TIỂU HỌC BAN MAI

***Tóm tắt:** Nghiên cứu này khảo sát tính hiệu quả của ứng dụng Wordwall như một công cụ kỹ thuật số hỗ trợ để nâng cao khả năng tiếp thu từ vựng của học sinh. Nghiên cứu được thực hiện trên một lớp học lớp 3 tại trường Tiểu học Ban Mai, Hà Nội trong tám tuần trong khuôn khổ của một nghiên cứu hành động lớp học. Nghiên cứu tập trung vào đánh giá khả năng học và tiếp thu mới của học sinh thông qua việc áp dụng trò chơi Wordwall. Việc thiết kế bài kiểm tra trước và sau nghiên cứu đã được thực hiện để đo lường sự cải thiện vốn từ vựng của học sinh, đi cùng với đó là phiếu câu hỏi khảo sát học sinh để đánh giá thái độ của học sinh đối với việc sử dụng các hoạt động học tập trên Wordwall. Kết quả cho thấy khả năng tiếp thu từ vựng của học sinh đã được cải thiện đáng kể, với điểm trung bình ở hai kiểm tra trước và sau tăng từ 5.0 lên 6.4 và 87.5% học sinh đạt được hiệu số tăng điểm dương (>0) trong bài kiểm tra sau. Hơn nữa, qua phiếu câu hỏi, 90% học sinh cho biết họ rất hứng thú và có động lực tham gia các hoạt động trên Wordwall. Nghiên cứu kết luận rằng Wordwall là một công cụ hữu ích và tạo động lực cho việc dạy từ vựng, hỗ trợ sự phát triển ngôn ngữ của học sinh tiểu học. Những phát hiện này nhấn mạnh giá trị của việc kết hợp các nguồn tài nguyên kỹ thuật số dựa trên trò chơi vào giáo dục ngôn ngữ sớm để cải thiện việc học từ vựng và làm phong phú thêm trải nghiệm học tập tổng thể của học sinh.*

***Từ khóa:** Thái độ, nâng cao; học sinh tiểu học; ghi nhớ từ vựng; trò chơi Wordwall.*