

## Enhancing 10<sup>th</sup> Grade Students' Grammar Mastery Through Wordwall: A Classroom Action Research

Salwa Salsabila<sup>1\*</sup>, Rizka Hayati<sup>2</sup>

<sup>1,2</sup>Universitas Pekalongan, Indonesia

[\\*salwaalsabil5@gmail.com](mailto:salwaalsabil5@gmail.com)

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### Abstract

This classroom action research investigated the effectiveness of Wordwall in enhancing tenth-grade students' grammar mastery and explored students' perceptions of its implementation in the classroom. The study employed the Classroom Action Research model proposed by Kemmis, McTaggart, and Nixon, by one cycle involving the stages of planning, acting, observing, and reflecting. The participants were 40 tenth-grade students of MAS Simbang Kulon Pekalongan in the 2025/2026 academic year. Data were collected through grammar tests (pre-test and post-test), classroom observations, and a four-point Likert-scale questionnaire. Quantitative data were analyzed using mean scores and percentages, while qualitative data from observations and questionnaires were analyzed descriptively. The findings demonstrated a significant improvement in students' grammar mastery. The mean score increased from 54,6 in the pre-test to 94,8 in the post-test, representing an improvement of 73% after the implementation of Wordwall. In the final assessment, the students achieved an average score of 94,8 out of 100, with 19 students obtaining a perfect score. Furthermore, the questionnaire results indicated highly positive perceptions toward the use of Wordwall, with all items receiving agreement levels above 80%. The highest agreement was found in students' enjoyment of grammar learning through Wordwall (97.3%), followed by their perception that Wordwall improved their grammatical accuracy (94.6%). These findings indicate that Wordwall is an effective instructional medium for improving students' grammar mastery while simultaneously increasing their motivation and engagement in grammar learning.

**Keywords:** Wordwall, grammar, Classroom Action Research, learning media, learning motivation

### Abstrak

Penelitian tindakan kelas ini mengkaji efektivitas Wordwall dalam meningkatkan penguasaan tata bahasa siswa kelas sepuluh serta mengeksplorasi persepsi siswa mengenai penerapannya di dalam kelas. Penelitian ini menggunakan model Penelitian Tindakan Kelas yang dikemukakan oleh Kemmis, McTaggart, dan Nixon, yang terdiri dari satu siklus yang mencakup tahapan perencanaan, pelaksanaan tindakan, pengamatan, dan refleksi. Partisipan penelitian adalah 40 siswa kelas sepuluh di MAS Simbang Kulon Pekalongan pada tahun ajaran 2025/2026. Data dikumpulkan melalui tes tata bahasa (pre-test dan post-test), observasi kelas, dan kuesioner dengan skala Likert empat poin. Data kuantitatif dianalisis menggunakan nilai rata-rata dan persentase, sedangkan data kualitatif dari observasi dan kuesioner dianalisis secara deskriptif. Hasil penelitian menunjukkan adanya peningkatan yang signifikan dalam penguasaan tata bahasa siswa. Nilai rata-rata meningkat dari 54,6 pada pre-test menjadi 94,5 pada post-test, yang mencerminkan peningkatan sebesar 73% setelah penerapan Wordwall. Pada penilaian akhir, siswa mencapai nilai rata-rata 94,5 dari 100, dengan 19 siswa memperoleh nilai sempurna. Selain itu, hasil kuesioner menunjukkan persepsi yang sangat positif terhadap penggunaan Wordwall, di mana seluruh butir pernyataan memperoleh tingkat persetujuan di atas 80%. Tingkat persetujuan tertinggi ditemukan pada aspek kesenangan siswa dalam belajar tata bahasa menggunakan Wordwall (97,3%), diikuti oleh persepsi bahwa Wordwall meningkatkan akurasi tata bahasa mereka (94,6%). Temuan ini mengindikasikan bahwa Wordwall merupakan media pembelajaran yang efektif untuk meningkatkan penguasaan tata bahasa siswa sekaligus meningkatkan motivasi dan keterlibatan mereka dalam pembelajaran tata bahasa.

**Kata kunci:** Wordwall, tata bahasa, Penelitian Tindakan Kelas, media pembelajaran, motivasi belajar

## INTRODUCTION

Amid rapid technological change, senior high school learners are expected to command English grammar well enough to support not just face-to-face conversation but also a growing range of digital interactions. As one of the world's most widely used languages, English allows speakers from diverse linguistic backgrounds to exchange ideas, and grammatical competence underlies a learner's capacity to build coherent, meaningful utterances. Of the four core language skills, listening, speaking, reading, and writing, grammar typically proves the hardest for learners to internalize given its abstract, rule-governed character.

Classroom observation carried out by the researcher at MA Simbang Kulon revealed a pattern of weak motivation and disengagement among learners, particularly in grammar lessons. Rather than developing genuine conceptual understanding, learners leaned heavily on memorization, a habit reflected in disappointing grammar test results and in difficulties producing accurate sentences, whether spoken or written. Reliance on conventional instructional formats, lecturing supplemented by paper-based drills, further dampened enthusiasm and lowered active involvement in class.

These observations pushed the researchers toward exploring an alternative pedagogical route capable of lifting both engagement and grammatical competence at the same time. Digital, game-infused learning has emerged as one promising direction. Among the platforms suited to this purpose is Wordwall, which equips teachers with tools to build interactive tasks such as quizzes, matching exercises, and sentence-reordering challenges intended to spark learners' enthusiasm for the subject matter.

Studies published between 2020 and 2025 consistently document favorable outcomes from Wordwall integration in English instruction. Its capacity to deliver instant feedback while fostering a lively, competitive classroom mood makes it an appealing instructional choice (Komara et al., 2025). Elsewhere, researchers have documented meaningful gains in grammar competence among learners exposed to Wordwall relative to peers taught conventionally (Maasah et al., 2025). Comparable benefits surfaced at junior secondary level, where Wordwall-based digital games not only lifted grammar scores but also eased learners' apprehension toward grammar practice (Rosyadiyah et al., 2025); at tertiary level, Wordwall use has likewise been linked to gains spanning grammar, vocabulary, and spoken communication alike (Galiyah, 2025). Supporting evidence from elsewhere reinforces this rationale: pairing Quizizz with Wordwall has been shown to strengthen both vocabulary and grammar outcomes (Pesantez & Quizizz, 2024.), while Wordwall used as a visual grammar scaffold has helped reduce writing errors among learners (Pratiwi et al., 2025).

Although previous studies have consistently reported the positive effects of Wordwall on English learning, most of them have used experimental, quasi-experimental, or descriptive research designs. These studies mainly focused on comparing students' learning outcomes before and after the implementation of Wordwall. As a result, they provide limited information about how students' grammar mastery develops through continuous classroom improvement. They also do not explain how teachers can identify classroom problems, apply instructional improvements, observe students' responses, and reflect on the teaching process during the implementation of Wordwall. Therefore, more research using Classroom Action Research (CAR) is needed to examine not only the effectiveness of Wordwall but also the process of improving grammar learning through continuous reflection and classroom-based action.

In this study, Classroom Action Research was selected because it allows the teacher to improve classroom instruction through a continuous process of planning, acting, observing, and reflecting. During the planning stage, grammar lessons and Wordwall activities were prepared based on students' learning needs. The action stage focused on implementing Wordwall in grammar learning, while observation was conducted to monitor students' participation, motivation, and classroom responses. Finally, reflection was used to evaluate whether the predetermined learning objectives had been achieved and to determine whether another cycle was necessary.

Based on the identified research gap, this study investigates the implementation of Wordwall through a Classroom Action Research approach at the senior high school level. The novelty of this study lies not only in examining whether Wordwall improves students' grammar mastery but also in investigating how the implementation of Wordwall supports continuous instructional improvement through the CAR process. In addition, this study explores students' learning experiences and perceptions after participating in Wordwall-based grammar learning activities, a reflective and cyclical form of inquiry through which teachers systematically refine their own instructional practice via planning, acting, observing, and reflecting (Siregar, 2025; Janatte et al., 2025).

Therefore, this study aims to answer two research questions. First, to what extent can the implementation of Wordwall improve the grammar mastery of tenth-grade students at MAS Simbang Kulon? Second, how do students perceive the implementation of Wordwall in grammar learning? The findings of this study are expected to contribute to the development of technology-based English language teaching and provide practical guidance for teachers who wish to integrate gamified learning media into grammar instruction.

## **METHOD**

This study employed Classroom Action Research (CAR) based on the model proposed by Kemmis, McTaggart, and Nixon (2014). CAR is a reflective research design that enables teachers to improve classroom instruction through four stages: planning, acting, observing, and reflecting. Before the implementation, the researcher determined the success criterion of the action, which was at least 80% of the students achieving the Minimum Mastery Criterion (MMC/KKM) score of 75.

The study was initially designed to be conducted in more than one cycle if necessary. However, the implementation was completed in one cycle because the predetermined success criterion had already been achieved. Based on the reflection after Cycle I, more than 80% of the students reached the MMC, and the class average also exceeded the expected target. Therefore, the action was considered successful, and no additional cycle was required.

The participants of this study were 40 tenth-grade students of MAS Simbang Kulon, Pekalongan Regency, Indonesia, during the 2025/2026 academic year. The class consisted of students aged approximately 15–16 years and was selected purposively because previous classroom observations showed that the students experienced difficulties in grammar learning and demonstrated low participation during English lessons. Therefore, this class was considered appropriate for implementing the planned instructional improvement through Wordwall.

Three instruments were used in this study: a grammar test, an observation checklist, and a student perception questionnaire. The grammar test consisted of a pre-test and a post-test developed by the researcher based on the learning objectives and grammar materials taught during the study. The test measured students' understanding of tenses, sentence structure, and subject-verb agreement.

The observation checklist was used to record students' participation, attention, motivation, and interaction during the implementation of Wordwall activities. The student perception questionnaire was adapted from Boers (2025). The questionnaire format and measurement indicators were adopted, while the statements were modified to fit the objectives of this study. It consisted of fifteen statements using a four-point Likert scale ranging from Strongly Disagree to Strongly Agree.

Before being administered, all research instruments were reviewed by two experts in English Language Teaching to ensure their content validity. Suggestions from the validators were used to improve the clarity and appropriateness of the test items, observation indicators, and questionnaire statements. The questionnaire also demonstrated acceptable internal consistency, indicating that it was reliable for measuring students' perceptions toward the implementation of Wordwall.

Data collection was carried out during one cycle consisting of one instructional meeting. At the beginning of the study, students completed a pre-test to identify their initial grammar mastery. The instructional treatment then focused on the use of Wordwall activities covering simple present tense, sentence construction, and subject-verb agreement through quizzes, matching activities, and sentence reordering games. At the end of the lesson, students completed the post-

test and the perception questionnaire. Throughout the implementation, the researcher also observed students' participation and classroom engagement using the observation checklist.

The student perception questionnaire was adapted from Boers (2025). Only the questionnaire format and its measurement indicators were adopted, while the items were modified to fit the objectives of this study and the context of grammar learning. The questionnaire employed a four-point Likert scale ranging from Strongly Disagree to Strongly Agree and measured students' motivation, enjoyment, engagement, and perceived usefulness of Wordwall in learning English grammar.

Quantitative data from the grammar tests were analyzed by calculating students' mean scores, the percentage of learning mastery, and the improvement between the pre-test and post-test. The action was considered successful if at least 80% of the students achieved the Minimum Mastery Criterion (MMC/KKM) score of 75. Observation data were analyzed descriptively by identifying students' participation, attention, motivation, and interaction during the learning process. Questionnaire responses were analyzed by calculating the percentage of each response category and the mean percentage for each perception indicator to describe students' perceptions toward the implementation of Wordwall.

## RESULTS

This section presents the findings of the study based on the data collected during the implementation of Classroom Action Research. The findings include students' grammar test results, classroom observation findings, and students' perceptions of using Wordwall in grammar learning. Since the predetermined success criterion was achieved in Cycle I, the action research was concluded after the first cycle without conducting an additional cycle.

### Pre-Test Results

Before the implementation of Wordwall, forty Class X learners sat a baseline grammar test comprising 15 items to determine their initial grammar knowledge. The score distribution is presented in Table 4.1.

Table 1. Pre-Test Score Distribution

| True  | Number of Students<br>(f) | Score     |
|-------|---------------------------|-----------|
| 15    | 1                         | 100       |
| 14    | 1                         | 93        |
| 13    | 4                         | 86        |
| 12    | 3                         | 80        |
| 11    | 4                         | 73        |
| 10    | 4                         | 66        |
| 9     | 3                         | 60        |
| 8     | 2                         | 53        |
| 7     | 3                         | 46        |
| 6     | 4                         | 40        |
| 5     | 11                        | 33        |
| Total | 40                        | Mean 54,6 |

Table 4.1 shows that student performance prior to treatment was widely dispersed, with the largest group of learners scoring only 33 out of 100, and only two students reaching the highest band of 93-1. The mean pre-test score was 54,6, indicating that, on average, students possessed no more than moderate grammar mastery before Wordwall was introduced.

### Action (Cycle I)

Treatment was carried out in a single meeting. In the planning stage, the researcher prepared a lesson plan integrating Wordwall-based grammar activities, selected grammar materials suitable for the Class X curriculum, and designed Wordwall games comprising quizzes, matching tasks, and unjumble-sentence activities, alongside an observation sheet and the post-test instrument. In the acting stage, the researcher delivered the grammar lesson through these Wordwall activities, encouraging students to compete individually, collaborate in small groups,

and actively participate. Throughout the session, the researcher observed students' attentiveness, enthusiasm, and interaction with the teacher and with one another.

### Post-Test Results

Following the treatment, students completed the post-test, comprising the same 15 grammar items. Score distribution is presented in Table 2.

Table 2 Post-Test Score Distribution

| True  | Number of Students (f) | Percentage (%) | Score     | Category  |
|-------|------------------------|----------------|-----------|-----------|
| 15    | 19                     | 100            | 100       | Very High |
| 14    | 11                     | 93             | 93.3      | Very High |
| 13    | 10                     | 86             | 86.7      | High      |
| Total | 40                     | 100            | Mean 94,5 | Achieved  |

Table 4.2 indicates that nineteen of the forty learners achieved a perfect score of 15, eleven scored 93, and the remaining ten scored 86. The mean rose from 54,6 in the pre-test to 94,5 in the post-test an increase of 73%, or from 54 to 94 placing every learner within the high-to-very high score with none falling below a score of 86. Completion times, which varied considerably, offer a further window onto engagement levels; most learners finished comparatively quickly, a pattern suggesting genuine enthusiasm and ease in navigating the game-based format. Given that the primary research objective determining whether Wordwall could improve students' grammar ability was already achieved with a clearly significant result after a single cycle, the researcher concluded that a second cycle was not necessary and ended the action research at this stage.

### Students' Perceptions of Wordwall (Questionnaire Results)

Beyond test performance, learner attitudes toward Wordwall were captured via a fifteen-item, four-point Likert questionnaire, administered after the completion of the treatment and answered by 37 learners per item depending on participation. A condensed overview of these responses is set out in Table 3.

Table 3 Summary of Questionnaire Responses

| No | Statement                                             | SD | D | A  | SA | % Positive |
|----|-------------------------------------------------------|----|---|----|----|------------|
| 1  | Interested in learning grammar using Wordwall         | 4  | 0 | 15 | 7  | 84.6       |
| 2  | Wordwall makes learning English more enjoyable        | 2  | 1 | 14 | 20 | 91.9       |
| 3  | Feel motivated when using Wordwall                    | 3  | 1 | 24 | 9  | 89.2       |
| 4  | Actively participate in Wordwall activities           | 2  | 3 | 21 | 11 | 86.5       |
| 5  | Pay more attention when Wordwall is used              | 2  | 2 | 20 | 13 | 89.2       |
| 6  | Feel more confident answering questions with Wordwall | 2  | 3 | 14 | 18 | 86.5       |
| 7  | Wordwall helps understand grammar better              | 2  | 1 | 21 | 13 | 91.9       |
| 8  | Wordwall helps remember grammar rules easily          | 3  | 2 | 20 | 12 | 86.5       |
| 9  | Wordwall improves ability to use correct grammar      | 2  | 0 | 23 | 12 | 94.6       |
| 10 | Wordwall is easy to use                               | 3  | 4 | 16 | 14 | 81.1       |

| No | Statement                                     | SD | D | A  | SA | % Positive |
|----|-----------------------------------------------|----|---|----|----|------------|
| 11 | Instructions in Wordwall are clear            | 3  | 3 | 17 | 14 | 83.8       |
| 12 | Can follow the activities without difficulty  | 2  | 4 | 19 | 12 | 83.8       |
| 13 | Enjoy learning grammar using Wordwall         | 1  | 0 | 20 | 16 | 97.3       |
| 14 | Prefer Wordwall over traditional methods      | 2  | 3 | 20 | 12 | 86.5       |
| 15 | Want to use Wordwall again in future learning | 1  | 2 | 22 | 12 | 91.9       |

Table 4.3 demonstrates that every item drew combined agree/strongly-agree endorsement exceeding 80%. Enjoyment of Wordwall-based grammar learning attracted the strongest support at 97.3%, trailed closely by perceived improvement in grammatical accuracy at 94.6%. By contrast, perceived ease of use registered the lowest, if still substantial, endorsement at 81.1%. A clearer picture of these overall response patterns emerges in Figure 1.

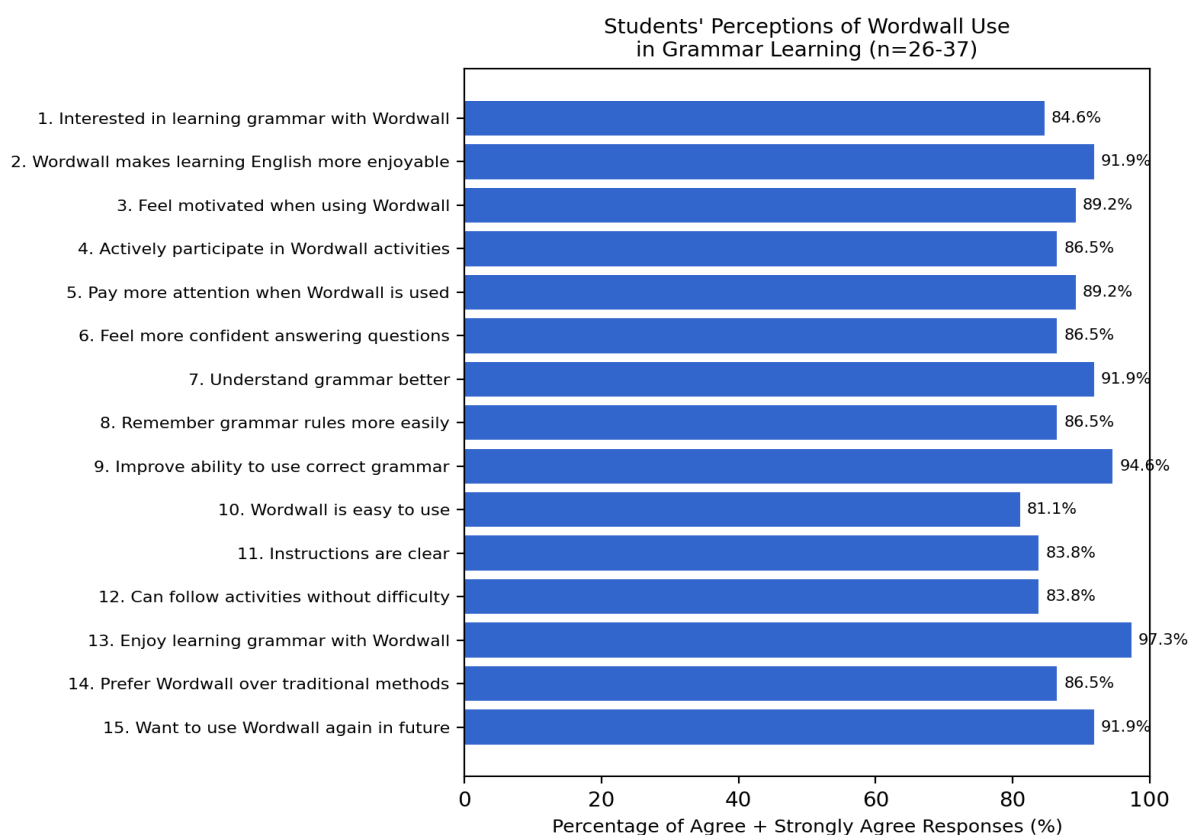


Figure 1. Percentage of Positive Responses (Agree and Strongly Agree) toward the Use of Wordwall in Grammar Learning

Figure 1 reveals a broadly consistent positive orientation across every dimension assessed, spanning initial interest, motivation, active involvement, grammar comprehension and retention, through to willingness to continue using Wordwall going forward. Such uniformity suggests that learners valued Wordwall not merely for the enjoyment it offered but also for the cognitive benefits it delivered within grammar instruction a pattern consistent with the significant quantitative gains observed between pre-test and post-test.

## DISCUSSION

The findings of this study demonstrate that the implementation of Wordwall effectively improved students' grammar mastery. The improvement was reflected in the increase in the mean score from the pre-test to the post-test, indicating that students were able to understand grammar concepts more accurately after participating in Wordwall-based learning activities. This improvement suggests that learning grammar through interactive digital activities can provide students with more opportunities to practice, receive immediate feedback, and apply grammar

rules in meaningful classroom situations. This result directly addresses the study's first guiding question concerning Wordwall's capacity to raise grammar knowledge. It aligns with prior work indicating that learners taught via Wordwall tend to outperform those taught through conventional means, a pattern attributed to the platform's gamified design, which promotes repeated exposure to content and sustained active participation, both conducive to stronger retention and comprehension (Maasah et al., 2025). A parallel pattern has emerged at junior secondary level, where Wordwall-based digital games lifted grammar performance while easing learner anxiety around grammar practice (Rosydiyah et al., n.d.).

Several mechanisms rooted in game-based learning theory may account for these strong results. Immediate feedback, a defining feature of Wordwall, lets learners identify and correct errors on the spot, thereby sharpening the efficiency of the learning process (Komara et al., n.d.). Wordwall's function as a visual grammar aid has likewise been shown to curb grammatical mistakes, particularly in sentence-level writing (P. D. Pratiwi et al., 2025). The two-cycle CAR design employed here further enabled the researcher to refine instruction between cycles based on reflection, an approach central to participatory action research (Kemmis et al., 2014), thereby narrowing the shortcomings surfaced in Cycle I and optimizing the outcomes achieved by Cycle II.

A second key finding concerns learner attitudes toward Wordwall, which proved overwhelmingly favorable across every dimension examined, among them motivation, enjoyment, participation, confidence, and continued willingness to use the platform. This addresses the study's second guiding question on Class X learners' perceptions of Wordwall within grammar instruction. The result mirrors earlier work showing that learners view Wordwall favorably precisely because it renders learning more enjoyable, interactive, and comprehensible (Fadhilah & Daulay, 2025); other studies similarly link Wordwall-based interactive tasks to heightened engagement and active participation in English learning (R. Pratiwi et al., 2025).

Almost all students enjoyed using the tool (97.3%), and most of them said it helped improve their grammar (94.6%). This shows that students can learn better when they like the learning tool. This pattern echoes findings from research into EFL learners' perceptions of Wordwall in vocabulary instruction, where an enjoyable classroom atmosphere was similarly tied to improved retention (Anggraini et al., 2025). The comparatively lower, though still substantial support for ease of use (81.1%) is consistent with observations elsewhere that Wordwall implementation can be hampered by practical obstacles, among them limited device access or unreliable internet connectivity, even as it continues, on balance, to boost engagement and interest (Khasyi et al., 2024).

The questionnaire findings further strengthened these results. Most students reported that Wordwall made grammar learning more enjoyable, increased their motivation, and helped them understand grammar more easily. Students also perceived that the competitive and interactive activities encouraged them to participate actively during the lesson. Positive perceptions toward the learning process are important because motivated students tend to participate more actively and practice the target language more frequently, which may contribute to better learning outcomes. Complementary evidence indicates that interactive strategies such as Presentation, Practice, Production, when paired with digital media, can likewise strengthen learners' grammar competence through classroom action research (Janatte et al., 2025), lending further credibility to the CAR approach adopted here. Taken together, the findings offer additional empirical support for the view that Wordwall enhances not only learners' cognitive grasp of grammar but also cultivates durable, positive learning attitudes and motivation.

One possible explanation for these findings is the instructional features provided by Wordwall. The platform offers instant feedback that enables students to identify and correct grammatical errors immediately. In addition, the gamification elements, such as points, rankings, and interactive quizzes, encourage students to participate actively throughout the lesson. Unlike conventional grammar instruction, which often relies on explanation and written exercises, Wordwall creates a more engaging learning environment that motivates students to practice grammar repeatedly without feeling bored.

These findings are consistent with previous studies reporting that Wordwall improves English learning outcomes, particularly grammar mastery and learning motivation (Maasah et al., 2025; Komara et al., n.d.; Rosydiyah et al., n.d.). However, the present study contributes additional



evidence by demonstrating that Wordwall can also support continuous instructional improvement within a Classroom Action Research framework. Rather than merely measuring learning outcomes, this study illustrates how teachers can use classroom reflection to evaluate the effectiveness of digital learning media in addressing students' grammar difficulties.

## CONCLUSION

This study concludes that Wordwall is an effective gamification-based instructional medium for improving students' grammar mastery at the senior high school level. The implementation of Wordwall not only increased students' grammar achievement but also encouraged greater classroom participation, learning motivation, and positive learning experiences during grammar instruction. These findings indicate that integrating interactive digital learning media into English classrooms can support both cognitive and behavioural aspects of learning. This study also contributes to the implementation of Classroom Action Research by demonstrating that instructional improvement can be achieved through a systematic process of planning, acting, observing, and reflecting. Since the predetermined success criterion was achieved in the first cycle, no additional cycle was required. Nevertheless, this study has several limitations. It involved only one class from one school and did not include a comparison group. Therefore, the findings should be interpreted within the context of this study and should be generalized with caution.

## SUGGESTION

Based on the findings of this study, English teachers are encouraged to integrate Wordwall into grammar instruction to create a more interactive and motivating classroom environment. Schools are also encouraged to provide adequate technological facilities and internet access to support the effective implementation of digital learning media. Future researchers are recommended to involve larger and more diverse samples from different schools, include comparison groups, and investigate the long-term effects of Wordwall on students' grammar mastery. Further studies may also explore which specific Wordwall features contribute most to improving students' language learning outcomes.

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