Revista Científica Multidisciplinar G-ner@ndo

ISSN: 2806-5905

Wordwall: Una Estrategia Interactiva para Fortalecer el Aprendizaje del Inglés

Wordwall: An Interactive Strategy to Enhance English Learning

Emili Alejandra Solórzano Alcívar, Carlos Alberto Fuentes Miranda, Sindy Mariela Paladines De La Cruz, María Liseth Mero Calderón

CIENCIA E INNOVACIÓN EN DIVERSAS DISCIPLINAS CIENTÍFICAS.

Enero - Junio, V°6-N°1; 2025

Recibido: 28/02/2025
Aceptado:07/04/2025
Publicado: 30/06/2025

PAIS

- Ecuador, Portoviejo
- Ecuador – Manta
- Ecuador – Jipijapa
- Ecuador – Puerto López

INSTITUCION

- Unidad Educativa Fiscal Guaranda #43
- Unidad Educativa Stella Maris
- Unidad Educativa Ciudad de Jipijapa
- Unidad Educativa Cesar Quimis Choez

CORREO:

emysolorzano@hotmail.com
carlosafuentesm13@gmail.com
sindy.paladines@educacion.gob.ec
maria.meroc@educacion.gob.ec

ORCID:

https://orcid.org/0000-0001-6529-5717
https://orcid.org/0009-0001-3920-1980
https://orcid.org/0009-0009-5425-1722
https://orcid.org/0009-0001-4985-8070

FORMATO DE CITA APA.

Solorzano, E. Fuentes, C. Paladines, S. Mero, M. (2025). Wordwall: Una Estrategia Interactiva para Fortalecer el Aprendizaje del Inglés. *Revista G-ner@ndo, V°6 (N°1,). 3938 – 3959.*

Resumen

La falta de fluidez y confianza en la producción oral en la asignatura de inglés sigue siendo un desafío en la educación básica superior, agravado por enfoques pedagógicos centrados en gramática y escritura que descuidan actividades interactivas. Además, la escasa exposición a contextos reales limita el desarrollo de habilidades comunicativas esenciales. Por ello, esta investigación tiene como objetivo aplicar una estrategia interactiva basada en Wordwall para fortalecer el aprendizaje del inglés, enfocándose en vocabulario, gramática, comprensión auditiva y pronunciación. La investigación siguió un enfoque mixto con diseño preexperimental, evaluando el impacto de Wordwall en el aprendizaje del inglés en 25 estudiantes y 3 docentes. Se emplearon métodos de análisis y síntesis para organizar información teórica, e inducción y deducción para relacionar resultados con el marco conceptual. Empíricamente, se aplicaron pruebas diagnósticas y finales para evaluar vocabulario, gramática, comprensión auditiva y expresión oral. También se realizaron entrevistas a docentes para identificar percepciones y metodologías. Las actividades interactivas incluyeron juegos y cuestionarios implementados durante cuatro semanas. El análisis estadístico se realizó con Jamovi, respetando principios éticos y consentimiento informado. Los resultados evidenciaron mejoras significativas en las habilidades lingüísticas de los estudiantes, con un aumento en las puntuaciones promedio y una mayor uniformidad en los resultados finales. En conclusión, la implementación de Wordwall demostró ser una herramienta efectiva para fomentar la motivación, participación y aprendizaje interactivo, transformando la enseñanza del inglés en contextos educativos.

Palabras Clave: Aprendizaje interactivo, Competencias comunicativas, Wordwall.

Abstract

The lack of fluency and confidence in oral production in the English subject remains a challenge in upper basic education, exacerbated by pedagogical approaches focused on grammar and writing that neglect interactive activities. Additionally, limited exposure to real contexts hinders the development of essential communicative skills. Therefore, this research aims to apply an interactive strategy using Wordwall to enhance English learning, focusing on vocabulary, grammar, listening comprehension, and pronunciation. The study adopted a mixed-method approach with a pre-experimental design, evaluating the impact of Wordwall on English learning in 25 students and 3 teachers. Methods of analysis and synthesis were used to organize theoretical information, while induction and deduction helped relate results to the conceptual framework. Empirically, diagnostic and final tests were applied to assess vocabulary, grammar, listening comprehension, and oral expression. Teacher interviews were conducted to identify perceptions and methodologies. Interactive activities included games and quizzes implemented over four weeks. Statistical analysis was conducted using Jamovi, adhering to ethical principles and obtaining informed consent. Results showed significant improvements in students' linguistic skills, with increased average scores and greater uniformity in final results. In conclusion, the implementation of Wordwall proved to be an effective tool for fostering motivation, participation, and interactive learning, transforming English teaching in educational contexts.

Keywords: Interactive learning, Communicative skills, Wordwall..

Introductions

In a globalized world, learning the English language has become an essential skill, as it facilitates access to educational and job opportunities. However, mastering a foreign language goes beyond acquiring basic knowledge; it involves developing a solid understanding of grammar and vocabulary to apply them practically. This allows students to communicate effectively, both in oral and written expression, competencies that are indispensable for excelling in a multicultural and highly competitive environment (Mora et al., 2023).

To face these challenges, teachers currently have a variety of strategies for language teaching, including the use of virtual tools and multimedia resources. These strategies aim to make English classes more dynamic and motivating for students. However, in many public schools, a traditional approach prevails due to the lack of integration of educational technologies and insufficient teacher training in their use. This scenario limits students' potential to acquire relevant language skills in a global context (Roldán, 2018).

In this regard, the implementation of technological tools emerges as an effective solution to overcome the limitations of conventional methods, connecting learning with current demands (Lino-Calle et al., 2023). Among these tools, Wordwall stands out for its ability to create interactive educational activities that increase motivation and encourage active participation from students, thereby facilitating more meaningful learning tailored to current needs (Collantes-Lucas & Aroca-Fárez, 2024). By integrating this platform into the classroom, teachers can design dynamics that combine theoretical learning with practical exercises, adapted to the needs and levels of the students (Medina et al., 2024). This facilitates the acquisition of communication skills in English, transforming the learning experience into a more meaningful and engaging process, aligned with the demands of modern education and the holistic development of students (Rogel et al., 2024).

At an international level, a study conducted in Mexico highlights the importance of Wordwall as a teaching strategy in language learning during the pandemic. Using a quantitative

methodology, its effectiveness in virtual education was analyzed, showing that this tool helps improve grades and student participation in digital environments. The results demonstrated that this tool facilitates interaction and student engagement, optimizing their learning process in a distance education context, which is especially relevant in the new educational normal (Brown & Rojas, 2022). In Latin America, specifically in Colombia, the influence of Wordwall on motivation and oral English skills of fourth-grade students has been studied. A study conducted at the Fundación Educativa Canaán showed that the use of this digital tool significantly improved students' confidence and oral communication skills in English. The results showed a notable increase in students' willingness to actively participate and practice the language, highlighting it as an effective strategy to promote English learning in digital environments (Brown & Rojas, 2022). In Ecuador, a study on the use of Wordwall to improve learning assessments revealed that the digital tool generates motivation and interest among students. The study results indicated that 84% of participants reported an improvement in their academic performance after using Wordwall, highlighting its effectiveness in improving student performance and engagement in the educational process. This tool proved to be a valuable resource for promoting interactive and dynamic learning in the Ecuadorian educational context (Párraga et al., 2024).

A common problem in English communication skills is the lack of fluency and confidence in oral production. This occurs because many students fear making mistakes, preventing them from practicing and improving. Additionally, teaching often focuses on grammar and writing, leaving aside conversation activities. Limited exposure to real-life contexts and a lack of adequate vocabulary also affects their ability to express themselves effectively. As a result, students face difficulties communicating in English in academic, professional, and everyday situations.

The importance of addressing this issue lies in the need to provide students with learning strategies that align with their interests and current contexts. According to Collantes et al. (2024), Wordwall allows for the diversification of teaching methodologies and also promotes active

participation, creativity, and collaborative learning. Therefore, this research is justified by proposing the use of Wordwall as an interactive tool to enhance English language skills and improve academic results in upper secondary education. In this context, the following research question is formulated: How do digital interactive tools impact English language learning in upper secondary education students? The main objective of this research is: To apply an interactive strategy using Wordwall to strengthen English learning, focusing on the development of language skills such as vocabulary, grammar, listening comprehension, and pronunciation. This study will contribute to the design of innovative pedagogical strategies that enhance English teaching in the Ecuadorian context.

Development of Communicative Competencies in English

The development of communicative competencies in English is essential to ensure effective interaction in this language. These competencies are structured around four essential skills: listening comprehension, speaking, reading comprehension, and writing, which are fundamental pillars for effective communication in various contexts, as shown in Figure 1.

Figure 1. *Communicative Skills*

The development of communicative skills is achieved as the student becomes an effective communicator. This involves making decisions related to pronunciation, intonation, and fluency when speaking, as well as the ability to decode and interpret messages to construct meanings and transmit them both orally and in writing. Furthermore, it depends on the correct use of grammatical structures, the absence of spelling errors, and the ability to express oneself coherently, consistently, and creatively, both in oral and written language (Fundora & Llerena, 2018). To foster communicative competencies in English, various practical strategies can be implemented. One of them is the use of communicative tasks, which include activities such as oral presentations, role-playing, and descriptions. These activities allow students to practice both oral and written expression, promoting their confidence and fluency. It is essential that these tasks are aligned with the course objectives and are relevant to real-life situations, facilitating their practical application and motivating students to participate actively.

Another key strategy is the incorporation of authentic materials, such as videos, articles, and recordings of real conversations, which help improve listening and reading comprehension. This approach makes learning more meaningful by connecting students with the use of language in real contexts. Additionally, the use of Information and Communication Technologies (ICT), such as interactive educational apps (e.g., Duolingo, Quizizz, Wordwall, among others), complements traditional learning by offering dynamic and engaging practices. These tools enhance student interest and effectively strengthen their communicative skills.

The use of Wordwall in educational settings presents benefits that enhance teaching and learning processes. Among its most prominent contributions is the optimization of cognitive learning, facilitating the integration of interactive strategies in both virtual and face-to-face environments (Mina et al., 2024). This promotes the activation of mental schemas and reinforces working memory, increasing students' intrinsic and extrinsic motivation. Furthermore, the platform

allows for the creation of interactive teaching resources such as crosswords, matching games, and puzzles, which stimulate the development of metacognitive skills and foster synchronous and asynchronous collaboration (Medina et al., 2024).

Additionally, Wordwall improves continuous formative assessment by providing instant tracking tools for student performance. This helps identify learning gaps and allows teachers to adjust pedagogical strategies based on individual student differences. Its alignment with contemporary pedagogical approaches, such as constructivism and connectivism, favors the implementation of active methodologies, including Project-Based Learning (PBL) and collaborative assessment. In this way, Wordwall becomes a pedagogical tool that drives the acquisition of key competencies in a meaningful and adaptive learning framework (Bermello & Moya, 2024).

Implementing Wordwall in the classroom requires strategic planning to maximize its effectiveness. First, it is crucial to conduct teacher training that allows them to familiarize themselves with the platform and explore its features for integration into the curriculum design. Subsequently, teachers can use Wordwall's pre-designed templates to create customized interactive activities that align with learning objectives and meet student needs. Additionally, it is recommended to use the tool to foster collaborative work, promoting group dynamics that strengthen social skills and cooperative learning in both face-to-face and virtual environments (Lorduy & García, 2024; Párraga et al., 2024).

Methods and Materials

This research was conducted using a mixed-methods approach that integrates both quantitative and qualitative methods, with a preexperimental design that allowed the observation of the effects of implementing the interactive tool Wordwall in English learning. This design was

chosen due to the ability to measure changes in students' linguistic skills after the intervention, without the need for a comparison group.

According to Lino et al. (2024a), the quantitative approach facilitates the collection and analysis of numerical data, providing a solid foundation to assess the effectiveness of the educational strategy. Meanwhile, the qualitative approach is focused on exploring and understanding the perceptions, experiences, and meanings individuals attribute to a situation or phenomenon, emphasizing context and individual perspectives (Hernández et al., 2014). To construct the theoretical framework, theoretical methods such as analysis and synthesis were employed, allowing for the selection and organization of relevant information about English learning and the use of technological tools in educational contexts. Additionally, induction and deduction methods helped interpret the results and relate them to the reviewed concepts, establishing a clear link between theory and practice.

In the empirical domain, various instruments were applied to assess the impact of the strategy. Initially, a diagnostic test was conducted to identify the students' level of linguistic competencies before the intervention. This evaluation focused on areas such as vocabulary, grammar, listening comprehension, and oral expression. Subsequently, an interview was designed and conducted with the English teachers to identify their perceptions of the students' learning needs, as well as the challenges faced in teaching linguistic competencies. This interview allowed the collection of information on aspects such as the methodologies used, challenges in teaching English, and the willingness to incorporate technological tools into the educational process.

The data analysis was carried out using descriptive and inferential statistical tools, utilizing the software Jamovi (Lino et al., 2024b). Descriptive statistics were used to analyze measures of central tendency and dispersion of the results, while inferential statistics allowed the determination

of the significance of the changes observed after the implementation of Wordwall. This analytical approach provided a detailed view of the tool's effectiveness in the educational context.

The population consisted of 25 students and 3 English teachers from a Unit Educativa in the Cantón Jipijapa. Given the small size of the population, the entire group of participants was used as the sample. The implementation of the strategy began with a training session for the teachers, who explored the functionalities of Wordwall and designed interactive activities tailored to the learning objectives of the subject. Over a period of four weeks, dynamics such as matching games, crosswords, and quizzes were conducted, focusing on strengthening the students' linguistic skills.

At the end of the intervention, a final test was administered to assess the students' progress, and teachers' responses were collected through a survey. The results revealed significant changes in linguistic competencies and an increase in students' motivation towards learning English. This process was carried out respecting ethical principles, ensuring the confidentiality of the data and obtaining informed consent from all participants. Thus, the research demonstrated how the use of technological tools such as Wordwall can transform English teaching in educational contexts, providing a more dynamic and meaningful learning experience.

Analysis Results

Results of the Diagnostic Assessment

The following details the results obtained from the diagnostic assessment conducted with the students, aimed at identifying their level of competence in the fundamental English language skills: listening comprehension, reading, writing, and speaking. This assessment provided insight into the students' performance, highlighting their strengths and areas that require improvement, which serves as an essential starting point for planning effective innovative strategies.

Table 1. Descriptive Statistics of the Diagnostic Assessment

	N	Mean	Median	Mode	SD	Minimum	Maximum
Diagnostic	25	6.44	7	7.00	1.19	5	9

Table 1 presents a descriptive statistical analysis of the results obtained from the diagnostic assessment applied to 25 students. The average score was 6.44, with a median and mode of 7, indicating that most students were at a slightly above-average level, as shown in Figure 2. The standard deviation of 1.19 reflects moderate dispersion in the scores, ranging from a minimum of 5 to a maximum of 9. These results suggest moderate variability in student performance, showing an overall satisfactory level, although there are areas that need strengthening.

Results of the Teacher Interview

The following table presents the responses obtained from three teachers through an interview designed to explore their perceptions, experiences, and opinions on teaching English and the integration of technological tools such as Wordwall in the classroom. The responses reflect a diversity of perspectives related to students' learning difficulties, the pedagogical strategies employed, and the opportunities and challenges associated with the implementation of interactive technologies. This analysis provides a foundation for understanding educational needs and planning effective interventions in the context of English language teaching.

Table 2. *Responses from the Teacher Interview*

Questions	Teacher 1	Teacher 2	Teacher 3
What do you consider to be the main difficulties your students face in learning English?	Difficulty memorizing vocabulary and lack of confidence when speaking in public.	Limitations in listening comprehension and advanced grammar.	Lack of exposure to the language outside the classroom and low vocabulary level.
From your experience, what strategies do you	I conduct group dynamics and use	I incorporate songs and interactive	I use role-playing and debates to

currently use to motivate students to actively participate in English classes?	English videos with subtitles.	listening exercises in class.	encourage oral practice.
How familiar are you with the use of technological tools in teaching English?	I have experience with basic tools like Kahoot, but not with Wordwall.	I know several apps, but I haven't worked with Wordwall specifically.	Familiar with basic technological tools, but not with Wordwall.
Have you had previous experience using tools like Wordwall or similar ones in your classes?	I haven't used Wordwall, but I'm interested in learning how to use it.	I have used similar platforms with good results in student participation.	I haven't used Wordwall, but I think it would be useful in my classes.
In your opinion, what advantages and disadvantages could the incorporation of technological tools like Wordwall have in the classroom?	Advantages: Interactive learning. Disadvantages: Requires technological infrastructure.	Advantages: Dynamism in classes. Disadvantages: Requires additional time for planning.	Advantages: Active participation of students. Disadvantages: Dependence on internet access.
What kind of support or training do you think you would need to effectively integrate Wordwall into your classes?	Practical workshops and examples of specific activities.	Training on advanced use of technological tools.	Step-by-step guides and access to online resources.
How do you currently assess the linguistic competencies of your students?	I use classroom observations and periodic assessments.	Oral and written assessments, as well as practical tasks.	I use quizzes and group projects to assess competencies.
Do you believe an interactive strategy based on Wordwall could improve English learning for your students?	Yes, because it can increase motivation and improve constant practice.	Yes, because it encourages interaction and facilitates collaborative learning.	Yes, because it allows customization of activities according to the group's needs.

Teacher 1 identifies the main difficulties his students face as a lack of confidence when speaking in public and difficulties in memorizing vocabulary. To motivate his students, he uses group dynamics and English videos with subtitles, which allows them to practice in a more interactive environment. Regarding the use of technological tools, he has basic experience with platforms like Kahoot, but he has not worked with Wordwall. Despite this, he expresses interest in learning how to use it. Regarding the advantages of integrating Wordwall, he believes that

interactive learning would be a positive point, but he warns that it requires adequate technological infrastructure.

Teacher 2 points out that his students face difficulties in listening comprehension and advanced grammar. To encourage them to participate in classes, he incorporates songs and interactive listening exercises that make the sessions more dynamic. In relation to the use of technological tools, he is familiar with several apps but has not worked with Wordwall specifically. However, he has used similar platforms with good results, especially in student participation. This teacher believes that Wordwall would add dynamism to the classes, although he acknowledges that it may require additional time to plan activities.

Teacher 3 perceives that the lack of exposure to the language outside the classroom and the low vocabulary level are the main challenges for his students. As for motivational strategies, he uses role-playing and debates to encourage oral practice, allowing students to apply the language in real-life contexts. He has basic experience with technological tools, but he has also not worked with Wordwall. However, he believes this tool could be useful in his classes.

Finally, all the teachers agree that Wordwall could be an effective tool to improve English learning. Each teacher highlights how this platform fosters interaction and facilitates collaborative learning, adapting to students' needs and making classes more dynamic and engaging. However, they also recognize that its implementation requires proper training and technological resources to support its use in the classroom.

Interactive Strategy Using Wordwall

General Objective: Implement an interactive strategy using Wordwall to develop linguistic skills (vocabulary, grammar, listening comprehension, and speaking) in a dynamic and collaborative manner.

Development: The implementation of Wordwall in the classroom is based on a strategic plan that includes preparation, activity development, and evaluation. First, it is essential to train students in the basic use of the platform to ensure smooth usage. This includes providing devices with internet access, such as mobile phones or tablets, to enable active participation in the proposed activities. During the class development, time is structured in different stages. The introduction, lasting about five minutes, is used to explain the activity of the day and its objectives. Then, in the main activity, lasting between 20 and 25 minutes, students work on activities designed in Wordwall, either in groups or individually.

Activities for Vocabulary

Vocabulary activities in Wordwall focus on strengthening the association between words and their meanings or images, which facilitates the acquisition of new vocabulary in an interactive way.

Vocabulary Matching: Match each word with its pair

This is my family: This activity allows students to match words related to family members with their corresponding images. It is ideal for beginners who are learning basic terms.

Farm animals: Designed to associate the names of farm animals with their corresponding images, this activity combines visual and textual learning to reinforce knowledge.

Figure 2. *Resources with Wordwall in Vocabulary Activities*

This is my family

Farm animals

Sources: Taken from Wordwall

Activities for Grammar.

These activities are designed for students to practice grammar rules dynamically, focusing on the correct understanding and application.

Multiple Choice Quizzes:

Present Simple vs Present Continuous: An activity where students select the correct option to complete sentences in either the present simple or continuous tense. This helps them differentiate between the two verb tenses.

Classification:

Zero, First, Second, and Third Conditionals: Students organize sentences into categories based on the type of conditional they represent. It is an excellent tool to consolidate the proper use of conditionals in English.

Figure 3. *Resources with Wordwall in Grammar Activities*

	
Present simple vs present continuous	**Zero, First, Second and Third Conditionals**

Sources: Taken from Wordwall

Activities for Listening Comprehension

Listening comprehension is essential in language learning, and these activities are designed to develop the ability to understand and process spoken information.

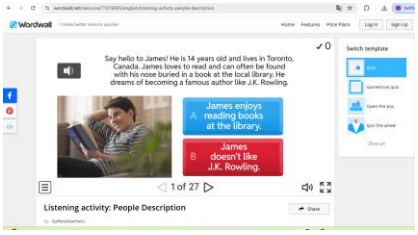
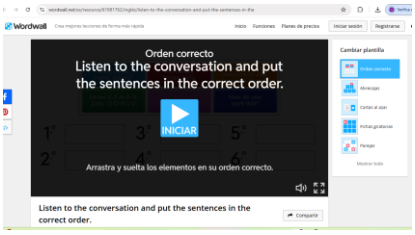
Listen and Respond:

People Description: Students listen to an audio clip and answer related questions, assessing their level of comprehension and retention of the information.

Order the Sentences:

Listen to the conversation and put the sentences in the correct order: In this activity, students listen to sentences and arrange them logically based on what they have heard. This reinforces active listening and thought organization.

Figure 4. *Resources with Wordwall in Listening Comprehension Activities*

	
Listening activity: People Description	Listen to the conversation and put the sentences in the correct order

Sources: Taken from Wordwall

Activities for Oral Expression

The oral expression activities in Wordwall are designed to help students practice and improve their communication skills in various contexts.

Role Wheel:

A bit about you: This activity uses an interactive wheel that generates everyday life situations designed to practice oral expression skills. These situations include examples like describing your

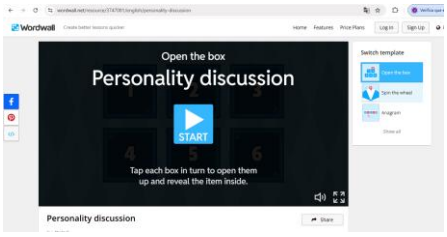
personal interests, sharing fun facts about yourself, or talking about your experiences in an informal context.

Open Boxes:

Personality discussion: This activity invites students to discuss aspects related to personality, such as characteristics, strengths, and weaknesses, encouraging the exchange of ideas, self-expression, and critical thinking.

Figure 5. *Resources with Wordwall in Oral Expression Activities*

[A bit about you]



[Personality discussion]

Sources: Taken from Wordwall

Results of the Final Evaluation

Upon implementing Wordwall in the classroom, a significant increase in active participation was observed, with students demonstrating higher motivation as they interacted with dynamic and personalized activities. The following presents the results.

Table 3. Descriptive Statistics of the Final Evaluation

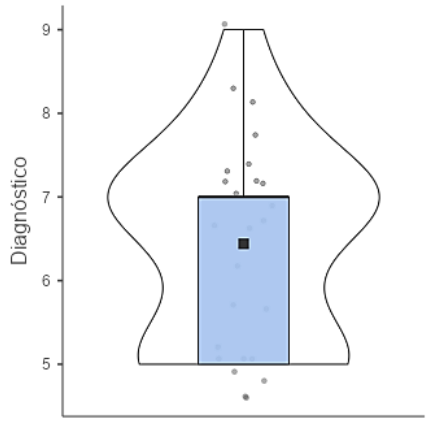
	N	Mean	Median	Mode	SD	Minimum	Maximum
Final	25	8.48	8	8.00	0.963	7	10

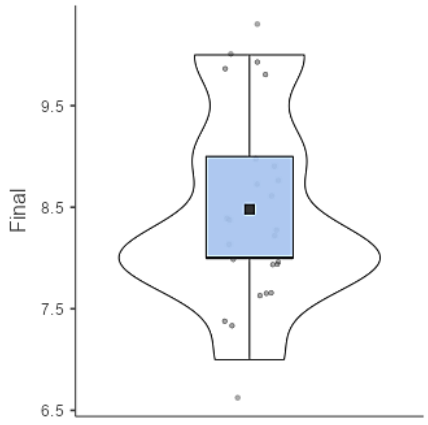
Table 3 shows the descriptive statistics of the final evaluation conducted through Wordwall, with a sample of 25 students. The mean obtained was 8.48, reflecting a high average performance in the proposed interactive activities. The median and mode were both 8, indicating that most students achieved similar results. The standard deviation of 0.963 suggests that, although the results were consistent, there were also some variations. The scores ranged from a minimum of 7 to a maximum of 10, demonstrating the effectiveness and positive impact of Wordwall on the students' learning.

Figure 6. *Descriptive Statistics of the Diagnostic Evaluation vs. Final Evaluation*

Descriptivas

	N	Mean	Median	Mode	SD	Minimum	Maximum
Diagnostic	25	6.44	7	7.00	1.193	5	9
Final	25	8.48	8	8.00	0.963	7	10





In general, a significant improvement in student performance is observed between the initial diagnostic and the final evaluation. While the results of the diagnostic were somewhat dispersed, the final evaluation showed greater uniformity in the grades, indicating that the students performed better in the activities. The reduction in variability in the final results suggests that learning was more consistently consolidated throughout the process, highlighting the effectiveness of the tools used, such as Wordwall, in the development of their skills. Next, the corresponding hypotheses for the paired sample t-test are presented:

Null Hypothesis (H_0): There is no significant difference between the two measures (initial diagnostic and final evaluation). That is, the difference between the two measures is equal to zero.

H_0: $\mu_1 - \mu_2 = 0$

Alternative Hypothesis (H_a): There is a significant difference between the two measures (initial diagnostic and final evaluation). That is, the difference between the two measures is not equal to zero.

H_a: $\mu_1 - \mu_2 \neq 0$

Table 4. *Paired Sample T-Test*

			Statistic	df	p
Diagnostic	Final	T de Student	-7.62	24.0	< .001

Note. H_a $\mu_{\text{Medida 1 - Medida 2}} \neq 0$

Based on the results of the paired sample t-test, with 24 degrees of freedom (df = 24) and a p-value less than 0.001, a significant improvement in student performance between the initial diagnostic and the final evaluation is observed. While the results from the initial diagnostic were somewhat dispersed, the final evaluation showed greater uniformity in the grades, indicating that students improved their performance in the activities. This reduction in variability suggests a more consistent consolidation of learning, highlighting the effectiveness of tools like Wordwall in the development of their skills.

Discussion and Conclusions

The results obtained in this research demonstrate a significant improvement in students' linguistic competencies after implementing interactive strategies using Wordwall. The comparison between the diagnostic and final evaluations shows considerable progress, moving from an average score of 6.44 to 8.48, accompanied by a decrease in data dispersion. This corroborates the effectiveness of interactive technological tools in English teaching, aligning with the findings of authors such as Bayas et al. (2024), who highlight that the use of digital platforms facilitates a more dynamic and collaborative learning process.

In the initial diagnostic, the scores showed moderate variability (SD = 1.19), indicating disparities in students' language skills levels. This aligns with Mora et al. (2023), who argue that heterogeneous contexts require differentiated pedagogical strategies to address the diverse needs of students. The teacher interviews also emphasized these differences, identifying a lack of confidence when speaking in public and difficulties with advanced grammar as the main challenges.

After implementing Wordwall, the final results show a significantly higher mean and a lower standard deviation (SD = 0.96), suggesting more uniform learning among students. According to Cabrera et al. (2024), interactive learning enhances students' motivation and active

participation, promoting effective knowledge consolidation. This finding is supported by the teachers' perceptions, who recognized the advantages of Wordwall in terms of dynamism, interaction, and activity personalization.

Furthermore, the specific activities designed for vocabulary, grammar, listening comprehension, and speaking allowed students to practice key skills in meaningful contexts. As noted by Pinargote et al. (2024), technology-based strategies not only reinforce specific skills but also develop metacognitive competencies by engaging students in active learning processes.

However, the implementation of tools like Wordwall also presents challenges, as mentioned by the interviewed teachers. These include the need for appropriate technological infrastructure and additional time for planning, which aligns with the findings of Rivera et al. (2024), who emphasize the importance of having adequate resources and institutional support to maximize the impact of educational technologies.

In conclusion, the results obtained support the hypothesis that interactive technological tools, like Wordwall, are effective in improving English learning, especially when well-structured strategies are applied, considering the individual needs of students. Future studies could focus on exploring the impact of these strategies in other educational contexts and proficiency levels, as well as analyzing their long-term sustainability.

References bibliographical

Bayas, L., Bayas, D., Guiscaho, D., Navarrete, M., & Collantes, M. (2024). Innovación con recursos tecnológicos en la enseñanza de fonemas en educación inicial. *Revista Científica Multidisciplinar G-Ner@ndo*, *5*(2), 1638–1659. https://doi.org/10.60100/rcmg.v5i2.327

Bermello, M., & Moya, L. (2024). El uso de la Herramienta Wordwall como aprendizaje activo en la asignatura Lengua y Literatura en la educación básica. *Boletín Científico Ideas y Voces*, *4*(3), 241–259. https://ciciap.org/ideasvoces/index.php/BCIV/article/view/172

Brown, D., & Rojas, P. (2022). El uso de Wordwall como estrategia didáctica para el aprendizaje del idioma inglés en la nueva normalidad. *Dilemas Contemporáneos: Educación, Política y Valores*, *1*(58), 1–15. https://doi.org/10.46377/dilemas.v10i1.3329

Cabrera, B., Ulloa, M., Calahorrano, R., Lino, V., & Toala, F. (2024). Uso de la simulación phet para el aprendizaje de vectores en estudiantes de bachillerato: un enfoque interactivo. *Revista Científica Multidisciplinar G-Ner@ndo*, *5*(2), 1971–1994. https://doi.org/10.60100/rcmg.v5i2.346

Collantes-Lucas, M. A., & Aroca-Fárez, A. E. (2024). Aprendizaje lúdico en la era digital apoyado por las TIC en niños de 4 a 5 años. *MQRInvestigar*, *8*(2), 596–620. https://doi.org/10.56048/mqr20225.8.2.2024.596-620

Collantes, M., Rogel, C., & Cobeña, M. (2024). Estrategia Didáctica para la Enseñanza de Matemáticas en Educación Inicial II : Integración de Wordwall. *MQRInvestigar*, *8*(3), 5340–5362. https://doi.org/10.56048/MQR20225.8.3.2024.5340-5362

Fundora, D., & Llerena, O. (2018). Características de las habilidades comunicativas en idioma inglés en estudiantes del curso introductorio de lengua inglesa. *Rev. Tzhoecoen*, *10*(2), 227–238. https://doi.org/10.26495/rtzh1810.226317 Daimir

Hernández, R., Fernández, C., & Baptista, P. (2014). Metodología de la investigación. In *Mc Graw Hill Education* (Sexta Edic).

Lino-Calle, V., Barberán-Delgado, J., Lopez-Fernández, R., & Gómez-Rodríguez, V. (2023). Analítica del aprendizaje sustentada en el Phet Simulations como medio de enseñanza en la asignatura de Física. *Journal Scientific MQRInvestigar*, *7*(3), 2297–2322. https://doi.org/10.56048/MQR20225.7.3.2023.2297-2322

Lino, V., Carvajal, D., Muñoz, J., & Intriago, Y. (2024). Jamovi como herramienta para el análisis de datos en la asignatura de estadística y diseño de experimentos. *Revista Alcance*, *7*(1), 73–83. https://doi.org/10.47230/ra.v7i1.62

Lino, V., Carvajal, D., Sornoza, D., Vergara, J., & Intriago, Y. (2024). Herramienta tecnológica Jamovi en el análisis e interpretación de datos en proyectos de Ingeniería Civil. *Innovaciones Educativas*, *26*(41), 151–165. https://doi.org/10.22458/ie.v26i41.5145

Lorduy, F., & García, R. (2024). *Influencia de wordwall en la motivación y competencias orales en inglés en estudiantes de cuarto grado de la Fundación Educativa Canaán* [Universidad Nacional Abierta y a Distancia UNAD]. https://repository.unad.edu.co/handle/10596/64579?utm_source=chatgpt.com

Medina, M., Pin, J., Chinga, R., & Lino, V. (2024). Wordwall como herramienta de apoyo en el refuerzo pedagógico de Ciencias Naturales. *Polo Del Conocimiento*, *9*(3), 1118–1136. https://bit.ly/4bv9fR4

Mina, C., Paredes, X., Santamaria, T., & Tapia, B. (2024). Wordwall como herramienta didáctica para fortalecer el aprendizaje de matemáticas. *Revista Minerva*, *5*(8), 1–19. https://revistas.ug.edu.ec/index.php/minerva/article/view/21/27

Mora, G. M., Pinza, L., López, R., & Alejo, Ó. (2023). Analítica del Aprendizaje y Gamificación para Fortalecer la habilidad “Reading” en la asignatura de Inglés. *MQRInvestigar*, *7*(4), 145–168. https://doi.org/10.56048/mqr20225.7.4.2023.145-168

Párraga, F., Holguín, A., González, P., & Rodríguez, E. (2024). Uso de la herramienta tecnológica Wordwall en la evaluación de aprendizaje. *Dominio de Las Ciencias*, *10*(3), 1606–1623. http://dominiodelasciencias.com/ojs/index.php/es/indexhttps://orcid.org/0009-0008-7651-6720

Pinargote, J., Lino, V., & Vera, B. (2024). Python en la enseñanza de las Matemáticas para estudiantes de nivelación en Educación Superior. *MQRInvestigar*, *8*(3), 3966–3989. https://doi.org//10.56048/MQR20225.8.3.2024.3966-3989

Rivera, F., Villalta, T., & Maliza, W. (2024). Herramientas digitales para la enseñanza de matemática en la formación técnica profesional. *Polo Del Conocimiento Conocimiento*, *9*(4), 2914–2938. https://doi.org/10.23857/pc.v9i4.7133

Rogel, C., De La O Pozo, R., Alejandro, M., Orta, I., & Collantes, M. (2024). Uso de juegos tecnológicos para fomentar el pensamiento lógico-matemático en niños de 4 a 5 años. *Revista Científica Multidisciplinar G-Ner@ndo*, *5*(2), 1526–1550. https://revista.gnerando.org/revista/index.php/RCMG/article/view/247/319

Roldán, R. (2018). Programa “B-English”, basado en clases semipresenciales, para el dominio de las habilidades comunicativas del idioma inglés. *Revista Ciencia y Tecnología*, *14*(3), 99–106. http://www.scielo.org.bo/scielo.php?script=sci_arttext&pid=S2077-33232016000100013&lng=es&nrm=iso&tlng=es