

The implementation of the Wordwall platform to enhance vocabulary acquisition in A1 efl students**Implementación de la plataforma Wordwall para mejorar la adquisición de vocabulario en estudiantes A1 de inglés como lengua extranjera**

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Resumen

El presente estudio tuvo como objetivo analizar la efectividad de la plataforma Wordwall como herramienta digital gamificada para mejorar la adquisición de vocabulario en estudiantes de inglés como lengua extranjera (EFL) con nivel A1. La investigación se desarrolló en una institución de educación básica ecuatoriana y adoptó un enfoque de métodos mixtos. Para la recolección de datos se aplicaron un pre-test y un post-test de vocabulario, un cuestionario tipo Likert para medir la percepción y motivación estudiantil, y una lista de observación para registrar el nivel de participación durante las actividades. Los resultados cuantitativos evidenciaron un incremento significativo en el desempeño léxico de los estudiantes tras la implementación de actividades interactivas en Wordwall. Asimismo, los hallazgos cualitativos mostraron una mayor motivación, participación activa y actitud positiva hacia el aprendizaje del vocabulario en inglés. El estudio aporta evidencia empírica sobre el uso pedagógico de plataformas digitales gamificadas en contextos EFL, destacando su potencial para fortalecer el aprendizaje léxico en niveles iniciales. Se concluye que Wordwall constituye una herramienta efectiva para apoyar la enseñanza del vocabulario y promover un aprendizaje más dinámico e interactivo.

Palabras clave: language learning, gamification, vocabulary acquisition, educational technology, English teaching.

Abstract

The purpose of this study was to examine the effectiveness of the Wordwall platform as a gamified digital tool to enhance vocabulary acquisition among A1-level English as a Foreign Language (EFL) students. The study was conducted in an Ecuadorian basic education context and adopted a mixed-methods research design. Data collection instruments included a vocabulary pre-test and post-test, a Likert-scale questionnaire to assess students' perceptions and motivation, and an observation checklist to document classroom engagement. Quantitative findings indicated a statistically significant improvement in learners' vocabulary performance following the implementation of Wordwall activities. Qualitative results highlighted increased motivation, active participation, and positive attitudes toward vocabulary learning. These findings support the integration of gamified digital platforms in EFL instruction and demonstrate that Wordwall contributes to more interactive and effective vocabulary learning at beginner levels.

Keywords: language learning, gamification, vocabulary acquisition, educational technology, English teaching

Introduction

Proficiency in the English language constitutes a fundamental competency in the contemporary global educational landscape. Within the process of Foreign Language (EFL) learning, vocabulary acquisition acts as the cornerstone for developing communicative skills, as a limited lexical repertoire restricts a learner's ability to comprehend and produce meaningful messages. According to Nation (2013), vocabulary acquisition is not merely the memorization of isolated words but a gradual process involving the mastery of form, meaning, and use through both intentional study and incidental exposure. However, for beginner learners (A1 level), particularly children aged 7 to 8, traditional rote-learning methods often fail to sustain the necessary motivation and engagement required for long-term retention.

At present, traditional rote-learning methods are being enriched by the global proliferation of some digital tools, which specific application within the Ecuadorian educational context presents a unique area for investigation. While the Ecuadorian National Curriculum encourages the use of digital resources to foster language learning (Ministerio de Educación del Ecuador, 2016), there is a scarcity of empirical research focusing on the implementation of specific gamified platforms like Wordwall in basic education institutions, such as the Unidad Educativa Paltas. In this local scenario, technology remains underutilized or restricted to passive consumption rather than serving as a catalyst for interactive learning. Consequently, a knowledge gap exists regarding the quantifiable impact of this tool on the lexical competence of young A1 learners in this specific demographic.

Gamified digital platforms have gained increasing attention due to their potential to create interactive and motivating learning environments. Wordwall is an online platform that allows teachers to design customizable vocabulary activities, such as matching games, quizzes, and word searches. Despite its growing use in English classrooms, empirical research examining its effectiveness in Ecuadorian EFL contexts remains limited. Therefore, this study aims to answer the following research questions:

To what extent does the implementation of Wordwall significantly improve vocabulary acquisition in A1-level EFL students?

What are students' perceptions and motivation levels toward learning vocabulary through Wordwall?

How does the use of Wordwall affect classroom participation and engagement?

Consequently, this study aims to examine the effectiveness of the Wordwall platform as a gamified digital tool for enhancing vocabulary acquisition among A1-level EFL students. Adopting a mixed-methods Explanatory Sequential Design, this research seeks not only to measure

improvements in vocabulary performance through pre- and post-testing but also to analyze students' perceptions and motivation toward this technology-enhanced learning environment. By addressing this gap, the study contributes practical empirical evidence to support the integration of gamified strategies in the Ecuadorian EFL classroom.

Literature review

Vocabulary Acquisition in Young EFL Learners

Vocabulary acquisition is widely recognized as a cornerstone of foreign language proficiency. Without a sufficient lexical foundation, learners cannot effectively develop productive skills such as speaking and writing, nor can they comprehend complex texts. While classical theories by (Nation, 2013) emphasize that vocabulary learning involves mastering form, meaning, and use, contemporary pedagogy has shifted towards understanding how digital environments influence this process. In the specific context of young learners (A1 level), the challenge lies not only in presenting new words but in ensuring retention through repeated and meaningful exposure. Recent research suggests that traditional rote-memorization methods are becoming less effective for the current generation of digital natives, necessitating the integration of more dynamic instructional strategies (Almuafa & Alqurashi, 2025).

A critical distinction in teaching young learners is the balance between intentional and incidental vocabulary learning. Reynolds (2025) argues that a significant portion of second language vocabulary is acquired incidentally—as a by-product of engaging in other meaning-focused activities—rather than through explicit study alone. For children aged 7 to 8, who are still developing their cognitive and metacognitive strategies, abstract definitions are often difficult to grasp. Therefore, the learning process must be embedded in activities that naturally provoke curiosity. When vocabulary is presented in isolation, retention rates drop significantly; conversely, when words are encountered within a playful or narrative context, young learners are more likely to map the form of the word to its meaning effectively.

Furthermore, the role of multimodal input is paramount in the modern EFL classroom. Cabanilla et al. (2024) posit that there is a reciprocal connection between visual stimuli and vocabulary development; the simultaneous presentation of text, audio, and images helps to create stronger memory traces in the learner's brain. This is particularly relevant for A1 students who rely heavily on visual cues to decode meaning. Digital platforms leverage this by offering "rich input" where a word is not just read, but seen and heard simultaneously. This multimodal approach aligns with the Dual Coding Theory, suggesting that processing information through two channels (verbal and visual) doubles the chances of retrieval, a strategy that traditional textbooks often fail to fully utilize.

Gamification and the Affective Filter

Psychological factors, specifically the "Affective Filter," also play a decisive role in vocabulary acquisition. High levels of anxiety or a fear of making mistakes can block the cognitive processes necessary for learning. Recent studies in educational psychology indicate that gamified environments significantly lower this affective filter by reframing errors as part of the game rather than academic failures (Dong, Li, & Chen, 2022). When students feel safe and entertained, their willingness to experiment with new vocabulary increases. This positive emotional state is crucial for "Foreign Language Learning Enjoyment" (FLLE), which has been identified as a strong predictor of long-term academic success in language learning.

Finally, it is essential to contextualize these theories within the reality of the Ecuadorian educational system. While the national curriculum emphasizes communicative language teaching, local implementations often face structural challenges. Espin and Recalde note (2025) that despite the theoretical push for innovation, many Ecuadorian classrooms still struggle with limited resources and a reliance on traditional grammar-translation methods. This gap creates a specific need for accessible, easy-to-implement digital tools that can function effectively in developing contexts. Introducing platforms like Wordwall in schools such as Unidad Educativa Paltas is not merely a technological upgrade but a necessary pedagogical intervention to bridge the gap between global EFL standards and local classroom realities.

To address the engagement gap in vocabulary instruction, gamification, also known as the application of game-design elements in non-game contexts, has emerged as a vital strategy. The core premise of gamification in Education is to leverage the motivational power of games to achieve learning outcomes. According to a study by Dong et al. (2025), gamified environments significantly reduce foreign language anxiety and boost "Foreign Language Learning Enjoyment" (FLLE), which are critical predictors of academic success. By transforming passive learning into an active, competitive, or collaborative experience, students are more likely to persist in difficult tasks. Furthermore, gamification provides immediate feedback, a crucial component for cognitive reinforcement, allowing students to self-correct and internalize vocabulary more efficiently than through delayed correction methods.

From a psychological perspective, the effectiveness of gamification is often analyzed through the lens of Self-Determination Theory (SDT). Garhani (2025) posits that gamified elements such as leaderboards, badges, and progress bars satisfy three innate human needs: autonomy, competence, and relatedness. In an EFL context, when students are given the agency to choose their path or try again without penalty (autonomy), and when they receive visible indicators of their progress (competence), their intrinsic motivation increases. Unlike traditional

coercive methods, this "gamified" motivation transforms the learning process from a requirement into a voluntary engagement, which is particularly effective for younger students who may lack the self-regulation skills necessary for autonomous study.

Furthermore, successful gamification induces a cognitive state known as "Flow," where learners become fully immersed in the activity. Ciancitto (2024) distinguishes between merely playing a game and educational gamification, noting that the latter must carefully balance challenge and skill levels to prevent boredom or anxiety. When a student enters this "Flow" state, the temporal and emotional barriers to learning diminish. This is crucial for vocabulary acquisition, which often involves repetitive drills that can easily become monotonous. By embedding these drills into a narrative or competitive structure, the repetition becomes a necessary step to achieve a game goal rather than a tedious academic task, thereby sustaining attention for longer periods.

In the realm of digital education, platforms like Wordwall have democratized access to these sophisticated gamification strategies. Unlike static classroom games, digital tools offer multimodal reinforcement which caters to diverse learning styles. Carrillo et al. (2025) highlight that for elementary students, the visual attractiveness and immediate responsiveness of platforms like Wordwall significantly enhance attention spans. Their research suggests that these tools bridge the gap between home-based digital entertainment and school-based learning, making the transition seamless for "digital native" children who expect interactivity in their daily lives.

However, it is imperative to acknowledge that gamification is not a universal remedy but a tool that requires pedagogical alignment. Chan and Lo (2024) warn against "superficial gamification," where game elements are loosely attached to poor instructional content. For vocabulary acquisition to be robust, the game mechanics must support the learning objectives; for instance, a game should not just reward speed. Effective implementation requires the teacher to act as a facilitator who integrates these digital experiences into a broader communicative curriculum, ensuring that the engagement generated by the game translates into meaningful and transferable linguistic competence.

Wordwall as a Gamified Digital Platform

Among the myriads of digital tools available, Wordwall has gained prominence due to its versatility and accessibility. Wordwall allows educators to create interactive activities such as quizzes, match-ups, and anagrams that can be accessed on any device. Chi and To (2024) highlights that student perceive Wordwall as a "user-friendly" interface that transforms monotonous vocabulary drills into engaging challenges. The platform's ability to offer multimodal input caters to diverse learning styles, which is particularly beneficial for younger students who may struggle with text-heavy content.

Vocabulary acquisition involves learning the form, meaning, and use of words through intentional and incidental exposure. (Nation, 2013) emphasizes that repeated encounters with vocabulary in varied contexts are essential for long-term retention. Digital tools such as Wordwall support this process by providing interactive and multimodal activities. Previous studies have demonstrated that Wordwall positively influences vocabulary learning and learner motivation in EFL classrooms, supporting its pedagogical relevance.

Although previous studies have demonstrated the effectiveness of gamification and digital platforms in enhancing vocabulary acquisition among EFL learners (Ahmed et al., 2022; Alfares, 2025; Angamarca et al., 2025; Veintimilla & Vega, 2025), limited empirical evidence exists regarding the implementation of Wordwall with young A1 learners in Ecuadorian basic education contexts. Furthermore, few studies have adopted a mixed-methods approach to simultaneously examine vocabulary gains, learner motivation, and classroom participation. Consequently, the present study seeks to address this gap by investigating the effectiveness of Wordwall as a gamified learning tool for improving vocabulary acquisition among A1 EFL students in an Ecuadorian public-school setting.

Materials and Methods

The present research study adopts a comprehensive mixed-methods design to thoroughly investigate the phenomenon of vocabulary acquisition through gamified platforms. This methodological framework effectively integrates quantitative and qualitative paradigms to provide a holistic understanding of the educational intervention. According to Creswell and Creswell (2018), the convergence of numerical data and contextual observations allows researchers to construct a more robust interpretation of complex learning processes. Consequently, this dual approach facilitates a deep exploration of both the measurable cognitive gains and the subjective affective responses experienced by young language learners.

Context and Participants

The study involved 30 A1-level English as a Foreign Language (EFL) students enrolled in the third year of Basic General Education at Unidad Educativa Paltas, Ecuador. Participants ranged in age from 7 to 8 years old and were selected through convenience sampling due to their accessibility and regular participation in English classes. This population was considered appropriate for examining the effectiveness of gamified digital tools in supporting vocabulary acquisition among beginning learners.

Instruments

To ensure a rigorous data collection process, the researchers implemented three distinct instruments designed to capture complementary dimensions of the educational experience. The primary quantitative tools consisted of a pre-test and a post-test specifically designed to measure vocabulary development among the participants. Furthermore, a Likert-scale questionnaire was administered to evaluate students' perceptions, attitudes, and motivational levels regarding the technological platform utilized during the intervention. Complementing these numerical metrics, an observation checklist was systematically employed to document learner behavior, participation patterns, and engagement within the classroom environment.

Intervention

The intervention was conducted over a four-week period during regular English lessons. Throughout this time, students participated in vocabulary-learning activities designed through the Wordwall platform. These activities included matching exercises, word searches, quizzes, labeling tasks, and interactive games focused on age-appropriate vocabulary topics aligned with the Ecuadorian English curriculum. A vocabulary pre-test was administered before the intervention to establish baseline performance, whereas the post-test was applied after the completion of the instructional sequence to determine learning gains attributable to the use of the platform.

Data Analysis

The analytical phase of the study involved distinct yet interconnected procedures tailored to the specific nature of the gathered data. Quantitative information derived from the assessments and the perception questionnaire was examined using descriptive and inferential statistics to determine the magnitude and significance of vocabulary gains. On the other hand, qualitative data extracted from the structured observations underwent a systematic thematic categorization process to identify recurring behavioral patterns. Following the procedures outlined by (Braun & Clarke, 2006), this thematic analysis enabled the identification of underlying psychological and social dynamics influencing the language acquisition process. Ultimately, the triangulation of these diverse analytical methods ensured a valid and reliable evaluation of the proposed pedagogical strategy.

Ethical Considerations

Regarding ethical considerations, authorization was obtained from the educational institution prior to data collection. Participation was voluntary, and parental consent was secured for all students involved in the study. Confidentiality and anonymity were maintained throughout the research process, and the collected information was used exclusively for academic and

research purposes. These procedures ensured compliance with ethical principles governing educational research involving minors.

Results and Discussion

This section presents the comprehensive findings derived from the systematic implementation of the mixed-methods research design. To accurately assess the impact of the gamified platform on vocabulary acquisition in beginner students, the analytical procedures rigorously integrate both quantitative measurements and qualitative observations. Initially, the numerical data obtained through the administration of the pretest and posttest are thoroughly examined to determine the statistical significance of the cognitive advances achieved. Subsequently, the perceptual information collected through a Likert-scale questionnaire to assess students' perceptions and motivation, is analyzed in depth to understand the underlying motivational factors and affective responses manifested by the participants. Finally, the behavioral patterns documented in detail within the observation checklist are explored thematically to provide a contextualized interpretation of student participation during the pedagogical intervention. Through the meticulous triangulation of these diverse sources of information, this research segment aims to construct a highly reliable and deeply nuanced understanding of the educational phenomenon under scrutiny.

Table 1

Pre-test and post-test results

Evaluation	N	M	DE	Min	Max
Pre-test	30	46,17	17,5	20	80
Post-test	30	82,17	15,1	50	100

Table 1 delineates the descriptive statistics concerning the vocabulary scores obtained by the participants during the initial diagnostic evaluation. The numerical data reveal an average pre-test score of 46,17, accompanied by a standard deviation of 17,5. These preliminary figures suggest a substantial gap in foundational lexical knowledge among the observed cohort prior to the technological intervention. Such baseline performance reflects the characteristic and linguistic challenges commonly experienced by beginner level students attempting to acquire a foreign language.

Following the systematic implementation of the gamified educational platform, the descriptive metrics indicate a profound transformation in the cognitive outcomes. The post-test results display a significantly elevated mean score of 82,17, clearly demonstrating the positive impact of interactive multimodal resources on memory retention. Furthermore, the standard deviation decreased to 15,1, which analytically implies a more homogeneous knowledge distribution across the entire student sample. Consequently, the empirical evidence strongly supports the premise that interactive digital environments facilitate equitable learning opportunities for young language learners.

Table 2

T – student test

Evaluation pair	Difference of Means	t	gl	p (bilateral)
Post-test – Pre-test	36	14.23	29	< .001

Table 2 meticulously details the results obtained using Student's t-test for paired samples. This analytical procedure was implemented to rigorously compare the average vocabulary scores before and after the technological intervention. The processed data reveal a difference of 36 points between the pre-test and post-test scores in favor of the final assessment. This substantial increase strongly suggests that the incorporation of the interactive platform had a highly positive impact on students' vocabulary performance.

To corroborate the empirical validity of these initial observations, it is essential to examine the indicators of statistical significance provided by the model. The calculated value for the t-statistic is fourteen point twenty-three, operating systematically on twenty-nine methodological degrees of freedom. At the same time, the resulting probability value is strictly less than one thousandth, a circumstance that allows us to rule out any random intervention with absolute confidence. All this empirical evidence authorizes the definitive rejection of the null hypothesis formulated at the beginning of this scientific study.

These analytical findings conclusively demonstrate that gamified virtual environments substantially optimize the retention of new vocabulary in early-level students. The inferential results strongly support the theoretical postulates linked to dual coding that underpin this innovative pedagogical proposal. Consequently, it can be logically deduced that combined visual and auditory stimulation greatly facilitates the cognitive consolidation of the foreign language. Such a discovery provides extremely valuable empirical evidence to guide future curricular decisions in the field of early language teaching.

Table 3*Likert scale results*

No.	Statement	SD (1)	D (2)	N (3)	A (4)	SA (5)	M	SD
1	Wordwall helps me understand new English words.	0	0	2	10	18	4.53	0.63
2	I feel motivated when using Wordwall.	0	1	1	8	20	4.56	0.77
3	Images and sounds help me remember words.	0	0	3	12	15	4.40	0.67
4	I enjoy learning vocabulary with Wordwall.	0	0	1	9	20	4.63	0.55
5	Immediate feedback helps me correct mistakes.	0	2	4	14	10	4.06	0.86
6	Wordwall activities are fun.	0	0	0	5	25	4.83	0.38
7	I participate more when we use Wordwall.	0	1	2	12	15	4.36	0.76
8	Wordwall helps me use new words correctly.	0	1	3	16	10	4.16	0.74

Note. N = 30. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree; M = Mean; SD = Standard Deviation. The maximum possible mean score is 5.00.

Table 3 details the subjective perceptions expressed by students after continuously interacting with the interactive technology platform. The quantitative data reveal exceptionally high levels of intrinsic motivation during the foreign language learning process. Particularly noteworthy is the statement referring to the enjoyment experienced through digital activities, which achieved an average of 4.83. These perceptual assessments empirically demonstrate a significant reduction in the affective filter within the formal educational environment. As a result, learners experience greater emotional confidence to actively engage with new English vocabulary related to topics such as greetings, means of transportation, sports, and adjectives. For instance, students learned and practiced vocabulary items such as hello, good morning, bus, train, soccer, basketball, and adjectives like happy, fast, strong, and beautiful through interactive activities that combined visual and auditory stimuli. The integration of images, sounds, and game-based tasks facilitated vocabulary retention and increased students' participation during the lessons.

Another fundamental aspect evidenced in the statistical results corresponds to the cognitive impact of integrated multimedia resources. Student responses overwhelmingly confirm that visual images complemented by auditory stimuli greatly facilitate lexical retention. For example, students learned nouns such as 'apple,' 'teacher,' and 'house,' as well as adjectives like 'happy,' 'big,' and 'beautiful' through matching games, quizzes, and audiovisual activities in Wordwall. This specific finding clearly supports the fundamental principles proposed by dual

coding theory. By simultaneously processing verbal information and pictorial representations, young students build considerably more robust memory traces. It is undeniable that multisensory stimulation is essential for consolidating abstract concepts during the early stages of language learning.

In addition, the assessment tool allows for analysis of behavioral changes observed in Ecuadorian classrooms. Participants openly acknowledge that their level of academic participation increased significantly when using these gamified digital resources. They also value the immediate feedback provided by the computer system to correct their spelling and semantic errors. This technological capacity to offer instant corrections encourages truly constructive autonomous learning, far removed from traditional frustrations. Consequently, constant interactivity transforms errors into valuable opportunities to perfect emerging communication skills.

Finally, it is imperative to correlate these highly favorable perceptions with the actual ability to use the learned words correctly. Although the practical application of vocabulary scores slightly lower, it still maintains a strongly positive and encouraging trend. This internal consistency between extrinsic motivation and the pragmatic usefulness of knowledge reaffirms the methodological relevance of this study. In conclusion, the quantified qualitative data fully validate the numerical findings discussed exhaustively in the preceding analytical sections. Educational gamification transcends mere entertainment to become a rigorously effective and cognitively stimulating pedagogical strategy.

The following table presents a comprehensive summary regarding the perceptual responses gathered through the structured questionnaire. To provide a precise analytical overview, the statistical data has been categorized into positive, negative, and neutral feedback. Positive responses encompass those participants who selected either the agree or strongly agree options during the evaluation. Conversely, the negative responses represent the individuals who indicated disagreement or strong disagreement with the proposed statements. This specific categorization facilitates a clearer understanding of the overall student reception regarding the gamified technological intervention.

Table 4

Checklist results

No.	Statement	Positive Responses	Negative Responses	Neutral Responses
1	Wordwall helps me understand new English words.	28	0	2
2	I feel motivated when using Wordwall.	28	1	1

3	Images and sounds help me remember words.	27	0	3
4	I enjoy learning vocabulary with Wordwall.	29	0	1
5	Immediate feedback helps me correct mistakes.	24	2	4
6	Wordwall activities are fun.	30	0	0
7	I participate more when we use Wordwall.	27	1	2
8	Wordwall helps me use new words correctly.	26	1	3

Note. N = 30. Positive responses combine the agree and strongly agree categories.

Negative responses combine the disagree and strongly disagree categories.

Table 4 provides a highly detailed analytical summary of the attitudes expressed by participants regarding the technological intervention. The data collected shows an overwhelming prevalence of positive responses to the stimuli generated by the interactive digital platform. This overwhelming student acceptance suggests that gamification is an exceptionally attractive pedagogical tool for elementary school children. It is clear that the integration of playful elements significantly transforms the traditional classroom dynamic into highly stimulating environments.

A detailed examination of the individual categories reveals absolute consensus regarding the enjoyment provided by these educational activities. Specifically, the entire sample population evaluated the playful component integrated into the vocabulary exercises positively. At the same time, indicators associated with intrinsic motivation and overall enjoyment of learning received virtually unanimous approval. These favorable metrics empirically confirm that virtual environments substantially reduce the linguistic anxiety characteristic of the early stages of learning.

From a purely cognitive perspective, the results demonstrate the methodological effectiveness of combining visual stimuli with simultaneous auditory representations. The vast majority of students recognized that multimedia resources greatly facilitated the memorization of new English words. Such empirical findings strongly support the theoretical foundations established by the dual coding hypothesis mentioned earlier in this article. Consequently, young learners are able to internalize foreign vocabulary more easily when they interact with platforms that offer multiple sensory channels.

Finally, it is imperative to highlight perceptions related to immediate feedback and the systematic increase in academic participation. Although there were minimal neutral or negative responses in these sections, the general trend continues to be markedly favorable toward the digital system. Students perceive that the instant corrections provided by the software promote a

deeper understanding without generating paralyzing emotional frustrations. In conclusion, this statistical synthesis strongly validates the overall effectiveness of gamification in optimizing the teaching of English as a foreign language.

The results presented strongly corroborate that the interactive platform optimizes vocabulary acquisition in beginner foreign language learners. This quantitative improvement is fully consistent with recent research highlighting the effectiveness of digital environments in promoting active learning. Specifically, the increase in grades reflects documented findings on the positive impact of contemporary educational gamification (Alfares, 2025). Additionally, the data obtained supports the premise that structured technological tools transform traditional teaching into truly dynamic methodologies (Angamarca et al., 2025). Finally, the homogeneity of the final scores suggests that this digital resource successfully addresses the diverse cognitive needs of students (Garhani, 2025).

From a purely cognitive perspective, lexical assimilation was significantly enhanced by the simultaneous combination of visual and auditory stimuli. The favorable responses in the student questionnaire empirically validate the central tenets of dual coding theory. This neurological phenomenon facilitates the construction of complex mental representations that promote long-term knowledge retention (Calle et al., 2024). Several academics agree that multimodal presentation is essential for consolidating abstract concepts during the early stages of language acquisition (Cabanilla et al., 2024). Consequently, the systematic integration of interactive images in early beginners generates considerably more robust memory anchors than simple mechanical repetition.

The emotional component of learning also underwent extremely positive transformations thanks to the implementation of these innovative playful strategies. Students reported exceptional levels of intrinsic motivation that effectively counteracted the anxiety typical of the conventional classroom. This drastic reduction in the affective filter is an indispensable element in ensuring communicative success in young learners (Ahmed et al., 2022). Current research confirms that relaxed educational environments promote a greater psychological willingness to take linguistic risks without fear (Myrzakhanova and Tulegenov, 2025). In this way, gamification transcends simple entertainment to become a pedagogical mechanism that strengthens personal confidence (Kazazoglu, 2023).

The qualitative notes taken during the observation sessions showed a substantial increase in the active participation of the group being evaluated. The competitive but friendly nature of the digital games encouraged constant interaction between peers and the academic content. This deep involvement is crucial in transforming passive students into true protagonists of their own

learning process (Veintimilla and Vega, 2025). Additionally, gamified Wordwall platform allows for optimal levels of concentration to be maintained for prolonged periods that are usually exhausting for children (Castillo et al., 2025). Consequently, the methodology applied has proven to have an exceptional capacity to revitalize school environments in economically vulnerable sectors (Alfares, 2025).

Another key finding lies in the enormous pedagogical value of the immediate feedback provided by the computer system. Participants appreciated the possibility of correcting their mistakes instantly without experiencing public ridicule in front of their peers. This technological feature promotes higher levels of student autonomy by allowing each individual to progress at their own pace (Intriago, Reyes, Kaicer, Bazurto, & Chavarría, 2024). At the same time, automated correction significantly reduces the teacher's workload, facilitating much more personalized and truly efficient supervision (Calle et al., 2024). Therefore, the study developed by the authors of the present work confirms the adaptability of this digital tool within the demands of contemporary diversified education and its role in Foreign Language Teaching.

In conclusion, the empirical results derived from this research fully validate the incorporation of interactive resources for teaching foreign languages and improving vocabulary in young learners. The widespread progress in vocabulary demonstrates empirically that well-planned technology far surpasses traditional purely rote memorization methods. It is imperative that educational institutions gradually adopt innovative platforms as Wordwall to ensure teaching and provide it with current technologic resources and gamified that should become a permanent curricular component within the educational system (Kazazoglu, 2023). Future lines of research could explore how these digital interventions simultaneously impact the development of other fundamental communicative language skills as pointed out by Angamarca et al (2025).

Conclusions

The primary conclusion derived from the quantitative analysis demonstrates that the systematic implementation of the technological platform significantly improves vocabulary acquisition among beginning English learners. The statistical evidence obtained through initial and final assessments reveals a substantial increase in average scores, fully validating the effectiveness of gamified digital resources. This cognitive progress confirms that interactive activities facilitate the retention of lexical terms much more efficiently than traditional memorization methods within the educational environment. Consequently, the research successfully establishes that multimodal technological tools represent a vital asset for developing linguistic competence in young learners.

Regarding the assessment of student perceptions, the study concludes that gamified platforms foster an exceptionally high level of intrinsic motivation among foreign language learners. Data collected through a Likert scale questionnaire indicate that students experience a significant reduction in their affective filter while interacting with the proposed interactive games. This positive emotional response directly contributes to a much more receptive learning environment where participants feel confident exploring new linguistic structures. Therefore, integrating digital entertainment into the curriculum serves as a powerful catalyst for maintaining student interest and promoting long-term academic engagement.

Systematic observation of student behavior confirms that the use of digital tools promotes active participation and genuine engagement throughout the learning process. According to documented evidence, students demonstrate a high capacity to identify meanings and apply new vocabulary within the context of interactive digital challenges. This observable success suggests that gamification bridges the gap between theoretical knowledge and practical application for beginning learners. Furthermore, the collaborative and competitive nature of the platform encourages students to take a much more proactive role in their own language development.

Despite the positive findings, certain limitations should be acknowledged. The study was conducted with a relatively small sample from a single educational institution and over a limited intervention period. Consequently, the findings should be interpreted within this specific context. Future research could include larger populations, longer intervention periods, and comparative studies involving control groups to further validate the effectiveness of gamified digital platforms in EFL instruction.

Finally, the research findings underscore the importance of incorporating modern technological resources to revitalize English language teaching in primary education settings. The convergence of cognitive benefits, positive perceptions, and active engagement provides a solid basis for recommending the continued adoption of gamified methodologies. Educators should consider the diverse benefits of digital platforms to create inclusive and stimulating environments that meet the needs of 21st-century learners. In conclusion, This study offers valuable insights for school administrators and teachers seeking to optimize language acquisition through innovative digital strategies.

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