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Assessing the Effectiveness of Wordwall.net as a Vocabulary Learning Tool: Pre-Service EFL Teachers' Perspectives

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Abstract

Educational technologies in English language classrooms have become increasingly significant over the last decades, playing a crucial role in both student learning and teacher instruction. This qualitative study explores the perceptions of seven Chilean pre-service EFL teachers regarding the usage of Wordwall.net in their instruction as a medium for English vocabulary acquisition. Semi-structured interviews with the participants focused on Wordwall's usability, effectiveness, visual appeal, and benefits for teaching and learning vocabulary. The data collected from the interviews were meticulously organized, analyzed, and interpreted using thematic analysis. The findings of the study indicate that pre-service EFL teachers consider Wordwall to be highly beneficial for both teaching and learning English vocabulary as well as providing feedback beyond traditional methods. The study further implies that pre-service teachers have a sense of ease and familiarity with the Wordwall webpage, and they perceive it as a valuable tool to incorporate into their future practice, advocating its usage to fellow educators. By shedding light on the effectiveness and versatility of Wordwall.net, this research offers valuable insights to educators worldwide, presenting an innovative approach to enhance English vocabulary acquisition in the EFL classroom. The study concludes by discussing implications for pre-service teachers and EFL students regarding the importance of vocabulary learning, along with recommendations for future research.

Keywords: Wordwall webpage, pre-service teachers, English Vocabulary, EFL teaching, online learning

DOI: 10.7176/JEP/14-31-04

Publication date: November 30th 2023

1. Introduction

The integration of web-based tools in English language classrooms has witnessed a significant surge in usage, coinciding with the ever-growing intersection of technology and language learning, a phenomenon that notably gained prominence in the early 21st century (Abunowara, 2016; Altun, & Khurshid Ahmad, 2021). This confluence is encapsulated under the umbrella of CALL (Computer Assisted Language Learning), which involves the strategic utilization of computers to augment language proficiency (Beatty, 2013). Within the expansive realm of CALL, a distinct subfield has emerged, known as DGBLL (Digital Game-Based Language Learning). DGBLL is marked by the creation and application of various digital games designed to facilitate language learning and teaching objectives (Cornillie et al., 2012). A specific subset within DGBLL is educational games, often referred to as edutainment, a term pioneered by Prensky (2001).

Despite the considerable body of research dedicated to exploring the use of digital games in language learning, with a particular focus on their impact on EFL (English as a Foreign Language) students and educators, there exists a discernible gap in the literature. This gap pertains to the perceptions of pre-service teachers regarding the integration and efficacy of digital games, particularly those available on platforms like Wordwall.net, within the context of language learning. The examination of these perceptions can shed light on an aspect of the DGBLL landscape that has yet to receive comprehensive attention and is integral to our understanding of the evolving dynamics in language education. Thus, this research article seeks to address this research gap by exploring the insights and perspectives of pre-service EFL teachers concerning the efficacy of the Wordwall.net tool for vocabulary learning. In doing so, it contributes to the broader discourse on the role of technology in language education, with a specific focus on the attitudes and expectations of those who are soon

to embark on their teaching careers.

2. Literature Review

The development of oral communicative competence in second or foreign language learners has traditionally been the primary concern of ESL (English as a second language) and EFL (English as a foreign language) teachers worldwide as speaking skills are often considered the most challenging to develop since they involve productive language use.

In recent decades, scholars and educational researchers have emphasized the paramount importance of vocabulary acquisition for developing speaking skills, as it forms the foundation for effective communication (Harmer, 1991; Thornbury, 2005; Ur, 2012; Nation, 2022). Additionally, Easterbrook (2013) contends that vocabulary plays a crucial role in all four language skills—listening, speaking, reading, and writing—for second or foreign language learners to achieve linguistic competence.

Clenton and Booth (2020) explain that vocabulary knowledge entails not only knowing the definition of words but also knowing how each word fits into speech. In this respect, Graves (2007) claims that vocabulary learning is most effective when students are exposed to a word several times and in different contexts so that they can infer the meaning of the contextual information provided. In this line, incorporating technology as a regular part of teaching practice can greatly facilitate this process and enhance students' learning, particularly when acquiring a second or foreign language like English (Ávila & Mayorga, 2020). Together with this, virtual platforms such as Wordwall.net can increase students' interest in their own learning process, creating a pleasant and conducive environment for both the acquisition and teaching of vocabulary effectively and positively (Carmona-Chica & Argudo-Garzón, 2022). It is noteworthy that in the context of foreign language learning, lessons that regularly incorporate diverse dynamics, such as virtual platforms, have a lasting positive effect on student motivation. In this respect, utilizing interactive techniques like gamification in instructional approaches significantly contributes to nurturing students' language abilities and building their self-assurance (Zambrano et al., 2018).

Kapp (2012) states that gamification can be understood as using game-design features in non-game contexts. In other words, it is a set of activities and processes for problem-solving using a game's characteristics and elements. Thus, gamification in learning settings involves using game-based methods and strategies such as peer competition and/or teamwork, point scoring, and knowledge testing. One of the benefits of incorporating games as part of our teaching repertoire is that they enhance students' motivation; therefore, they help with the lack of motivation and concentration they may have when it comes to learning a foreign or second language. In this respect, Teixes (2015) contends that gamification as a teaching tool goes beyond enhancing student motivation for it also plays a significant role in addressing issues like inadequate learning environments and emotional barriers that may impede the successful completion of specific learning tasks. Gamified interactive resources allow the diversification of teaching strategies and methodologies that enrich the development of learners' oral communicative competence (García, 2014). Additionally, through the use of these digital resources, both teachers and students have the opportunity to turn a virtual lesson into a space of interaction. This point remains relevant even in the current non-pandemic context, as digital media continues to play a vital role in education. Teachers around the world have embraced digital tools to enhance communication, lesson delivery, and learning assessment, making technology an integral part of modern teaching practices.

Zichermann & Cunningham (2011) and later Seaborn & Fels (2015) argue that gamification is an encouraging teaching strategy for problem-solving for it increases students' motivation and engagement. Gamification does not necessarily mean joining a particular game, but instead, using its most effective elements and features to generate the same benefits. As with any other teaching strategy, these benefits are only achieved by recognizing that the teaching practices used to support and enrich the learning process should be constantly adjusted and modified to align with the students' specific learning needs and contexts. In this sense, educators should expand the limits of traditional teaching strategies and didactical materials and encourage students to engage in the context of EFL learning, guiding them through scaffolding knowledge and autonomy building (Freire, 2014).

In the last decades, vocabulary learning using web tools and games as teaching strategies has been of significant interest to educational researchers. In this line, numerous studies focusing on popular educational web tools and games as teaching strategies in order to improve language learners' speaking skills have been conducted. These have aimed to explore the effectiveness of educational web tools in vocabulary learning in EFL contexts (e.g., Nikoopour & Kazemi, 2014; Chien, 2015; Bal, 2018), as well as the benefits they bring to students' learning process. Andreani and Ying (2019) show that using online games to teach vocabulary helps create an anxiety-free learning environment, which, in turn, leads to the development of learners' autonomy. In the same line, Hasram et al. (2021) emphasize that EFL learners experience greater satisfaction in learning vocabulary through online games as these use features and functions that are attractive and fun for them, thus promoting meaningful learning. The authors assert that previous studies have shown that "the regular design of

online games provides points, ranks, and a leaderboard to visualize the players' achievement after completing tasks. These elements provide a sense of achievement and satisfaction, especially when the players overcome challenges created in the games" (p. 5599).

As an educational technology tool, Wordwall is intentionally designed to foster interactive learning in a wide range of contexts. It empowers educators and learners alike to craft personalized interactive resources, thereby enriching individual and collaborative learning experiences. Moreover, these interactive resources can be used for various pedagogical purposes, including formative assessment and gamified learning. The Wordwall tool features extensive templates, such as quizzes, matching exercises, word searches, and crossword puzzles, which can be modified to suit users' needs. Noteworthy characteristics also include its accessibility, adaptability, and potential for collaboration between student and teacher teams. The webpage is also compatible with various devices, including tablets, smartphones, and PCs, making it suitable and adaptable through various customizable templates.

Apart from its interactive features, Wordwall incorporates real-time collaboration and feedback functionality, making significant contributions to active learning and heightened student engagement (Hattie & Timperley, 2007). Empirical research has further demonstrated positive outcomes associated with implementing the Wordwall tool in educational settings. For instance, a study conducted by Hasram et al. (2021) revealed that young learners exhibited higher motivation levels, resulting in increased learning involvement. However, despite the growing body of research on the effectiveness of Wordwall, there is a notable gap in understanding the perceptions of pre-service EFL teachers regarding this tool. To bridge this gap, this study aims to explore the insights and attitudes of pre-service EFL teachers towards Wordwall, shedding light on its potential as a valuable resource for future language educators.

3. Research Method

3.1 Research Purpose and Design

The current research examined pre-service EFL teachers' perceptions about using Wordwall.net to teach and learn vocabulary in the English classroom and the eventual effectiveness it could bring to their student's learning process. The study adopted a qualitative approach consistent with participants' perceptions of the practicality of this website and the role it played in their practice when teaching English as a foreign language. Thus, the research questions that guided this project were:

1. What are pre-service EFL teachers' positive perceptions about using the Wordwall tool for teaching and learning vocabulary in their high school classes?
2. What are the perceptions of the possible improvements, if any, that pre-service EFL teachers have about using Wordwall for teaching and learning vocabulary in their high school classes?
3. Do pre-service English teachers perceive Wordwall as an effective tool for their students to learn vocabulary in their English classes?

Thus, the first question aimed at identifying the benefits and advantages pre-service EFL teachers perceived from using Wordwall in their vocabulary instruction. The second question explored the challenges and limitations that pre-service EFL teachers faced when using Wordwall in their vocabulary instruction and how they could overcome them or suggest improvements. Finally, the third question evaluated the impact and outcomes that pre-service EFL teachers perceived from using the Wordwall tool on their students' vocabulary learning process.

3.2 Participants and Procedure

The participants were a group of seven high-school pre-service EFL teachers in their third year of a teacher training program at a private university in Santiago, Chile (table 1 below shows the participants' profile). They were invited to participate voluntarily in this study as they were easily accessible to the researchers and were all doing their practicum at the same school. Table 1 shows the demographic information of the participants, encompassing their identification labels, genders, school types, teaching grades, and respective city locations.

The data collection process started in July 2021 with a semi-structured interview that was carried out on a one-on-one basis. Before its application, the instrument was validated by two external professors who specialize in English language teaching, who provided useful comments and recommendations about the instrument itself and the research questions of this study, complying with the ethical standards and methods stated by the university where the project was conducted. This type of interview was chosen given its enriching, flexible nature, as it encourages two-way communication. Thus, it allowed the researchers to better understand the reasons behind participants' responses. It also gave the participants time to open up about any issues that might be significant and/or not included in the question sets. During these interviews, the researchers explored the participants' views and opinions about the importance of teaching vocabulary to EFL learners using both traditional and alternative methodologies. The interviews also included questions about the participants' stance regarding the possible benefits of using technology as a means of instruction. Thus, this semi-structured

interview included 8 questions categorized into 6 dimensions: 1) general questions, 2) teaching dimension, 3) accessibility, 4) motivation, 5) interaction, and 6) learning.

3.3 Data Analysis Process

Using thematic analysis, participants' responses were recorded in audio format and later transcribed thoroughly using a free transcription software. The acquired data were then subjected to a systematic analysis with the primary objective of identifying and delineating initial codes. Following the transcription and coding phase, the researchers began to look for broader patterns and themes, thus grouping related codes together to create potential, meaningful themes. This collective task allowed the researchers to deeply engage with the data, facilitating a comprehensive understanding of the insights conveyed by the participants.

4. Results and discussion

The results obtained from data analysis—as well as the subsequent discussion—are systematically presented in alignment with the sequence of the research questions. This structured approach allows for a clear and organized exploration of the study's findings, ensuring that each research question is addressed methodically and comprehensively. By adhering to this orderly presentation, we aim to provide a coherent and insightful analysis that directly corresponds to the specific inquiries posed in this research, facilitating a deeper understanding of the study's outcomes and their implications.

4.1 Research question 1: What are EFL pre-service teachers' positive perceptions about using the Wordwall tool for teaching and learning vocabulary in their high school classes?

According to the statements submitted by the participants, Wordwall has been the subject of primarily positive perceptions regarding its applicability in English language teaching, particularly vocabulary acquisition. According to research by González and Ovando (2023), students' active participation in the English classroom environment acquires significant relevance for a number of reasons. First, active participation encourages oral communication, a fundamental aspect of learning English as a second language, since students must be constantly involved in the activities proposed by teachers to develop their verbal expression skills. In addition, the participation of students in the field of the English classroom improves their reading and writing skills, elements that directly affect their academic success (Dussling, 2022). Concerning the teaching of lexical sets, it is argued that the Wordwall webpage contributes to more significant student vocabulary learning and participation than theoretical or exclusively content-focused lessons since its playful and game-based nature motivates students to get more actively involved. In this regard, one of the pre-service teachers (PSTs) interviewed stated:

"Students don't want grammar-based instruction (...), Wordwall is easier and more fun, not tedious. This increases participation" (Pre-service teacher 1).

This statement highlights the contrast between traditional grammar-based instruction and the interactive, game-based nature of Wordwall. According to the PST's perspective, students tend to show reluctance towards grammar-based lessons, perceiving them as boring and less enjoyable. In contrast, the playful and interactive nature of Wordwall makes the learning experience more enjoyable, encouraging students to actively participate in the vocabulary learning process. The use of interactive activities and games on Wordwall seems to alleviate the perception of learning as a dull task, leading to a more significant level of student engagement. By acknowledging the positive impact of Wordwall on motivation and participation, the statement underscores the potential benefits of integrating interactive technologies in second or foreign language teaching, paving the way for more effective and enjoyable vocabulary instruction.

In accordance with the teaching process, as well as the perceptions of PSTs regarding Wordwall, it is argued that this tool provides functionality for learners to develop and apply various vocabulary learning skills, specifically relevant when practicing speaking in interaction dynamics. It is important to emphasize that the capacity for verbal expression is a vital attribute in the EFL learning journey, particularly due to the increasing demand for effective communication in contemporary society. Consequently, oral communication represents a fundamental aspect of human interaction, and honing this skill through practice significantly impacts the acquisition of English as a second or foreign language (Sanz, 2017). Based on this perspective, PST 2 highlighted the importance of the practice of oral expression to acquire new vocabulary, reflecting on the following:

"Wordwall helps students apply their knowledge and ability to practice their speaking skills to learn new words and also to participate more actively in classes. These activities foster active student engagement" (Pre-service teacher 2).

In this extract, PST 2 underscores the essential role of oral communication in the process of acquiring English as a second or foreign language. The participant acknowledges that Wordwall plays a crucial part in facilitating this development by providing students with opportunities to practice their speaking skills in an engaging and interactive manner. Thus, by engaging in Wordwall activities, students are encouraged to apply

their existing knowledge while learning new vocabulary, effectively improving their oral expression abilities. The emphasis on oral practice aligns with the understanding that active speaking practice is instrumental in language acquisition, particularly in building vocabulary proficiency. Additionally, PST 2 recognizes that Wordwall's interactive activities promote active student engagement in the language learning process, leading to heightened participation in classroom activities. This statement shows that Wordwall is perceived as a valuable tool to foster communicative competence in language learners, making language learning a dynamic and participatory experience. By providing students with the means to actively engage with language through oral expression, Wordwall contributes significantly to the development of their language skills and enhances the overall language learning experience. In addition, one of the participants mentioned that the perceived dynamism in the teaching process also inspires motivation for their work, as this webpage offers numerous possibilities for grammar and vocabulary development, promoting interaction among students through play.

Likewise, concerning the teaching process, Wordwall stands out as an effective tool, considering the current technology and its use by language learners, which constitutes an additional opportunity to encourage their participation. It is of common agreement within the field of educational technology that incorporating technological tools in the classroom promotes a more significant commitment on the part of students towards their learning process and autonomy by generating greater interest and promoting dynamism and activity in the educational environment. In this respect, PST 6 highlighted:

"It is an outstanding tool to motivate students because technology is closer to them, (...) these things entertain them, and they feel involved." (Pre-service teacher 6).

PST 6 highlights the effectiveness of Wordwall as an impactful tool for language teaching, especially in the context of current technology use by language learners. The participant emphasizes the significance of incorporating technology in the classroom, which fosters greater student commitment to the learning process and cultivates learner autonomy. By leveraging technology, Wordwall provides an additional opportunity to encourage student participation, as it aligns with the digital preferences and familiarity of 21st century students. PST 6 suggests that the use of technology, such as Wordwall, serves as a motivational force for students, as it offers an entertaining and engaging approach to language learning. The interactive nature of Wordwall's activities sparks students' interest, promoting a dynamic and active educational environment that enhances student involvement. This statement resonates with the consensus in the educational technology field, emphasizing the positive impact of technology in promoting learner engagement, interest, and autonomy.

When it comes to motivation, it is important for students to experience a genuine interest in their learning process. This enthusiasm will boost and awaken positive emotions, generating a more significant commitment to the educational process (Marchesi, 2020). In line with this premise, it is argued that tools such as Wordwall arouse greater interest in learning all areas of the English language due to the playful dynamics that characterize it:

"This tool enhances dynamism (...) This results in faster learning (...) This fosters curiosity and engagement towards new vocabulary or grammar" (Pre-service teacher 4).

Subsequently, it is worth highlighting the collaborative work that is carried out during the implementation of English activities in the classroom environment, which facilitates feedback among the classmates themselves. In addition, teamwork is a strategy that significantly improves the teaching and learning process (De la Cruz May, 2010) while promoting the development of various values, attitudes and skills necessary to perform different tasks. In relation to this aspect, one of the participants mentioned:

"Students helped each other a lot with Wordwall (...) there was teamwork. They corrected and supported each other (...) testing their vocabulary was more fun in teams" (Pre-service teacher 4).

The participant's statement emphasizes how Wordwall activities foster a collaborative environment in the classroom, promoting valuable feedback and teamwork among students. The implementation of English activities with Wordwall encourages classmates to work together, facilitating peer-to-peer feedback. The emphasis on teamwork aligns with previous research that highlights its significant impact on the teaching and learning process, as well as the development of essential values, attitudes, and skills required for various tasks. In this regard, the participant observes that Wordwall promotes a cooperative learning environment, where students actively support and correct each other. Engaging in vocabulary testing as a team adds an element of enjoyment to the learning process, encouraging students to participate and collaborate with their peers. The emphasis on collaborative learning with Wordwall highlights its potential as a tool that not only enhances language acquisition but also cultivates important social and cognitive skills through teamwork and mutual support among students. This insight underscores the significance of interactive and collaborative tools like Wordwall in creating a positive and enriching classroom environment that goes beyond individual language learning and fosters a sense of community and camaraderie among students.

In addition to the above, it is also mentioned that Wordwall encourages student participation through the introduction of competitive elements. In a positive way, competitiveness can provide opportunities for students to learn more vocabulary from their mistakes, increase their motivation, and promote active participation in the

learning process. In this sense, one of the pre-service teachers interviewed reflected on the positive influence of competitiveness:

"Wordwall facilitates engagement and learning by fostering positive competition. This approach promotes a healthy atmosphere of competition, leading to effective vocabulary and grammar acquisition" (Pre-service teacher 2).

The incorporation of healthy competition in language learning serves as a motivating force for students, encouraging them to learn from their mistakes and strive for improvement. Wordwall's approach to fostering positive competition creates an atmosphere where students are motivated to actively engage in the learning process. The element of competition not only enhances vocabulary and grammar acquisition but also fosters a sense of enthusiasm and eagerness to excel in their language learning journey. By promoting positive competition, Wordwall effectively contributes to creating a dynamic and engaging classroom environment where students are motivated to challenge themselves and each other. This emphasizes the potential of gamified learning platforms, such as Wordwall, in stimulating student interest, increase motivation, and ultimately enhance language learning outcomes through a fun and competitive approach.

4.2 Research question 2: What are the perceptions of the possible improvements that pre-service EFL teachers have about using Wordwall for teaching and learning vocabulary in their high school classes?

The pre-service teachers interviewed highlighted some positive aspects of using Wordwall, but they also identified certain aspects that could be improved. One of the aspects mentioned relates to its accessibility as it is a paid webpage. Paid educational platforms can offer numerous benefits for teachers, as they can enhance various aspects of the teaching and learning process and contribute to the professional development of educators (Barragán Lucas, 2023). As per the details provided on the official Wordwall website, new users can register for free with a basic account, which allows them to create up to 5 activities. However, to unlock the full range of features offered by the website, users need to subscribe and pay a fee. One of the participants stated that this situation could be a disadvantage for some teachers:

"A drawback I've found is the requirement for a premium subscription to access extra features and unlimited activity design. The limited number of activities you can create is a major disadvantage" (Pre-service teacher 3).

In line with the topic of accessibility to the webpage and the aspects prone to improvement, the problems related to the operation of the tool exclusively through an internet connection were highlighted regularly. This implies that if a teacher encounters connectivity issues, it could potentially undermine the performance of Wordwall, thereby negatively impacting the learners' progress:

"A major issue is intermittent internet connection causing complete pixelation or invisibility of activities. If I'm the one experiencing the problem, I can't expect much from students, and I can't control technical issues either. Students shouldn't be blamed for these technical failures" (Pre-service teacher 6).

Another area for improvement revolves around learner motivation. Sustaining motivation throughout the learning process is crucial, as it plays a pivotal role in fostering positive academic performance. Motivation facilitates a greater level of dedication from students towards their learning process and contributes to improved information retention (Rosas et al., 2010). In addition, students motivated to learn new words show more active participation in classes, demonstrating a willingness to ask questions and help their classmates (Rodríguez et al., 2019). Motivation is also essential for students to strengthen their self-esteem since its presence allows for greater success in their learning process. As a result, an increase in their self-esteem and self-confidence is generated (Rosas et al., 2010). In respect to motivation, one of the teachers interviewed pointed out that the assignment of scores in some activities created on Wordwall could have a negative impact on students:

"Implementing a scoring system was complex and led to students questioning themselves due to low scores. This could result in isolation or stigmatization" (Pre-service teacher 5).

The participant's statement draws attention to the critical role of motivation in language learning and its significant impact on students' self-esteem and self-confidence. In this respect, the implementation of a scoring system in some Wordwall activities, while intended to enhance engagement, could have unintended consequences. The participant points out that low scores might negatively affect students' motivation, causing self-doubt and potentially leading to feelings of isolation or stigmatization. This observation underscores the importance of careful consideration when implementing scoring systems in gamified learning platforms like Wordwall, since balancing the benefits of competition and assessment with the potential impact on student motivation is crucial. In this sense, educators should strive to create a supportive and encouraging learning environment to foster students' self-esteem and maintain their enthusiasm for language learning.

As for students' learning process and engagement with the activities proposed, one of the participants mentioned that when using the webpage in joint activities as a class, some students do not participate due to various reasons:

"One projects something, a question comes up and its alternatives. Supposedly, students should answer the questions together, but sometimes this does not happen. (...) Some students are shy and don't want to be exposed when answering a question incorrectly, so they prefer not to participate (...) They don't talk unless you ask them directly" (Pre-service teacher 4).

PST 4 brings attention to the differing levels of student participation and engagement, which is a crucial aspect of using Wordwall in collaborative classroom activities. The participant points out that while the intention is for students to collectively answer questions, this does not always occur as some students refrain from participating mainly due to shyness or fear of making mistakes in front of their peers. This observation highlights the significance of creating a supportive and inclusive learning environment that encourages all students to feel comfortable and confident in sharing their ideas. Educators should be mindful of individual student needs and preferences to ensure that every student has an opportunity to participate actively. Implementing strategies that encourage and empower students to contribute, such as providing multiple ways to answer questions or offering opportunities for private responses, can help foster greater engagement.

It is essential to highlight that students' active participation during classes plays a key role in improving the learning process and in their understanding of the contents (Flores-Fernández & Durán, 2022). In addition, participation also stimulates students' creativity and encourages the development of their critical thinking (Correa et al., 2017). Likewise, active participation promotes students' responsibility towards their learning process and allows teachers to provide feedback on students' progress in understanding the contents taught (Flores-Fernández & Durán, 2022). On this topic, PST 4 mentioned:

"Another complication teachers have is that as we project the activities, we must ask the students for the answers to mark them on the screen. Thus, the student who always speaks first participates only" (Pre-service teacher 4).

The fragment above raises important considerations about students' active participation in the classroom and its impact on the learning process. Student involvement promotes a sense of responsibility towards their own learning, allowing teachers to offer timely feedback on their progress; however, PST 4 points out a potential challenge faced by teachers when using Wordwall in class. As the activities are projected, teachers are required to ask students for answers, and this may result in a situation where only the same student, who tends to respond promptly, actively participates. This observation highlights the need for educators to be mindful of equal participation opportunities for all students. Implementing strategies that encourage all students to contribute and share their answers can enhance inclusivity and active engagement in the learning process. Through addressing these challenges, educators can skillfully utilize the advantages of Wordwall to cultivate interactive learning experiences that actively engage every student, fostering a dynamic and enriching classroom environment.

4.3 Research question 3: Do pre-service English teachers perceive Wordwall as an effective tool for their students to learn vocabulary in their English classes?

The efficacy of educational technology tools for English lexicon acquisition is a subject of interest in second and foreign language education. During our research, one of the participants provided valuable insights into the advantages of incorporating Wordwall in the language learning process. Their statement emphasized how this interactive website not only boosts classroom dynamics but also accelerates vocabulary and grammar learning, capturing students' interest in understanding the language and its functioning:

"This type of tool, in addition to making the class more dynamic, simplifies things and makes students learn vocabulary and grammar much faster and more engaging (...) they are a little more interested in what English is and how it works" (Pre-service teacher 4).

PST 4 acknowledges that Wordwall's interactive nature breathes life into the classroom, making the learning environment more active and engaging. Additionally, Wordwall's incorporation simplifies language learning, enabling students to grasp vocabulary and grammar concepts and patterns more rapidly. By capturing students' interest and curiosity, Wordwall sparks their desire to explore English language intricacies, fostering a deeper engagement with the subject. This insight suggests that educational technology tools like Wordwall have the potential to create a more interactive and enthusiastic learning experience, encouraging students to actively participate in their language learning process and develop a genuine interest in learning the language.

Regarding the flexibility that the Wordwall website provides with its diverse materials and components for the English instruction process, participant 1 stated:

"It has several categories, not only the Quiz. It also has this contest-like activity that is super entertaining and motivating. I have never seen anything like it (...). It is entertaining for them and for us to use it to teach them the vocabulary contents of the class" (Pre-service teacher 1).

This positive evaluation emphasizes Wordwall's potential as an attractive and versatile tool for delivering vocabulary content effectively and creatively, catering to diverse teaching styles and student preferences. In relation to the various possibilities that the webpage offers and how they can be used for the benefit of teaching and learning vocabulary, PST 5 pointed out:

"If I am not mistaken, presentations can be made apart from just the activities (...) It can be used to work on the development of class templates and design special material to teach several lexical sets with their corresponding contexts" (Pre-service Teacher 5).

Another aspect mentioned by participants is related to the significance of Wordwall for feedback opportunities. Feedback is valuable to improve the performance of students in their learning process, in addition to promoting a process of metacognition in which students can reflect and analyze what they have learned, identifying areas that could be strengthened (Campuzano et al., 2021). In this context, PST 3 expressed:

"During the feedback process, when asking students about the experience in class, it is common to observe that their answers focus mostly on the practical vocabulary activities carried out through the Wordwall webpage (...) They usually mention the moments in which they participated in interactive games provided by that tool" (Pre-service teacher 3).

The feedback provided by Wordwall's interactive games and activities seems to resonate strongly with students, as they recall and highlight those moments in their learning experience. This observation highlights the efficacy of Wordwall in delivering feedback, engaging students in a reflective and analytical process that helps them identify areas for improvement in their language learning journey. Wordwall's role in fostering a positive feedback loop contributes to a deeper understanding and retention of vocabulary, making it a valuable tool for language educators seeking to provide meaningful and constructive feedback to their students. Together with this, the importance and usefulness of collaborative feedback was also highlighted. Peer feedback promotes a better understanding of the concepts addressed in class, which can positively impact their academic performance (Ramos et al., 2017). In line with this, PST 3 pointed out that by using Wordwall in-game dynamics, students take the opportunity to interact, give each other support, or discuss the correct answers (peer feedback):

"Students interact, talk to each other, support each other, and calm each other, so that is perfect" (Pre-service teacher 3).

Finally, it is relevant to highlight the importance of student participation during classes for learning new English words. Active participation promotes a better analysis and understanding of the contents addressed, in addition to facilitating the retention of new knowledge in the memory of students (Freire, 2014). According to the participants' perceptions, using Wordwall has shown to increase student participation in the implemented activities, which highly benefits the teaching and learning process of English as a foreign language:

"Students showed greater motivation to participate in these activities, encouraging more positive learning. They did not experience a sense of stagnation (...). They could constantly apply and put into practice what they learned through the proposed ludic activities" (Pre-service teacher 7).

Indeed, incorporating gamified activities fosters high student motivation, encouraging active participation. Competition is essential for many students, diverging from conventional learning approaches and setting the stage for their increased engagement in exploring novel realms of knowledge. In addition, in this same line, PST 6 reflected:

"Generally, the students did not show much interest in traditionally learning vocabulary. However, when we began integrating this online webpage in a game-based format, it became evident that they truly enjoyed it and started to participate more actively" (Pre-service teacher 6).

The quotation echoes the positive impact of gamified activities on student motivation and participation. PST 6 highlights a significant shift in student engagement when transitioning from traditional vocabulary learning methods to the game-based format offered by Wordwall. The observation emphasizes the power of gamification in capturing students' interest and fostering a deeper level of involvement in the learning process. By transforming vocabulary instruction into an enjoyable and interactive experience, Wordwall sparks a newfound enthusiasm among students, leading to heightened interest and active participation.

5. Conclusions

The primary aim of this study was to examine the perceptions of pre-service English teachers regarding the efficacy of incorporating Wordwall into their teaching practice to enhance learners' vocabulary acquisition. Within this context, it was observed that the participants regarded this webpage as a highly beneficial resource for diverging from conventional methodological approaches to teaching and learning vocabulary and embracing a more dynamic teaching and learning style centered around gamification. A prevalent viewpoint among the participants revealed that integrating this webpage infused a ludic element into each activity, reinforcing motivation and active engagement in every instructional proposal. Pre-service teachers discerned that including a technological component introduced an additional layer of challenge, competition, and companionship, fostering elevated levels of negotiation, interaction, and collaborative work among students.

This study shows the valuable contribution of ICT integration particularly in the context of language education in the 21st century for educators worldwide must broaden their repertoire of techniques and strategies to adapt their teaching methodologies. This study raises concerns regarding teachers' preparedness to effectively integrate online platforms into their teaching practices. Undoubtedly, this integration also poses new challenges

in lesson planning, considering the objectives, content delivery, and student assessment within the context of the current digital world. Using online platforms equips teachers with a wide array of multimodal elements inherent to digital resources, such as interactive videos, simulations, and virtual reality experiences. These resources not only enhance student engagement but also cater to different learning styles and preferences. Additionally, online platforms provide opportunities for collaborative learning, allowing students to interact with their peers and engage in meaningful discussions beyond the confines of the physical classroom. However, the successful integration of digital resources requires teachers to develop new skills and knowledge in order to effectively navigate these platforms and select appropriate resources for their lessons. This includes understanding how to evaluate the quality and credibility of online content as well as ensuring that digital resources align with curriculum standards and learning objectives. Furthermore, teachers must also consider issues of accessibility and equity when incorporating digital resources into their teaching practices, ensuring that all students have equal access to these tools and opportunities.

Overall, while the integration of online platforms presents exciting possibilities for enhancing teaching and learning experiences, it also demands a shift in pedagogical approaches and ongoing professional development for educators to fully harness the potential of these captivating digital resources in the classroom. In this respect, possible future research directions could explore the sustained impact of Wordwall integration on long-term vocabulary retention and assess the scalability of this approach across diverse language learning environments. Additionally, investigations into teacher training programmes focusing on ICT integration and the development of strategies to overcome challenges related to online platform incorporation could provide valuable insights for educators navigating the evolving landscape of digital language education in the 21st century.

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Table 1: Participants' demographics.

Participant	Gender	Program/ year	Type of school	Grade	City
Pre-service teacher 1	Male	Teacher training program/ third year	Public school	9 th	Santiago
Pre-service teacher 2	Male	Teacher training program/ third year	Public school	11 th	Santiago
Pre-service teacher 3	Female	Teacher training program/ third year	Subsidized school	9 th	Santiago
Pre-service teacher 4	Female	Teacher training program/ third year	Public school	10 th	Santiago
Pre-service teacher 5	Male	Teacher training program/ third year	Public school	9 th	Santiago
Pre-service teacher 6	Female	Teacher training program/ third year	Subsidized school	10 th	Santiago
Pre-service teacher 7	Male	Teacher training program/ third year	Public school	11 th	Santiago