UNIVERSIDAD TÉCNICA DE AMBATO

FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACION

CARRERA DE PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

Informe final del trabajo de Titulación previo a la obtención del título de Licenciado/a en Pedagogía del Idioma Inglés.

Theme: Interactive games (wordwall) and vocabulary learning

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I declare this undergraduate dissertation entitled "Interactive games (Wordwall) and vocabulary learning" is the result of the author's investigation and has reached the conclusions and recommendations described in the present study.

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DEDICATION

To God, for allowing me to complete this journey and giving me the strength to continue.To my dear parents,for always supporting me financially and emotionally during this journey. To my sisters, for the words of encouragement they give me and the advice they provide.To my friend Melanie because she was the one who helped me the most throughout my career.

Dann.

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Dann.

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CARRERA DE PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

THEME: "Interactive games (wordwall) and vocabulary learning"

AUTHOR: Hurtado Yanez Christian Daniel

TUTOR: Mg. Iza Pazmiño Sarah Jaqueline

ABSTRACT

The present study aimed to investigate students' perspectives on the effectiveness of interactive Wordwall games in vocabulary learning. A total of 87 students from 10th to 3rd BGU (38 male 49 females) participated in a descriptive, non-experimental research design. The data was gathered using an 18-item survey on a Likert scale and two open-ended questions were included. The reliability of the survey was confirmed by Cronbach's Alpha coefficient (0.854). The study was based on three research questions aligned with the objectives. The results revealed that interactive Wordwall activities such as memory games, quizzes, and matching activities were the most popular among students due to their dynamic and engaging nature. However, Quickfire Games or limited-time activities were not favored as they generated pressure among students. In addition to these activities, students also reported using other applications such as Duolingo and Quizlet for vocabulary learning, while Kahoot, Liveworksheets, and Quizizz were used less frequently. Furthermore, many different strategies were employed by students to expand their vocabulary. The most used among these were memory strategies like repetition, visualization, and listening. Interestingly, receptive skills such as reading or listening were found to be less effective than more enjoyable methods like reading funny stories or watching movies with subtitles. Finally, it was noted that visual strategies were not widely favored by students as they did not find them attractive or useful for their learning purposes. Overall, this study provides valuable insights into the preferences and practices of students when it comes to learning new vocabulary through interactive Wordwall games and other techniques.

Keywords: Interactive games, strategies, vocabulary learning, types of interactive games

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CARRERA DE PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

RESUMEN

El presente estudio tuvo como objetivo investigar las perspectivas de los estudiantes sobre la efectividad de los juegos interactivos de Wordwall en el aprendizaje de vocabulario. Un total de 87 estudiantes de 10th a 3rd BGU (38 hombres y 49 mujeres) participaron en un diseño de investigación descriptivo no experimental. Los datos se recopilaron mediante una encuesta de 18 ítems en una escala Likert, que incluía dos preguntas abiertas. La confiabilidad de la encuesta se confirmó mediante el coeficiente alfa de Cronbach (0.854). El estudio se basó en tres preguntas de investigación alineadas con los objetivos. Los resultados revelaron que las actividades interactivas de Wordwall, como juegos de memoria, cuestionarios y actividades de emparejamiento, fueron las más populares entre los estudiantes debido a su naturaleza dinámica y atractiva. Sin embargo, los Quickfire Games o actividades de tiempo limitado no fueron bien recibidos, ya que generaban presión entre los estudiantes. Además de estas actividades, los estudiantes también informaron el uso de otras aplicaciones como Duolingo y Quizlet para el aprendizaje de vocabulario, mientras que Kahoot, Liveworksheet y Quizizz se usaron con menos frecuencia. Además, muchos estudiantes emplearon diversas estrategias para ampliar su vocabulario. Las más utilizadas fueron las estrategias de memoria como la repetición, la visualización y la escucha. Curiosamente, se encontró que las habilidades receptivas, como la lectura o la escucha, eran menos efectivas que métodos más agradables, como leer historias divertidas o ver películas con subtítulos. Finalmente, se observó que las estrategias visuales no eran ampliamente preferidas por los estudiantes, ya que no las encontraban atractivas ni útiles para sus propósitos de aprendizaje. En general, este estudio proporciona información valiosa sobre las preferencias y prácticas de los estudiantes en cuanto al aprendizaje de nuevo vocabulario a través de juegos interactivos de Wordwall y otras técnicas.

Palabras clave: Juegos interactivos, estrategias, aprendizaje de vocabulario, tipos de juegos interactivos

1.1 Research Background

In order to ensure the credibility and reliability of this research, a multitude of study sources were utilized. These sources included various academic platforms such as Google School and Researchgate, among others. The information gathered from these sources was centered around the application of the Wordwall app in enhancing students' understanding of vocabulary. Through careful analysis and examination of these sources, valuable insights were gleaned that shed light on the efficacy of using technology to support learning in educational settings.

Hasram et al. (2021) ascertained that interactive educational games were employed as a supplementary tool to augment students' vocabulary learning. Furthermore, the magnitude of advancement in their performance was evaluated. The quantitative data was scrutinized utilizing descriptive statistics and a dependent t-test. A cross-sectional survey based on the ACRS-V model was dispensed to fifth-grade pupils at a national primary school in Negeri Sembilan, adhering to the English language curriculum for primary schools (KSSR).

The results showed a moderate level of satisfaction, engagement, relevance, trust, and willingness among the students. Furthermore, a paired samples t-test revealed a significant enhancement in students' vocabulary scores when WordWall (WOW) was used as a supplementary tool for vocabulary learning. In conclusion, the study demonstrated remarkable benefits of using interactive games, such as WordWall, to improve students' vocabulary.

This research delves into the impact of specific online games in effectively imparting vocabulary knowledge, Employing an experimental analysis approach, the study utilized a pre/post-test instrument to gauge the vocabulary level of 160 tenth-grade students assigned across four sections - two male and two female. The test comprised 20 items, furthermore the results revealed a significant disparity between the control and experimental groups. Moreover, there were no noteworthy variations in student performance based on their gender (Muhanna, 2023).

Jannah and Syafryadin (2022) concluded that previous studies have mainly focused on utilizing ICT tools to teach vocabulary in language education. However, this particular

study aims to delve deeper into the specific perspectives of students regarding the utilization of Wordwall.net. The motivation behind this research is rooted in the lack of investigations conducted in Indonesia that explore students' views on using this app to enhance their English vocabulary skills. To achieve its objective, this study employed a survey method with a sample size of 29 eighth-grade students from a secondary school located in Bengkulu Tengah. Data collection was accomplished via a structured questionnaire consisting of closed-ended questions, and subsequent analysis was quantitatively carried out by employing the Likert scale.

The findings revealed that an extensive number of students had positive perceptions towards Wordwall.net and its usefulness for enhancing their vocabulary acquisition efforts. They expressed high levels of satisfaction with this, recognizing it as an efficient tool for promoting teamwork and encouraging healthy competition among peers. Students perceived this app as an appealing, engaging, motivating, and enjoyable for improving their vocabulary skills.

Pradini and Adnyayanti (2022), pandemic period has resulted in a lack of motivation among students during online learning. Consequently, educators require more innovative and compelling teaching methods to capture their students' attention and boost their motivation levels in the vocabulary learning process. Thus,The main objective of the investigation was to observe the development or progress of vocabulary in young learner students following exposure to Wordwall in young learners' English vocabulary at SDN 1 Mambang . The material provided was composed of three key vocabulary components: nouns, verbs, and adjectives. Employing a single participant for treatment through a one-shot case study design was used in this research. It is important to note that this research adopts a quantitative approach with data obtained from both pre-tests and post-tests being presented quantitatively.

The results reveal that prior to intervention via Wordwall usage student scores were categorized as satisfactory on pre-test assessments; however post-intervention scores increased significantly reaching good category standards with an average score increase.These outcomes demonstrate conclusively that using Wordwall can enhance student's motivation towards learning English while also improving their mastery over its associated lexicon.

Arsini, et al. (2022) conducted that research on the efficacy of Wordwall as a learning tool for students at Apollonia Hotel School in Indonesia, with the objective of assessing its impact on their English vocabulary during online instruction. The study employed qualitative methods and gathered data from 10 participants who had been selected based on their activity ratings and consistent participation in the learning process. Data was collected via a brief questionnaire distributed through Google Form and analyzed using a qualitative descriptive model.

The findings indicate that students showed great enthusiasm for utilizing Wordwall's various creative and interactive vocabulary games to enhance their language skills. Furthermore, the analysis demonstrated that this app is an effective medium for increasing students' vocabulary, which can benefit them in future career opportunities.

Shabrina and Taufiq (2023) assert that the integration of innovative teaching and learning methods necessitates the incorporation of interactive and didactic websites. Wordwall stands out as an excellent option in this regard, enabling students to memorize and recall vocabulary through engaging games. The objective of this study was to investigate the impact of Wordwall.net on English vocabulary acquisition among students at SMP Negeri 1 Wonoayu. Employing an experimental research design, 35 participants were assigned to both the experimental and control groups. Data collection involved a comprehensive vocabulary test administered over three weeks, resulting in a significant improvement within the experimental group.

Additionally, data analysis utilized SPSS version 26 with independent sample t-tests employed for statistical significance testing purposes. Therefore, results suggest that implementing Wordwall.net is instrumental in enhancing students' vocabulary knowledge effectively.

The Wordwall platform is a valuable tool for instructing students in vocabulary. Consequently, the aim of this investigation is to ascertain educators' perspectives concerning the implementation of the Wordwall app. Correspondingly, this inquiry's analysis employs a descriptive approach with quantitative methods. The research data comprises instructors' viewpoints on utilizing the Wordwall.net application to teach English vocabulary, sourced from SDN Makassar 06 teachers in East Jakarta through questionnaires as data collection instruments. Subsequently, questionnaire responses were collated and analyzed before being interpreted. This study reveals that teachers

hold favorable opinions regarding the use of Wordwall.net as an educational resource for teaching English vocabulary (Paksi et al., 2022).

After careful analysis of the aforementioned research, it becomes apparent that utilizing learning applications is an effective and powerful strategy for improving vocabulary acquisition. These studies show a remarkable consistency in their findings across populations of children and adolescents. The application was found to be highly effective in various experimental, descriptive, and quasi-experimental settings. The results consistently demonstrate favorable outcomes with regard to the implementation of this technology. Furthermore, students reported a significant increase in their confidence levels while practicing their English language skills. This indicates that incorporating such technology into classrooms can lead to positive impacts on students' academic performance and overall educational experience. Therefore, it is recommended that educators consider integrating learning apps into their teaching methodology to enhance the learning process in a more engaging and interactive manner.

1.2 Theoretical foundation

Independent variable

Information and Communication Technology (ICT) tools in education

According to Pandey (2021), Information and Communication Technology (ICT) has its roots dating back to the 20th century which was significantly influenced by advancements in computer technology alongside telecommunications - ultimately leading to various ICT tools and solutions. Furthermore, there has been an explosive proliferation of ICT tools since then thanks largely due to mobile device usage including smartphones, tablets and laptops. Aditionally, the use of ICT Tools is all pervasive in our everyday life, and use of ICT tools has almost revolutionized the way teachers impart knowledge to students and students receive knowledge from their teachers.

Antón et al. (2023), Information and Communication Technology (ICT) tools have become an indispensable aspect of education, offering a multitude of advantages for both students and teachers. These innovative tools provide a wide range of capabilities that facilitate the development of creative ideas and engaging teaching methods, which are essential in today's fast-paced world. The integration of high-tech devices such as

projectors, internet access, and computers into classrooms has revolutionized learning by making it more interactive and enjoyable. Moreover, Information and Communication Technology (ICT) has become an indispensable aspect of modern-day life, revolutionizing the way we communicate, work, and live. At the heart of this technological evolution lies.

Networks and Communications:

Garzo (2023) argumented that this type of tools that have revolutionized the way we communicate and connect with one another, particularly in the field of education. These resources comprehend a wide range of platforms including the Internet, email, video conferencing, social networks, and more. These platforms play a crucial role in supporting modern educational practices by facilitating remote learning, enabling collaboration among students and educators, and encouraging the exchange of information.

Purwanto et al. (2023) determined that student who tends to remain passive in class may actually have a lot to offer when it comes to co-creating their own learning experience alongside their teacher. By collaborating with peers and utilizing social media platforms like Facebook, Twitter, or YouTube, they may feel more at ease expressing themselves and sharing resources and ideas. Moreover, with the help of educational tools such as Google Apps for Education, students can gain access to valuable learning resources anytime and anywhere, which can greatly enhance their overall academic progress. Therefore, it is crucial for educators to recognize the importance of student engagement beyond the traditional classroom setting and create a supportive environment that encourages active participation and collaboration.

WEB 2.0

In the early 2000s, following the dot-com bubble's burst, a select group of online services not only survived but also experienced a significant uptick in user engagement. These companies were praised for their technical proficiency and innovative utilization of internet technology that distinguished them from their counterparts. In recent years, there has been chatter about a second iteration of the internet - one that is more dynamic and interactive than its antecedent. It was during this epoch when Dale Dougherty, an O'Reilly vice president (and co-founder of O'Reilly Media Inc.), coined the term Web 2.0 to describe this new wave of digital innovation. Nevertheless, it is vital to note that

Dougherty's phraseology was never intended to encapsulate these advancements' true essence; instead, it functioned as an umbrella term employed to describe this nebulous concept (Sharma, 2023).

The term "Web 2.0" has been a topic of much discussion and debate, with varying opinions on its significance in the realm of online interaction. Some view it as a catalyst for technological evolution, while others dismiss it as a fleeting trend. According to Kara (2023), web 2.0 encompasses a range of services and tools that have revolutionized how we exchange information on the internet. These include blogs, wikis, podcasts, and content syndication feeds, among others. However, the impact of this web extends far beyond each individual component to encompass broader economic, technological, and social elements. It has become a powerful phenomenon that shapes digital interactions and deeply impacts how information is generated and shared in contemporary society.

The new generations of students have grown up with modern technology, as they harness its advantages to share knowledge and information beyond traditional boundaries (Simões,2008). It is essential that the introduction of Web 2.0 as a fundamental tool in education be of superior quality, marked by enhancements in servers and a wide array of educational resources, such as games, knowledge assessment applications, and more.

According to Anderson (2019), In the realm of Web 2.0 services, it is common practice to utilize horizontal scaling in order to effectively address any issues that may arise. This involves increasing the number of computers or servers available, ensuring that the service remains accessible and functional for all users. In the realm of education, having a diverse range of educational websites available is crucial for enabling students to hone their skills and expand their knowledge base. Therefore, this approach takes on paramount importance when considering how best to provide students with access to these necessary resources.

Interactive games (wordwall)

Hania (2023) determined that wordwall is a highly popular application within the educational realm, and it has been widely embraced by both educators and students alike. This platform was created by a team of experienced software developers with the ultimate aim of providing interactive and didactic teaching tools that would significantly

enhance the learning experience. As such, Wordwall comprises an array of resources and tools that are geared towards teaching and learning, with a particular emphasis on vocabulary instruction.

One of the core objectives of this platform is to enhance students' vocabulary skills. According to Mahfiroh (2023), wordwall offers an extensive range of activities and games designed to help learners improve their retention abilities. These games are carefully crafted to cater to different learning styles, ensuring that every student can find an activity that resonates with them. In the same way, wordwall's versatility makes it an ideal tool for teachers looking to spice up their lessons and make them more engaging. The platform's user-friendly interface makes it easy for educators to create custom activities tailored to their students' needs, allowing them to incorporate multimedia elements such as images, videos, and audio recordings. Overall, Wordwall is an excellent resource for anyone looking to improve their vocabulary skills or teach others how to do so effectively. With its diverse range of activities and games designed specifically for vocabulary instruction.

Wordwall is a platform with a wide range of educational games, which are indispensable for the learning process of students. These games found on Wordwall provide a more didactic and enjoyable teaching method, as opposed to traditional teaching. Among these games, you can find:

Quizzes: Quizzes are a widely used tool in the education to evaluate students' enhance of specific subjects. They serve as an effective and objective means of assessing students' knowledge and understanding, allowing educators to evaluate their progress and identify areas where they may require additional guidance or support. Furthermore, quizzes offer immediate feedback to students, permitting them to correct any errors they may have made and deepen their understanding of the subject matter. On the other hand, by regularly incorporating quizzes into the curriculum, educators can create an engaging and interactive learning experience that promotes active participation and enhances overall student achievement (Johnson, 2022).

Crossword Puzzles: can be a fantastic tool for students to acquire new vocabulary and concepts. By creating crossword puzzles with clues and key words, educators can engage their students in a fun yet educational activity that reinforces learning. With the

ability to customize the level of difficulty, teachers can ensure that their students are challenged at an appropriate level while still making progress (Lippay, 2023).

Memory Games: are an effective way for students to retain and recall important information. These games are designed to stimulate the brain and enhance memory function, enabling students to better retain key concepts and ideas. By engaging in memory games, students can improve their ability to focus, concentrate, and remember details. By incorporating memory games into their lessons and activities, teachers can help students become more confident learners who are better equipped to succeed academically (Cerasi & Dougrusadik, 2022).

Matching Games: One effective way to engage students in the learning process is through the use of matching games. These games can be created to require students to match related elements, such as words and definitions. By incorporating this type of interactive activity into the classroom, students are able to actively participate in their own education. This not only helps them retain information better, but it also makes learning more enjoyable and memorable (Benedek, 2023).

Puzzles: Puzzles are an excellent tool for developing problem-solving and critical thinking abilities. They are a fun and engaging way to challenge your mind while also providing a sense of accomplishment when completed successfully.By working on puzzles regularly, individuals can improve their cognitive skills such as spatial reasoning, pattern recognition, and logical deduction. Moreover, solving puzzles requires patience, persistence, mi rasocinio porq tienen patrones de reconocimiento and attention to detail, which are essential qualities for educative success (Tu et al., 2022).

Quickfire Games: are a type of educational game that puts students' knowledge and skills to the test under time pressure. The objective is to answer as many questions as possible within a specified time frame, which can range from a few seconds to several minutes. These games are designed to be both fun and engaging, while also promoting critical thinking and problem-solving abilities. Students must think quickly and act decisively in order to succeed, making Quickfire Games an effective way to enhance cognitive abilities and boost academic performance (Krishnamurty et al., 2022).

Flashcards are an effective tool for students to review and retain important information. These study cards can be created to focus on definitions, terms, or key concepts that are

essential to understanding the subject matter. With flashcardsferent, es   can easily quiz themselves and reinforce their knowledge through repetition. This method of studying has been proven to increase retention rates and improve overall academic performance.

Anagram is a word puzzle that involves shuffling the letters of a given word and then rearranging them to form a new word. This activity is often used as a fun and engaging way to improve spelling and vocabulary skills in students of all ages. By challenging them to think creatively and critically, anagrams can help learners develop their problem-solving abilities while also expanding their knowledge of language and word structures. Whether used as a classroom exercise or as a fun pastime at home, anagrams are an excellent tool for promoting cognitive development and building essential literacy skills (Panagiotakopoulos, 2013).

Board games have been a classic form of entertainment for generations, and now they can be brought into the digital age through virtual adaptations. With this in mind, educators have been using virtual board games as a tool to engage students in learning and testing their knowledge. These virtual board games are designed to allow students to advance by answering questions correctly, making them an effective and fun way to reinforce important concepts and assess student understanding. By incorporating elements of competition and strategy, teachers can create an environment that encourages active participation and fosters a deeper understanding of the subject matter (Sousa, 2023).

Maze one interesting and engaging way to challenge students to test their knowledge and understanding of various topics is by creating a labyrinth, or maze, that incorporates questions or concepts related to the subject matter. This interactive approach can be a fun and effective tool for educators to assess the progress of their students while also providing an opportunity for them to apply what they have learned in a practical setting. As participants navigate through the twists and turns of the maze, they must answer the questions posed at certain points along the way in order to progress further. By incorporating this type of activity into lesson plans, teachers can foster a dynamic learning environment that promotes critical thinking, problem-solving skills, and active engagement with course material (Asadnia, 2021).

When it comes to the acquisition of vocabulary, studies have shown that using educational apps can lead to a higher or comparable level of vocabulary acquisition compared to not using such apps. Specifically, research has found that children who use educational apps on portable touch-screen devices tend to make significant improvements in their vocabulary and achieve higher vocabulary scores than those who receive traditional lessons. This highlights the potential benefits of incorporating technology into education, particularly for language learning. By engaging students with interactive and engaging tools, educational apps may offer a more effective and engaging way for learners to expand their vocabulary and enhance their language skills. Overall, these findings suggest that educational apps can be a valuable resource for educators looking to support their students' language development, among them are: Quizlet, Duolingo, Memrise, Babbel (Aspiranti, 2023).

The applications most used by students for interactive activities are Quizlet and Dulingo. Acording to Abdulaziz (2018) quizlet is a very useful web and mobile study application that has been designed to help students in their academic activities. Its main function is to allow students to study information by using various learning tools and games. These modules are presented to students through a variety of different learning modes, including flashcards, games, collaborative activities, and quizzes.On the other hand, According to Caroline (2022) kahoot! is a learning platform based on educational games. The main function of the platform is to allow users to design and participate in interactive quizzes, called "kahoots", which serve as an exciting and immersive tool for learning. One of the standout features of Kahoot! is its remarkably easy-to-use interface, which makes it easily accessible to people of all ages and proficiency levels, regardless of their previous experience with similar technologies.

Lutfi et al. (2022), by infusing game mechanics, such as points, levels, and rewards, into educational activities, educators can craft interactive and immersive learning experiences that resonate with contemporary learners' preferences and interests. The result is a powerful tool that not only amplifies student motivation but also nurtures active engagement, information retention and competitiveness. More over, With this dynamic approach, education is transformed from a routine task to a fun-filled adventure that students fun.

Competitiveness

Butera (2021) argued that An essential point to emphasize is that promoting competitiveness in students is beneficial, but only when it is healthy. Healthy competition stimulates both academic and personal growth in students. By fostering healthy competition in the classroom, students are encouraged to bring out the best in themselves and reach their full potential. They no longer view their peers as rivals but rather learn to collaborate with one another. Furthermore, healthy competition can aid in the development of crucial skills such as perseverance, resilience, and self-assessment. Competing is indeed beneficial, as achieving a goal can motivate a student. However, it is important to note that healthy educational competition does not generate stress, anxiety, or exclusion.

Dependent Variable
Language Proficiency

According to Persici (2022), language proficiency, refers to is the degree of knowledge, ability, and expertise that someone has in a particular language. This can encompass a wide range of skills, from basic vocabulary and grammar to more advanced abilities like reading comprehension, writing fluency, and conversation proficiency. Linguistic proficiency is a crucial factor in many areas of life, including education, employment, social interaction, and personal growth. Some people may choose to focus on developing their linguistic proficiency in order to enhance their communication skills or pursue new opportunities, while others may simply enjoy the process of learning and mastering a new language as a rewarding intellectual challenge.

The evaluation of linguistic proficiency is a crucial aspect in the world of language. It involves the assessment of one's knowledge and ability to communicate effectively in a particular language. The standards and exams that are used for this evaluation have been developed by organizations and teams of language experts therefore, These standards and exams play a vital role in education and communication worldwide, as they provide a benchmark for measuring the proficiency levels of individuals in different languages. Furthermore, these standards and exams have a significant impact on international communication, as they allow individuals from different parts of the world to communicate effectively with each other (Ali, 2022).

Language proficiency is regarded as the general competence and ability of person to interact in L2 (Nejad, 2019). Language proficiency is crucial for individuals who need

to interact with others in their L2 for academic, professional or personal reasons. It involves mastering grammar rules, vocabulary usage, pronunciation and intonation patterns specific to the target language. Furthermore, achieving high levels of language proficiency requires consistent practice and exposure to the target language.

According to Lee (2023) Mastery of vocabulary is considered a fundamental cornerstone in the acquisition of a second language (L2), serving as a comprehensive gauge of successful progress in L2 development. The acquisition and retention of new words and phrases can greatly enhance one's ability to communicate effectively and understand complex ideas within the L2 context. Thus, it is crucial for language learners to prioritize the expansion and reinforcement of their vocabulary knowledge as they progress towards fluency.

English skills

mastering the L2 is crucial for anyone seeking to broaden their horizons and achieve their personal and professional goals on a global scale. Rusmiyanto et al. (2023) concluded that as the demand for English language skills continues to grow, educators and researchers are exploring innovative approaches to enhance language learning outcomes. In the realm of language learning, various approaches are employed to enhance the four major skills: listening, speaking, reading, and writing.

When it comes to improving listening skills, technology has become a valuable resource. Audio and video materials are integrated into lessons to provide students with exposure to authentic accents and real-life conversations. Podcasts and videos in the target language are commonly used for this purpose. Additionally, gamified exercises, interactive quizzes, and online dictation tools engage students and give them immediate feedback on their listening comprehension (Maulina et al., 2022).

To improve speaking skills, language exchange programs or associations with native speakers through the internet offer opportunities for learners to enhance their pronunciation and fluency. Voice recognition tools can also be utilized to assess students' pronunciation and provide feedback so that they can practice oral expression independently. As well, reading skill is an effective way to develop vocabulary, comprehension, and reading speed. Online articles serve as an excellent source of reading material for learners at all levels. Simplified books with controlled vocabulary

and grammar levels are designed specifically to help learners gain confidence while progressively developing their reading skills (Miranda, 2023).

Writing skills can be improved by keeping blogs or online diaries as a means of practicing written expression. Such activities also promote critical thinking among learners. Blended learning models combine traditional classroom instruction with online resources and interactive platforms.Furthermore, This approach provides a personalized learning experience tailored to each student's needs allowing them to focus on specific language skills that require improvement. By employing these techniques effectively, students can become proficient in all four key language skills in a fun, engaging manner that suits their individual learning style (Maulida et al., 2023).

In spite of minor advancements, it can be asserted that there is a lack of clearly defined standards delineating the necessary proficiency in language skills at the primary level, along with corresponding appropriate assessment tools in the field of early language learning assessment (Güngöra & Önder, 2022). Early language learning is not limited to academic proficiency alone but also encompasses the development of communication skills and language acquisition, which cannot be effectively measured through traditional assessment tools.In this way,to address this issue, assessment tools for early language learning must consider the stages of development when acquiring the language, these include the 4 skills. These assessments should also be age-appropriate and tailored to the cognitive abilities and linguistic development of young learners.

Vocabulary learning

Woodeson et al.(2023), vocabulary, an important aspect of learning a foreign language, plays a crucial role. It is impossible to communicate without a diverse vocabulary. Learning to read, speak, write, and listen also requires a strong vocabulary. People who lack a sufficient vocabulary may be unable to effectively communicate and express themselves, both orally and in writing. Having a wide range of vocabulary is an essential factor in learning a foreign language, Effective communication becomes almost impossible without having a diverse and rich vocabulary. In this way become proficient in reading, writing, speaking, and listening requires a solid foundation of vocabulary. Therefore, it is safe to say that vocabulary serves as the fundamental building blocks upon which language skills are constructed, making it an indispensable asset for effective communication and mastery of any language.

Vocabulary learning is a complex process that can be examined from various angles, each offering unique in sights into language acquisition and usage. Acording to Gu (2019), When it comes to examining the task of learning vocabulary, there are multiple perspectives to consider. These include the breadth of one's vocabulary, meaning how many words a person knows, as well as the depth of their knowledge, or how well they understand each word.

Firstly, vocabulary breadth refers to the sheer number of words a person knows in a language. In contrast, vocabulary depth delves into the nuanced understanding of each word, including its meaning, connotations, collocations, and usage in different contexts. Both breadth and depth are crucial for effective communication. Another important aspect of vocabulary learning is automaticity. This involves the ability to recognize and use words effortlessly without conscious effort. Achieving automaticity requires practice and exposure to words in real-life situations. In addition to this, it is essential to use vocabulary appropriately in different social, cultural, and situational contexts. Inappropriate word choices can lead to miscommunication or even offense. Understanding the nuances of word usage is therefore crucial for effective communication (Ghazal, 2022).

Throughout history, there have been numerous individuals who have contributed to the field of vocabulary learning in a variety of ways. These creators and pioneers have developed innovative methods and approaches aimed at enhancing our understanding and mastery of language. From ancient civilizations to modern-day educators, the pursuit of effective vocabulary acquisition has remained a key focus for many.

Paul Pimsleur, born in 1927 and passed away in 1976, made significant contributions to the field of language education. One of his most notable achievements was the creation of the widely recognized Pimsleur method, which positioned him as one of the greats in the field. This approach places a strong emphasis on vocabulary acquisition and conversation skills through a combination of listening exercises and repetition. Its effectiveness has been repeatedly proven, as it has been utilized by countless individuals seeking to learn a new language (Sabokhat, 2023).

Strategies

In order to improve one's vocabulary in a language, it is crucial to employ effective strategies that can be sustained over time and personalized to meet individual needs.In

this way, By utilizing diverse approaches and tools, the process of learning new words can become more dynamic and engaging, ultimately resulting in a greater level of proficiency in the language. Whether it be through flashcards, reading extensively, or actively seeking out new words in conversation, there are countless methods available to enhance one's vocabulary acquisition. It is important to note that no single strategy will work for everyone; each learner must experiment with different techniques until they find what works best for them. The main intent of language learning strategies is to evolve communicative competence. In the words of Oxford, language learning strategies are categorized into two broad groups, namely direct and indirect strategies (Masharipovna et al., 2019).

According to Alsharif (2022), VLSs refer to particular techniques and methods that learners employ to help them "comprehend, store, and remember information" about the learnt vocabulary. There has been a prolific strand of scholars who tried to identify how learners use vocabulary learning strategies in their L2. The acquisition of vocabulary plays a vital role in the language learning process. To enhance this process, there are five crucial strategies that learners can use. These strategies cover different aspects of vocabulary acquisition and include Memory Strategy (MEM); Determination Strategy (DET); Social Strategy (SOC); Cognitive Strategy (COG); Metacognitive Strategy (MET).

Firstly, (Alsharif) asserted that **memory Strategy** is a cognitive approach that utilizes various mental techniques and pre-existing knowledge to enhance the retention of information in long-term memory. It is a highly effective tool, especially when attempting to learn and retain new vocabulary on a large scale. By employing mnemonic devices, visualization, repetition, and other similar techniques, individuals can improve their ability to recall information over extended periods of time. This strategy can be applied across various fields and disciplines, making it an essential skill for anyone seeking to improve their memory capacity and overall cognitive functioning.

Determination Strategy is an approach that puts emphasis on the learners' own resources to decipher the meanings of new words. It involves utilizing various methods such as educated guesses based on context or consulting dictionaries. This strategy requires learners to take an active role in their learning process, promoting independence and self-reliance. With this approach, learners are encouraged to use their

critical thinking skills and problem-solving abilities to understand unfamiliar words, which can lead to a deeper understanding and retention of language (Isakovna et al., 2023).

Social Strategy is a crucial aspect in classroom settings, whereby educators play an instrumental role in facilitating and bolstering students' journey towards vocabulary acquisition. Through the use of some strategies and techniques, instructors can guide learners to develop effective communication skills and foster a supportive learning environment. The incorporation of Social Strategy also allows for the integration of interactive activities that encourage collaboration and engagement among students, ultimately enhancing their overall learning experience (Almosa, 2023).

Cognitive Strategy is a term used to describe a variety of techniques that aid in the retention of new words by language learners. These techniques include activities such as taking notes, engaging in verbal and written repetitions, and articulating lexical items aloud. By implementing these strategies, learners are able to more effectively encode new vocabulary into their long-term memory, which can ultimately lead to greater proficiency in the target language. Whether through note-taking during lectures or repeating newly-learned words out loud, cognitive strategies are an essential tool for anyone looking to improve their language skills (Idris et al., 2023).

Metacognitive Strategy is a powerful tool for language learners to enhance their vocabulary acquisition skills. This strategy involves the implementation of a plan or self-assessment of the learning process, which allows learners to monitor and regulate their own progress in acquiring new words. The strategies encompass a wide range of techniques, including memory techniques, self-determination in discovering word meanings, social factors influencing learning, cognitive actions like note-taking and repetition, and metacognitive processes for effective self-assessment during the learning journey. By utilizing these strategies, language learners can significantly improve their ability to acquire new vocabulary (Idris et al., 2023).

Productive and Receptive vocabulary

In the realm of language learning, it is important to distinguish between two types of vocabulary: receptive and productive refers to words that can be easily understood when listening or reading. On the other hand, productive vocabulary pertains to words that can be actively used in speech or writing. It is crucial for learners to develop both types

of vocabulary in order to effectively communicate and comprehend in a given language. While receptive vocabulary may be acquired through exposure and immersion, building productive vocabulary requires practice and application in real-life situations. It is also easier to acquire a receptive control of words than a productive control, which often develops later. Traditionally, vocabulary is taught in three modes of instruction: visual, verbal and translation (FundaKömeç & ÖzkanKırmızı, 2019).

Visual techniques are an incredibly effective tool for language teachers to utilize in their teaching practices. These techniques involve implementing a variety of visual aids, such as flashcards, realia, drawings, mime or gestures. By incorporating these methods into lessons, language educators can enhance the learning experience for their students by providing them with a more engaging and interactive environment. One of the primary benefits of utilizing visual techniques is that they allow learners to associate the language being taught with tangible items and real-life situations. This is particularly useful when introducing vocabulary related to specific objects or descriptions of people and places. By utilizing visual aids such as flashcards or realia (real-life objects used in teaching), learners can more easily make connections between words and their corresponding meanings (Aliakbari et al., 2023).

1.3 OBJECTIVES

General objetive

To analyze the usage of the Interactive games (Wordwall) for enhancing vocabulary learning.

Specific objetives

1. To identify the types of interactive games(wordwall) to improve vocabulary.

2. To examine alternative types of interactive games employed by learners for vocabulary learning.

3. To determine the strategies employed by learners in their vocabulary learning endeavors.

Fulfillment objectives

To enhance the development of the first objective, the research concentrated on a

thorough investigation of interactive wordwall games, their advantages, and distinct characteristics. A pivotal component of this exploration involved conducting a comprehensive survey comprising 18 questions designed on a Likert scale. The survey aimed to gauge student perspectives and preferences related to interactive wordwall games. On the other hand, to ensure the reliability and internal consistency of the survey, Cronbach's alpha, a statistical measure, was employed for validation. This step was crucial in affirming the survey's reliability and the consistency of responses.

To further enhance the comprehensiveness of the study, an open-ended question was incorporated to better address the second objective. This addition provided students with the opportunity to share with each other other types of interactive activities they commonly engage in, using various apps such as Duolingo, Quizlet, and Quizzes Liveworksheet. This approach not only broadened the scope of the investigation but also allowed for a more nuanced understanding of the diverse interactive learning experiences students encounter beyond wordwall games.

Finally, to conclude the last objective, students utilized the survey along with a second open-ended question. This allowed students to express their opinions on various strategies used to learn vocabulary. Through this comprehensive approach, all objectives were successfully achieved. The collected data yielded valuable insights into students' behaviors and preferences regarding language learning tools and interactive techniques.

CHAPTER II
METHODOLOGY
RESOURCES AND MATERIALS

2.1 Materials

Several resources were considered for the research. Initially, the human resource consisted of students of Unidad Educativa "Glenn Doman". Additionally, technological assets like laptops, cellphones, and printers were essential. Finally, data was collected using Google forms and analyzed using SPSS (Statistical Package for Social Science) software.

Population

The research on interactive games (Wordwall) and vocabulary learning was carried out at the Unidad Educativa "Glenn Doman", involving a total of 87 students. Students from the 10th grade of Educacion General Basica to the 3rd grade Bachillerato General Unificado were considered, comprising 38 males and 49 females. All of them were mestizos, with ages ranging from 13 to 17 years old. These participants were selected to understand how the new generations engage with interactive games. The institution provides a comprehensive, dynamic, and enjoyable education equipped with various technological devices such as computers, projectors, among others.

Table 1

Population

Population	Participants	Percentage
Male	38	43.6%
Female	49	56.3%
Total	87	100%

Note: Pre-service teachers surveyed

Instruments

A comprehensive survey was conducted through the use of Google Forms to gather and analyze data that would determine the effectiveness, significance, and contribution of interactive Wordwall games in the development of vocabulary learning. This research started with the constructed survey validated by Cronbach's Alpha with a result of 0,854 that was applied to 87 students. The survey comprised a total of 18 items and two open ended questions, for this survey the Likert scale was applied. Additionally, added an introductory section consisting of 5 questions related to nationality, age, gender, and other relevant information, on the other hand, the first section was related to types of interactive wordwall activities It contained 10 items and one open ended question. Second section included one open ended question corresponding to the other types of interactive games that students typically utilize. Finally, the last section was about the strategies that learners use to learn vocabulary, It involved 8 items and one open ended question as well. furthermore, the survey was divided in three main sections that correspond to the research questions: What wordwall interactive activities are used to enhance vocabulary learning? and What other types of interactive games do learners use when learning vocabulary?

Procedure

The research was conducted with great attention to detail and a methodical approach, ensuring a comprehensive examination of the topic at hand. The first and foremost step involved delving the interactive wordwall activities, with extensive efforts made to gather relevant information from diverse sources such as books, articles, and academic publications. Additionally, I explored other types of applications that offer interactive games beyond wordwall applications, including Duolingo, Quizlet, and Kahoot, in order to gain a more complete understanding of the subject matter. By taking this thorough and diligent approach to the research process, it was obtained a wealth of valuable insights and information that will help in the research.

One of the key steps in the research process was to create a survey that would examine the use of interactive wordwall games. In order to develop this instrument, specific objectives were identified that focused on the three research questions that had been previously asked. These objectives aimed to investigate all aspects related to these questions, including relevant theories and topics. Additionally, three open-ended questions were incorporated into the survey in order to gain a better understanding of students' perspectives on the topic being researched. Throughout the development process of the survey, multiple iterations and revisions were undertaken in order to ensure that each question was clear, relevant and easily understood by participants. This attention to detail was crucial in ensuring that accurate data could be collected from respondents, which would ultimately contribute to a more comprehensive understanding of the use of interactive wordwall games in educational settings.

In order to ensure the reliability of the survey, a thorough process was implemented. Firstly, a pilot test was conducted on a sample of 10 students to gauge the effectiveness and accuracy of the survey questions. Based on the result obtained from this pilot test, necessary adjustments were made to improve the overall quality of the survey. Subsequently, data collected from the survey were entered into the SPSS program for validation purposes. To obtain a consistent and reliable value, Cronbach's alpha was utilized in this process. With these measures in place, it can be assured that the survey is not only effective but also reliable in its results.

After successfully validating the survey, the research progressed to the next crucial phase of data collection. This phase involved meticulously administering the survey to

both 2nd and 3rd-grade high school students and 10th-grade Educación General Básica students at the Unidad Educativa "Glen Doman". To facilitate a smooth and effective survey process, an intervention was conducted beforehand. This intervention familiarized the students with key concepts, such as "What is Wordwall?" and its various uses, among other important details. The aim of this intervention was to make it easier for the students to comprehend and accurately complete the survey. With this approach, the researcher ensured that all relevant data was efficiently collected in a manner that would not compromise the overall integrity of the study.

In order to streamline the survey process, a link was provided to each individual teacher, who then disseminated it amongst their respective classes. The students were urged to provide their honest opinions and perspectives on the activities in question in order to ensure the accuracy of the results. Once all responses had been collected, they were analyzed using the SPSS program, which allowed for an assessment of both their reliability and validity. Overall, this comprehensive approach ensured that the resulting data was both accurate and informative.

Methods

Research approach

My research was conducted with a mixed approach because both qualitative and quantitative methodologies were used. It is qualitative because, according to Aspers and Corte (2021), Qualitative research is a valuable method for delving deeply into complex social phenomena. This approach allows researchers to gain insightful perspectives on participants' experiences and viewpoints. By using qualitative methods, researchers can collect rich data that goes beyond mere statistical analysis and numbers. Qualitative research is particularly useful for investigating topics that are difficult to quantify or measure, such as cultural beliefs, social relationships, and individual experiences. For this reason, a survey was conducted to gather information about the interactive games of the Wordwall app.

On the other hand, this research took a quantitative approach to analyze the results using statistics. Hans et al. (2023), Quantitative research is a scientific approach that involves collecting data through measurement. It assumes that the phenomenon being studied can be measured. Therefore, this type of research is objective and systematic, with a focus

on quantifiable data. By employing rigorous methods of measurement and analysis, quantitative research helps ensure reliable and valid conclusions about the world around us.

Descriptive

This research had a descriptive level, as the characteristics of the variables are given. Furthermore, According to Siedlecki (2020), Descriptive research serves the purpose of providing a comprehensive representation of individuals, events, or conditions in their natural state. This type of research does not involve any manipulation of variables, and instead focuses solely on describing the sample and/or variables under investigation. Such studies are useful for identifying problems within a unit, organization, or population; analyzing the characteristics of a population; or comparing variations in practices and characteristics between institutions or countries.

The primary objective of this inquiry was to provide a comprehensive depiction of the impact that interactive games, specifically Wordwall, have on vocabulary learning and their role in enhancing this important skill. To achieve this aim, a survey was utilized as an instrument to collect data regarding the participants' experiences and perceptions of using interactive games like Wordwall to facilitate vocabulary acquisition. By doing that, we aimed to get valuable insights on how these innovative tools can be used to improve vocabulary learning outcomes.

RESEARCH QUESTIONS

1. What wordwall interactive activities are used to enhance vocabulary learning?
2. What other types of interactive games do learners use when learning vocabulary?
3. What are the strategies that learners use to learn vocabulary?

CHAPTER III
RESULTS AND DISCUSSION

3.1 Analysis and discussion of the results

In this particular chapter it was deepened based on analyzed data that has been collected with the specific purpose of providing answers to three key questions based on the objectives of the study. The results obtained after conducting a survey will be presented

in an organized manner to facilitate comprehension and clarity. To ensure accuracy and precision, the data was processed via SPSS, which allowed for the acquisition of meaningful insights. Furthermore, this approach enabled us to effectively tabulate the results of open-ended questions, thereby enhancing our understanding of the topic at hand.

1. What wordwall interactive activities are used to enhance vocabulary learning?

2. What other types of interactive activities do learners use when learning vocabulary?

3. What are the strategies that learners use to learn vocabulary?

Table 2

Wordwall interactive activities

Items	mean
When I complete quizzes, I improve my understanding.	3,64
I improve my vocabulary and learn new ideas and concepts when I complete different crossword puzzles.	3,40
I concentrate more when I work with activities to retain information.	3,82
I like working with line-matching activities because they help me learn more words and definitions.	3,59
When I work with various puzzles, they help me enhance my reasoning as they have recognition patterns.	3,53
I like to answer different questions that need to be answered within a limited time.	2,64
I use various online flashcards to retain different definitions and terms.	2,75
When I create new words with jumbled letters, I learn and retain more vocabulary.	3,14
I use activities of answering questions consecutively to retain more vocabulary.	3,41
I improve my vocabulary and learn new ideas and concepts when I play maze games.	3,44

Note: The following scales were used to derive the measures: 1. Always, 2. Often, 3. Sometimes, 4. Rarely, and 5. Never.

Analysis and Interpretation

Research Question: What interactive wordwall activities are used to enhance vocabulary learning?

The findings of the study revealed that students mainly use memory activities, with a mean of 3.82 as they prove to be more effective in retaining information. These games are designed to stimulate the brain and improve memory function, which ultimately helps students retain knowledge better. However, interactive activities like quizzes were also popular among students, with a mean of 3.64. Wordwall quizzes are dynamic and widely used to evaluate student progress and identify areas where academic support is required. Matching activities were frequently employed by students as well, scoring an average of 3.59 for their effectiveness in relating elements and facilitating significant learning. Besaides, Quickfire Games or answering questions under time pressure received the lowest mean of 2.64 as it tends to make students more susceptible to failure.

In conclusion, the study highlights that employing a variety of interactive activities in wordwall can significantly enhance student engagement and improve learning outcomes. It is essential for educators to incorporate such techniques into their teaching methodologies to promote effective learning and retention among students.

Table 3

Strategies to learn vocabulary

items	mean
I can memorize more vocabulary when I read, repeat, or listen.	4,16
I learn new vocabulary when I associate it with a general context.	3,56
I learn new vocabulary when I share ideas with the class and do group activities.	3,69
I learn vocabulary best by taking notes or repeating the words out loud.	3,47
I learn vocabulary best when I have conversations with my classmates and transcribe.	3,67
I increase my vocabulary when I use online flashcards, and real materials.	3,33
I increase my vocabulary when I use class objects.	3,54
I increase my vocabulary when listening or reading.	3,94

Note: The following scales were used to derive the measures: 1. Always, 2. Often, 3. Sometimes, 4. Rarely, and 5. Never.

Analysis and Interpretation

Research Question: What are the strategies that learners use to learn vocabulary?

The study conducted has revealed some of the most popular strategies used by students when it comes to learning vocabulary. One of the most frequent strategies identified was memory strategies, which involve stimulating long-term memory through techniques such as visualization, auditory and repetition. This strategy had a mean of 4.16, indicating its effectiveness in improving retention for prolonged periods of time compared to other strategies.

According to the results, it was found that the receptive skill was the second most frequently used strategy by students with a mean of 3.94. This technique primarily involves listening and is especially beneficial for auditory learners who have a tendency to grasp new words more efficiently when they hear them in music, podcasts, or audiobooks. In addition, reading is also deemed as an effective method for students to retain new vocabulary. On the other hand, cognitive strategy, was one of the least used by students with a mean of 3.47. In particular, the visual strategy appears to be the least used among students, with an average rating of 3.33. However, research has shown that this approach can be incredibly effective in terms of capturing students' attention and enhancing their overall learning experience. By incorporating visual aids such as flashcards, mimes, and gestures into their studies, students are able to focus more intently on the material at hand and retain more information over time. Despite these clear benefits, it is surprising to note that the visual strategy remains one of the least favored options among students today.

In summary, the study highlights that memory and receptive skills are among the most popular strategies that students use when learning new vocabulary while cognitive and visual strategies are less frequently used. It is important for educators to understand these preferences so that they can tailor their teaching methods accordingly to improve student engagement and retention rates.

Table 4

Open-ended questions

Question 1	Answer	Total
	Duolingo	50
	quizlet	12

What other types of interactive activities do you know to learn vocabulary (Quizlet (gravity), Duolingo (pronunciation), Memrise(Stories and Practical Situations)?	Memrise	10
	Quizziz	2
	Liveworksheets	7
	Other answers	6
	Total	87

Question 2	Answer	Total
What other strategies do you use to learn vocabulary, for example (copying vocabulary on paper, underlining, learning through subtitles)?	I underline to learn vocabulary.	18
	I learn through subtitles	13
	I learn when I copy vocabulary on paper.	22
	I learn when I watch movies and videos in English	7
	I learn when I read books or stories	10
	I learn when I listen to music	17
	Total	87

Analysis and Interpretation

The first open-ended question, what other types of interactive activities do you know to learn vocabulary (Quizlet, Duolingo, Memrise, Babbel)?The results revealed that Duolingo is widely favored among students due to its comprehensive approach to vocabulary and grammar learning. Offering a variety of dynamic activities, it allows for flexible studying methods tailored to each student. However, Quizlet is another frequently utilized application. It provides a broad range of enjoyable and interactive activities that contribute to the development of visual skills, primarily through the use of flashcards. Additionally, students often turn to Memrise, which relies on repetition to stimulate the brain for enhanced long-term retention.

In addition to these applications, Liveworksheets, Quizz, and Kahoot are also popular choices among students. These platforms offer a diverse set of activities for vocabulary learning. In summary, there are numerous options available for interactive vocabulary learning activities, each presenting unique features and benefits.

The second open-ended question, what other strategies do you use to learn vocabulary, for example (copying vocabulary on paper, underlining, learning through subtitles)?

Based on the results, it appears that most students tend to write words as a way of learning vocabulary. This is because writing involves physical movement, which can help reinforce kinesthetic memory. Writing also helps internalize words, leading to better retention and comprehension. Another effective strategy for retention is underlining key words. By highlighting important information visually, students can focus on relevant material for later review and recall. Using subtitles is another effective tool for learning vocabulary as it provides both visual and auditory context for learners. This not only reinforces the association between words and their meanings but also improves contextual understanding and pronunciation skills. On the other hand, exposure to visual and auditory media like movies and videos can enrich one's vocabulary by presenting words in authentic situations. This approach enables students to understand colloquial language and diverse contexts better. Reading books or listening to music are also popular methods used by students to learn new vocabulary. In conclusion, these various strategies reflect the diversity of approaches that students find effective in learning vocabulary. Each approach takes advantage of different learning channels and individual styles, ensuring that everyone has an opportunity to succeed in this essential aspect of language acquisition.

Discussion

The three research questions presented below were designed to explore students' perspectives on interactive wordwall activities and their impact on students' vocabulary learning process.

Question 1 *What wordwall interactive activities are used to enhance vocabulary learning?*

Through the analysis, it was found that the majority of students commonly utilize two types of interactive wordwall activities: memory games, and quizzes. These interactive activities are frequently implemented in English language teaching, particularly in the context of vocabulary subskills.

Cerasi and Dougrusadik (2022) argued that the memory games can be incredibly beneficial for individuals looking to enhance their brain function and improve long-term

retention. These games are specifically designed to stimulate the mind and challenge individuals to remember specific details and information. I On the other hand, according to Johnson (2022) Quizzes have become an indispensable tool in the field of education Seeing that they provide educators with an effective and objective way to evaluate their progress and pinpoint areas where they may need further assistance or direction. Moreover, quizzes offer an immediate feedback mechanism that enables students to correct any mistakes they may have made and deepen their comprehension of the subject matter.

Krishnamurty et al (2022) noted that quickfire Games are a specific type of educational game that assesses students' cognitive abilities and expertise while they face time constraints. These games offer numerous benefits, including enhancing critical thinking skills and problem-solving abilities. However, despite their advantages, research outcomes suggest that such games are not frequently utilized by students.

Question 2 *What other type of interactive activities do learners use when learning vocabulary?*

The results of the study indicated that the majority of students use two main types of interactive activities: duolingo and quizlet, the use of educational applications usually play a very important role in vocabulary acquisition, according to Aspirantes (2023) the incorporation of technology into education has been found to have significant potential benefits, especially when it comes to language learning. One key advantage is the ability to engage students through interactive and stimulating tools, such as educational apps. These apps can provide learners with a more effective and engaging way to expand their vocabulary and improve their language skills. By offering personalized learning experiences, such apps can help students to progress at their own pace and in ways that are tailored to their individual needs. Abdulaziz (2018) noted that quizlet is an incredibly helpful web and mobile application designed to aid students in their studies. This innovative tool offers a range of learning resources such as flashcards, games, collaborative activities, and quizzes to help students study effectively. However, According to Carolline (2022) Quizlet, students have the flexibility to choose from different learning tools that best suit their individual needs and preferences. Kahoot! is a highly innovative and interactive learning platform that revolves around educational games. Designed to augment the traditional classroom experience with a user-friendly

interface and intuitive design. This makes it easily accessible to learners of all ages and proficiency levels. The results show that Kahoot and Quizlet are applications commonly used by students due to their flexibility and popularity.

Question 3 *What are the strategies that learners use to learn vocabulary?*

Previous results indicated that one of the most used strategies to learn vocabulary is the memory strategy according to Alsharif (2022). memory strategy involves the use of various methods that target specific aspects of the brain's capacity for memory retention. One such method is the use of mnemonic devices, which are essentially memory aids that help individuals remember complex or abstract information by associating it with more easily remembered concepts. Visualization is another technique that involves creating visual images or mental pictures that represent the information being learned. Repetition is also an essential aspect of memory strategy as it helps reinforce neural connections between different pieces of information. However, According to FundaKömeç & ÖzkanKırmızı (2019) Receptive vocabulary skill is a crucial aspect of language acquisition, as it involves the ability to comprehend and identify words when they are spoken or written. For students looking to enhance their language proficiency, there are several effective ways to improve receptive vocabulary. One such method is reading beloved stories in English, which can help learners associate familiar phrases and expressions with new words and concepts. Additionally, watching movies with subtitles or listening to music in the target language can also be highly beneficial for expanding one's understanding of vocabulary.The results obtained by this strategy were good since it was the second strategy that students most often use.

Aliakbari (2023) mentioned that the use of visual aids in language teaching has been proven to enhance retention and comprehension among learners. When students are presented with visual representations of new vocabulary or grammar concepts, they are more likely to remember them long-term among them we find Flashcards, drawings, illustrations, mime or gestures. This strategy, despite having a variety of advantages, has been the least used by students.

CHAPTER IV
CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

After the survey results were analyzed and processed, the following conclusions.

were reached:

Based on the findings, it has been determined that students primarily use interactive wordwall games, such as quizzes and memory games, to improve their vocabulary comprehension and retention. This is because students are naturally drawn to interactive, entertaining and enjoyable activities in the same way, students tend to prefer line matching activities. However, most students tend to avoid Quickfire games or time-limited activities because they often experience nervousness or discomfort when working under pressure. Consequently, this was found to be the least used wordwall activity among students. Despite this finding, incorporating interactive games into vocabulary learning can greatly benefit overall comprehension and retention of new words in the students.

When it comes to learning vocabulary, students have a lot of interactive tools at their disposal. From games to applications to websites, the options are endless. However, among these tools, Duolingo has emerged as the most successful application due to its numerous benefits that students can enjoy while using it. On the other hand, Quizlet also holds a prominent place in student learning thanks to its diverse range of dynamic games. Despite this, many students reveal that they often utilize other lesser-known applications such as Memrise, Kahoot, Liveworksheet, Quizz and more. These applications may not be as popular as Duolingo or Quizlet but they offer unique features that cater to specific learning styles and preferences.

When it comes to learning vocabulary, there are several strategies that students commonly employ. The most frequently used method for students is the memory technique, which is the simplest approach for teaching and acquiring new words. Additionally, many students tend to rely on their receptive skills of reading and listening as they find it easier to comprehend and retain new information when exposed to music, stories, or movies with subtitles. However, it's worth noting that only a small percentage of students use cognitive strategies despite their numerous benefits. On the other hand, some learners reported using visual strategies such as flashcards, gestures,

and mimes in order to enhance their language acquisition. As such, it's crucial for teachers to consider these various strategies during the vocabulary learning process since each one offers countless advantages and could serve as an alternative method of language instruction.

4.2 Recommendations

After analyzing the survey results, several recommendations have emerged to enhance students' vocabulary learning. Interactive wordwall games, specifically quizzes and memory games, have proven to be highly effective in improving vocabulary comprehension and retention. Therefore, it Is recommended that educators to incorporate these engaging activities into their teaching methodologies to create an interactive and dynamic learning environment.

To provide students with a comprehensive and personalized learning experience, it is recommended that educators explore a diverse range of vocabulary learning applications. This includes lesser-known applications such as Memrise, Kahoot, Liveworksheet, and Quizz. By doing so, students will receive exposure to various tools that can aid them in their vocabulary acquisition journey.

Moreover, the survey highlights the importance of incorporating memory techniques, receptive skills development, and visual strategies into teaching practices. To achieve this goal, educators are encouraged to expose students to vocabulary in context through music and stories. They should also promote the use of visual aids like flashcards as they have been proven effective in aiding memory retention. Finally, it is essential for educators to adopt a flexible and diversified approach that acknowledges individual preferences when catering to varied learning styles. This approach ensures a more enjoyable and effective vocabulary learning journeys for all students. In conclusion, by implementing these recommendations effectively, educators can optimize their teaching methodologies for enhanced vocabulary learning outcomes among their students.

REFERENCES

Abdulaziz. (2018). The Effect of Quizlet on Vocabulary Acquisition. *Asian Journal of Education and e-Learning*. https://www.researchgate.net/profile/Abdulaziz-Sanosi/publication/327108959_The_Effect_of_Quizlet_on_Vocabulary_Acquisition/links/5b7a8aeb92851c1e12219602/The-Effect-of-Quizlet-on-Vocabulary-Acquisition.pdf

Adnyayanti, P. P. (2022). Teaching English Vocabulary to Young Learners with. *Journal of educational study, 2*, 1.

al., M˙. (2023). The Complexity of Matching Games: A Survey. *Journal of Artificial Intelligence Research*. https://www.jair.org/index.php/jair/article/view/14281/26938

Ali, Z. (2022). Vocabulary Learning Strategies and their Influenceon Language Proficiency ofMultilingual Undergraduate ESL Learners. *Journal of Educational Research & Social SciencesReview*. https://ojs.jerssr.org.pk/index.php/jerssr/article/view/103/45

Aliakbari, D. (2023). The effects of receptive and productive testing on L2 active vocabulary knowledge. https://jmrels.journals.ikiu.ac.ir/article_2977.html?lang=en

Almosa, A. (2023). A Look Into The Effectiveness Of Vocabulary Learning Strategies By Foreign Language Students In Undergraduate Classes. *Onomazein*. http://www.onomazein.com/index.php/onom/article/view/121/131

Alsharif, R. (2022). *International Journal of Education & Literacy Studies, 10*. https://creativecommons.org/licenses/by/4.0/

Anderson, P. (2019). *WEB 2.0 and BEYOND Principles and Technologies.* CHAPMAN & HALL/CRC.

Andreani, W., & Ying, Y. (2019). "PowPow" interactive game in supporting English vocabulary learning for elementary students. *International Conference on Computer Science and Computational Intelligence*. https://pdf.sciencedirectassets.com/280203/1-s2.0-S1877050919X00137/1-s2.0-S1877050919311627/main.pdf?X-Amz-Security-Token=IQoJb3JpZ2luX2VjEKX%2F%2F%2F%2F%2F%2F%2F%2F%2F%2FwEaCXVzLWVhc3QtMSJHMEUCIQCzU4dmOodvxBi4ZHMP2xIG%2FK%2Fmcoz7%2BbDVgylFagEfTwIgS8YJOI

Antón Sancho, Á. F. (2023). Impact of the covid-19 pandemic on the use of ICT tools in science and technology education. *Journal of technology and science education*. https://upcommons.upc.edu/handle/2117/387516

Asadnia, F. (2021). The Game Maze of Edutainment: How do English Teachers get Through. *1*. https://samanketab.roshdmag.ir/fa/article/25545/The-Game-Maze-of-Edutainment-How-do-English-Teachers-get-Through

Aspiranti, K. (2023). Using multimodal educational apps to increase the vocabulary of children with and without reading difficulties. *International Journal of Child-Computer Interaction*. https://pdf.sciencedirectassets.com/282180/1-s2.0-S2212868923X00026/1-s2.0-S2212868923000168/main.pdf?X-Amz-Security-Token=IQoJb3JpZ2luX2VjECUaCXVzLWVhc3QtMSJHMEUCIQCPiv%2FAP%2FJSAGRBkR6KvxQRL%2BFXQykDfEdfK1Q16%2FRAEAIgQWZNZQUxiOxWNQUuZ8W6VEeFIjvot3QfgbdU

Butera, F. (2021). *Competition in Education.* The Oxford handbook on the psychology of competition. (pp.in press). https://doi.org/10.1093/oxfordhb/9780190060800.013.24

CERASI, C. C., & DOGRUSADIK2, A. K. (2022). THE DEVELOPMENT OF A MEMORY GAME "REMEMBER THE DAY" FOR PEOPLE WITH ALZHEIMER'S DISEASE. *THEORETICAL AND EMPIRICAL RESEARCH.* https://iksadyayinevi.com/wp-content/uploads/2023/03/THEORETICAL-AND-EMPIRICAL-RESEARCH-IN-SOCIAL-SCIENCES-I.pdf#page=8

Dmitriy. (2022). Features of the Use of Software and Hardware of the Educational Process. *2.* https://www.scitepress.org/Papers/2020/109304/109304.pdf

Fakhruddin, Firdaus, & Mauludiyah. (2021). Wordwall Application as a Media to Improve Arabic Vocabulary Mastery of Junior High School Students. *Arabiyatuna : Jurnal Bahasa Arab, 5.* http://journal.iaincurup.ac.id/index.php/arabiyatuna

Fauziyah, N. L. (2022). The Use of 'Canva for Education' and the Students' Perceptions. *Budapest International Research and Critics Institute-Journal, 5.* https://www.bircu-journal.com/index.php/birci/article/view/4359/pdf

Friza Brillianty Shabrina, W. T. (2023). *T h e E f f e c t o f T e a c h i n g E n g l i s h V o c a b u l a r y o n J u n i o r H i g h S c h o o l S t u d e n t s B y U s i n g W o r d w a l l . n et* (Vol. 2). https://jurnal.fkip-uwgm.ac.id/index.php/Borju/article/view/1353/745

FundaKömeç, Ö. (2019). The impact of the flipped classroom on receptive and productive vocabulary. *Journal of Language and Linguistic Studies.* https://dergipark.org.tr/en/download/article-file/751901

Garzo, P. (2023). Advancing Primary Education through Active Teaching Methods and ICT for Increasing Knowledge. *Sustainability.* file:///C:/Users/DELL/Downloads/sustainability-15-09551.pdf

Ghazal, L. (2022). LEARNING VOCABULARY IN EFL CONTEXTS THROUGH VOCABULARY LEARNING STRATEGIES. *Novitas-ROYAL.* https://dergipark.org.tr/en/download/article-file/111894

GU, Y. (2019). Vocabulary Learning Strategies. *The Encyclopedia of Applied Linguistics.* https://doi.org/10.1002/9781405198431.wbeal1329.pub2

Hania, I. (2023). DEVELOPMENT OF CEFR-BASED QOWA'ID LEARNING EVALUATION TOOL WITH THE HELP OF WORDWALL INTERACTIVE GAMES TO IDENTIFY STUDENTS' UNDERSTANDING. *Journal of Arabic Linguistics and Education.* https://e-journal.uingusdur.ac.id/alsinatuna/article/view/1734/977

Hasram, S. (2021, 09 01). The Effects of WordWall Online Games (WOW) on English Language Vocabulary Learning Among Year 5 Pupils. *Theory and Practice in Language Studies, 11.* https://tpls.academypublication.com/index.php/tpls/article/view/1402/1131

Idris, N. (2023). An Investigation of the Use of Cognitive and Metacognitive Strategies in Foreign Language Learning. *International Journal of Academic Research in Business and Social Sciences.* https://www.researchgate.net/profile/Noor-Rahmat-2/publication/358957767_Investigation_of_the_Use_of_Cognitive_and_Metacognitive

33

_Strategies_in_Foreign_Language_Learning/links/621f4428ef04e66eb74e7274/Investigation-of-the-Use-of-Cognitive-and-Metacognitive

Isakovna, T. N. (2023). THE IMPORTANCE OF MOTIVATION TO IMPROVE STUDENTS' VOCABULARY SKILLS IN THE EFL CLASSROOM. *Integration of Pragmalinguistics, Functional Translation Studies and Language Teaching Processes*. https://conferenceseries.info/index.php/online/article/view/797/711

Jannah, S. (2022, 07 31). EFL students' perspectives on the use of Wordwall.net as vocabulary learning media. *Journal of english language teaching, 11*. https://journal.unnes.ac.id/sju/index.php/elt/article/view/57120/22180

Johnson, E. L. (2022). *Extra Credit Quizzes as a Teaching Tool in General Chemistry.* Department of Chemistry & Biochemistry, Georgia Southern University. https://digitalcommons.georgiasouthern.edu/cgi/viewcontent.cgi?article=2798&context=sotlcommons

Junior, D. F. (2020). Information and Communication Technologies (ICT) in educational. *International Journal of Education and Development using Information and Communication Technology, 2*. https://files.eric.ed.gov/fulltext/EJ1268774.pdf

Kanike, U. K. (2023). An Empirical Study on the Influence of ICT-Based Tools on Team Effectiveness in Vir eness in Virtual Softwar tual Software Teams Oper eams Operating Remotely ating Remotely During the COVID-19 Lockdown. *ScholarWorks @ Georgia State University*. https://scholarworks.gsu.edu/cgi/viewcontent.cgi?article=1193&context=bus_admin_diss

Kara, S. (2023). The Effects of Web 2.0 Tools on Foundation English Students` Success Rates at A Private University in Iraq. *International Journal of Social Sciences & Educational Studies*. https://ijsses.tiu.edu.iq/wp-content/uploads/2023/02/The-Effects-of-Web-2.0-Tools-On-Foundation-English-Students-Success-Rates-at-A-Private-University-in-Iraq-2.pdf

Krishnamurty, K. (2022). Benefits of gamification in medical education. *Clinical Anatomy*. https://onlinelibrary.wiley.com/doi/epdf/10.1002/ca.23916

Lee, S.-M. (2023). Factors affecting incidental L2 vocabulary acquisition and retention in a game-enhanced learning environment. *RESEARCH ARTICLE*. https://www.cambridge.org/core/services/aop-cambridge-core/content/view/429D5D5AF1E567164C49C70CE3DB05DC/S0958344022000209a.pdf/factors-affecting-incidental-l2-vocabulary-acquisition-and-retention-in-a-game-enhanced-learning-environment.pdf

Li, Y. (2022). Psychosocial Impacts of Mobile Game on K12 Students and Trend Exploration for Future Educational Mobile Games. *Digital Education, 7*. https://frontiersin.org/articles/10.3389/feduc.2022.843090/full

Liang., L. P. (2022). A review of ICT-enabled learning for schoolgirls in Asia and its impacts on education equity. *Education Tech Research Dev*. https://link.springer.com/article/10.1007/s11423-022-10178-w#Sec14

Lippay, N. (2023). Crosswords as an Educational Tool. *Western University*. https://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1008&context=classification_indexing_winter2023

Lutfi, A., Aftinia, F., & Permani3, B. E. (2022). GAMIFICATION: GAME AS A MEDIUM FOR LEARNING CHEMISTRY TO MOTIVATE AND INCREASE RETENTION OF STUDENTS' LEARNING OUTCOMES. *Journal of Technology and Science Education, 1*. https://files.eric.ed.gov/fulltext/EJ1391626.pdf

M.R, K. B. (2023). THE USE OF WEB 2.0 TOOLS IN ENGLISH LANGUAGE TEACHING IN SCHOOL. *Special Issue*. https://www.gejournal.net/index.php/IJSSIR/article/view/1645/1547

Mahfiroh, D. (2023). DEVELOPMENT OF INTERACTIVE E-BOOK TEACHING MATERIALS BASED ON LOCAL WISDOM USING WORDWALL EDUCATIONAL GAMES. *Journal of Educational Learning and Innovation*. https://journal.shantibhuana.ac.id/index.php/elia/article/view/723

Mansurjonovich, J. M. (2023). IMPORTANT ADVANTAGES OF ORGANIZING THE EDUCATIONAL PROCESS USING SPECIAL APPLICATIONS. *4*. https://www.oarepo.org/index.php/oa/article/view/2326/2304

Masharipovna. (2019). VOCABULARY TEACHING STRATEGIES USING IN ESP CLASSES. *CIBERLENINKA*. https://cyberleninka.ru/article/n/vocabulary-teaching-strategies-using-in-esp-classes

Maulida, D. S. (2023). A Review of the Blended Learning as the Model in Improving Students`Paragraph Writing Skills. *International Journal of Education*. https://www.researchgate.net/profile/Ciptro-Handrianto-2/publication/361651364_A_Review_of_the_Blended_Learning_as_the_Model_in_Improving_Students_Paragraph_Writing_Skills/links/62be2fad7c5b016ee4fce2ec/A-Review-of-the-Blended-Learning-as-the-Model-in-Imp

Maulina. (2022). Research Methods in Teaching Listening SkillsUtilizingTechnology Media. *Journal of Education and Teaching*. https://jet.or.id/index.php/jet/article/view/140/37

Mayo, E. F. (2020). Perception about the Influence of ICT Tools on Knowledge Management Processes in Grade of Primary Education. *Píxel-BIT Revista de Medios y Educación -, 59*. https://recyt.fecyt.es/index.php/pixel/article/view/75070/50424

Miranda, J. A. (2023). PRE-SERVICE TEACHERS' STRATEGIES IN IMPROVING STUDENTS' SPEAKING SKILLS. *Journal of English Language Teaching and Learning*. https://jim.teknokrat.ac.id/index.php/english-language-teaching/article/view/3132/857

Muhanna. (2023). Using Online Games For Teaching English Vocabulary For Jordanian Students Learning English As A Foreign Language. *proquest, 9*. https://www.proquest.com/docview/1418715780?pq-origsite=gscholar&fromopenview=true

Nejad, S. G. (2019). ROLES OF GENERAL LANGUAGE PROFICIENCY,AURAL VOCABULARY KNOWLEDGE, ANDMETACOGNITIVE AWARENESS IN L2 LEARNERSLISTENING COMPREHENSION. *International Journal of Listening*. https://sci-hub.se/https://doi.org/10.1080/10904018.2019.1572510

Ni Nyoman Arsini, H. S. (2022). Hospitality School Students' Perception on the Use of Wordwallto Enrich Students' Work-Ready Vocabulary MasteryNi. *Elsya: Journal of English Language Studies, 2*. https://journal.unilak.ac.id/index.php/elsya/article/view/8732/3965

Önder, B. G. (2022). Development of English Picture Vocabulary Test as an Assessment Tool for Very Young EFL Learners' Receptive and Expressive Language Skills. *EARLY EDUCATION AND DEVELOPMENT, 34*. https://www.tandfonline.com/doi/epdf/10.1080/10409289.2022.2043134?needAccess=true

Paksi, Sari, & Somawati. (2022, december 31). Teacher Perceptions on the Use of the Wordwall.NetApplicationas an English Vocabulary Learning Media. *4*. https://mail.edunesia.org/index.php/edu/article/view/307/163

Panagiotakopoulos. (2013). Playing With Words": Effects of an Anagram Solving Game-Like. *International Education Studies, 6*. https://files.eric.ed.gov/fulltext/EJ1067157.pdf

Pandey, A. (2021). INFORMATION COMMUNICATION TECHNOLOGY TOOLS. *International Journal of Creative Research Thoughts, 9*, 1. https://ijcrt.org/papers/IJCRT2109247.pdf

Persici, V. (2022). Vocabulary and reading speed in the majority language are affected by maternal language proficiency and language exposure at home: a study of language minority bilingual children in Italy. *International Journal of Bilingual Education and Bilingualism*. https://www.tandfonline.com/doi/full/10.1080/13670050.2022.2076552?scroll=top&needAccess=true

Pradini, P. C., & Adnyayanti, N. L. (2022). Teaching English Vocabulary to Young Learners with Wordwall Application: An Experimental Study. *Journal of educational study, 2*.

Purwanto, A. (2023). The Benefits of Using Social Media in the Learning Process of Students in the Digital Literacy Era and the Education 4.0 Era. *JOURNAL OF INFORMATION SYSTEMS AND MANAGEMENT, 2*. https://jisma.org/index.php/jisma/article/view/296/61

Rusmiyanto. (2023). The Role Of Artificial Intelligence (AI) In Developing English Language Learner's Communication Skills. *Journal on Education, 6*. https://www.jonedu.org/index.php/joe/article/view/2990/2549

Sabokhat, A. (2023). VOCABULARY LEARNING. *INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY RESEARCH*. https://aidlix.org/index.php/sg/article/view/292/283

Sailer, M., & Homner, L. (2019). The Gamification of Learning: a Meta-analysis. *SpringerLink*. https://link.springer.com/article/10.1007/s10648-019-09498-w

Saputri, S. N. (2023). Development of Wordwall Educative Games Applications as Learning Media ForUnderstanding PJOK Materials For Elementary Students. *h International Conference on Learning Innovation and Quality Education*. https://jurnal.uns.ac.id/SHES/article/view/80034/42447

Sharma, S. A. (2023). Employing Web 2.0 T eb 2.0 Technologies t echnologies to Suppor o Support Students' Academic t Students' Academic Vocabulary Acquisition. *Michigan*

Reading Journal.
https://scholarworks.gvsu.edu/cgi/viewcontent.cgi?article=1094&context=mrj

Simões, L. (2008). Web 2.0 and Higher Education: Pedagogical Implications. *Knowledge technologies for social transformation, 2*.
https://upcommons.upc.edu/bitstream/handle/2099/5736/l2_pap_Simoes.pdf?seque nce=1&isAllowed=y

Sobecks, B. (2020). Language Acquisition Device and the Origin of Language. *Brain Matters, 2*.
https://ugresearchjournals.illinois.edu/index.php/brainmatters/article/view/689

Sousa, M. (2023). MASTERING MODERN BOARD GAME DESIGN TO BUILD NEW LEARNING EXPERIENCES. *INTERNATIONAL JOURNAL OF GAMES AND SOCIAL IMPACT,, 1*.
https://revistas.ulusofona.pt/index.php/ijgsi/article/view/8516/5248

Suleiman, M. M. (2020). Effective Utilization of ICT Tools in Higher Education. *Journal of Xidian University*. https://d1wqtxts1xzle7.cloudfront.net/64416651/JXU_-
_Effective_Utilization_of_ICT_Tools_in_Higher_Education-
libre.pdf?1599906447=&response-content-
disposition=inline%3B+filename%3DEffective_Utilization_of_ICT_Tools_in_Hi.pdf&Expi res=1700634812&Signature=B

Swari. (2023). WORDWALL AS A LEARNING MEDIA TO INCREASE STUDENTS'READING INTEREST. *Jurnal Pendidikan Bahasa Inggris Indonesia, 1*.
https://ejournal2.undiksha.ac.id/index.php/jpbi/article/view/1572/1017

Tu, J.-C. (2022). Exploring the Impact of Puzzle Games for the Elderly from Experiential Learning. *ScienceDirect*.
https://www.sciencedirect.com/science/article/abs/pii/S1871187122001109

Turg`unova, F. (2023). DEVELOPING SKILLS IN STUDENTS IN ALL AREAS TO IMPROVE LANGUAGE SKILLS. *Journal of Foreign Languages and Linguistics*.
https://fll.jdpu.uz/index.php/fll/article/view/7915

V, C. (2022). DO KAHOOT! GAMES ENHANCE VOCABULARY. *JOURNAL OF ELEMENTARY EDUCATION*. file:///C:/Users/DELL/Downloads/2410-Article%20Text-6787-1-10-
20220923.pdf

Woodeson. (2023). Students' Vocabulary Learning Difficulties and Teachers' Strategies: A Qualitative Case Study of Ammartpanichnukul School, Krabi in Thailand. *Advance Knowledge for Executives, 15*.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4393641

ANNEXES

Annex 1. Approval

ANEXO 3
FORMATO DE LA CARTA DE COMPROMISO.

CARTA DE COMPROMISO

Ambato, 11 Septiembre 2023

Doctor
Marcelo Nuñez
Presidente
Unidad de titulación
Facultad de Ciencias Humanas y de la Educación

Yo, Maria Gabriela Camino Cepeda , en mi calidad de Rectora de la Unidad Educativa Glenn Doman, me permito poner en su conocimiento la aceptación y respaldo para el desarrollo del Trabajo de Titulación bajo el Tema: "Interactive games (wordwall) and Vocabulary learning" propuesto por el estudiante Hurtado Yanez Christian Daniel, portador de la Cédula de Ciudadania, 1804429775 estudiante de la Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros, de la Facultad de Ciencias Humanas y de la Educación de la Universidad Técnica de Ambato.

A nombre de la Institución a la cual represento, me comprometo a apoyar en el desarrollo del proyecto.

Particular que comunico a usted para los fines pertinentes.

Atentamente,

Mg. Maria Gabriela Camino Cepeda.
Rectora
C.I. 1802525814
Telf.0995346636
Email.esc.glenndoman@gmail.com

Annex 2. Survey Validation Cronbach's Alpha

Estadísticas de fiabilidad

Alfa de Cronbach	N de elementos
.854	18

Estadísticas de total de elemento

	Media de escala si el elemento se ha suprimido	Varianza de escala si el elemento se ha suprimido	Correlación total de elementos corregida	Alfa de Cronbach si el elemento se ha suprimido
When I complete quizzes, I improve my understanding.	65.20	49.289	.775	.832
I improve my vocabulary and learn new ideas and concepts when I complete different crossword puzzles.	65.40	48.267	.762	.831
I concentrate more when I work with activities to retain information.	65.10	53.433	.363	.852
I like working with line-matching activities because they help me learn more words and definitions.	65.30	56.900	.189	.856
When I work with various puzzles, they help me enhance my reasoning as they have recognition patterns.	65.40	55.378	.326	.852
I like to answer different questions that need to be answered within a limited timel.	65.90	49.656	.620	.838
I use various online flashcards to retain different definitions and terms.	65.40	46.933	.879	.824
When I create new words with jumbled letters, I learn and retain more vocabulary.	65.70	52.456	.575	.842
I use activities of answering questions consecutively to retain more vocabulary.	65.20	46.622	.772	.829
I improve my vocabulary and learn new ideas and concepts when I play maze games.	65.80	44.622	.910	.819
I can memorize more vocabulary when I read, repeat, or listen. (Memory Strategy).	65.00	58.667	-.023	.864
I learn new vocabulary when I associate it with a general context. (Determination Strategy).	65.10	58.544	-.022	.866
I learn new vocabulary when I share ideas with the class and do group activities. (Social Strategy).	65.20	55.956	.378	.851
I learn vocabulary best by taking notes or repeating the words out loud. (Cognitive Strategy).	65.50	57.611	.136	.857
I learn vocabulary best when I have conversations with my classmates and transcribe. (Metacognitive Strategy).	65.50	59.167	-.075	.862
I increase my vocabulary when I use online flashcards, and real materials. (visual Techniques).	65.40	50.711	.557	.842
I increase my vocabulary when I use class objects. (visual Techniques).	65.30	54.011	.263	.858
I increase my vocabulary when listening or reading (receptive skill).	65.00	54.667	.404	.849

Annex 3. Turnitin Report

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41

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| 9 | Submitted to Mae Fah Luang University
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| 10 | Kristina Kramarczuk, Jandelyn Plane, Kate Atchison. "First-Generation Undergraduate Women and Intersectional Obstacles to Pursuing Post-Baccalaureate Computing Degrees", 2021 Conference on Research in Equitable and Sustained Participation in Engineering, Computing, and Technology (RESPECT), 2021
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