CAPÍTULO 1

USING NEARPOD APPLICATION ON ENHANCING ENGLISH VOCABULARY LEARNING AMONG NINTH-GRADE STUDENTS

USO DE LA APLICACIÓN NEARPOD PARA MEJORAR EL APRENDIZAJE DEL VOCABULARIO EN INGLÉS EN ESTUDIANTES DE NOVENO GRADO

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Abstract

This study investigates the use of the Nearpod application in improving English vocabulary in ninth grade students of upper secondary education in a public school in Loja. The aim of the research was to determine whether the Nearpod tool could help students' ability to improve their vocabulary. A mixed-method approach was used, combining quantitative data through pretest and posttest assessments and qualitative data by using a survey with the Likert's scale. The results show improvements in students' vocabulary, including the appropriate use of words in different contexts, understanding their meaning, and using their structure. This suggests that activities carried out with Nearpod, such as interactive lessons, visual aids, real-time assessments, and customizable lessons by memorization activities, fostered motivation and engagement in vocabulary learning. These results demonstrated that the use of Nearpod as an effective tool improves vocabulary learning in ninth grade students, specifically in form, meaning, and use components.

Keywords: application; interactivity; motivation; pedagogical tool; vocabulary.

Resumen

Este estudio investiga el uso de la aplicación Nearpod en la mejora del vocabulario en inglés en estudiantes de noveno grado de educación media superior de un colegio público de Loja. El objetivo de la investigación fue determinar si la herramienta Nearpod podría ayudar a los estudiantes a mejorar su vocabulario. Se utilizó un enfoque de método mixto, combinando datos cuantitativos a través de evaluaciones pretest y postest

y datos cualitativos mediante el uso de una encuesta con escala de Likert. Los resultados muestran mejoras en el vocabulario de los estudiantes, incluido el uso apropiado de las palabras en diferentes contextos, la comprensión de su significado y el uso de su estructura. Esto sugiere que las actividades realizadas con Nearpod, como lecciones interactivas, ayudas visuales, evaluaciones en tiempo real y lecciones personalizables mediante actividades de memorización, fomentaron la motivación y la participación en el aprendizaje de vocabulario. Estos resultados demostraron que el uso de Nearpod como herramienta eficaz mejora el aprendizaje de vocabulario en estudiantes de noveno grado, específicamente en los componentes de forma, significado y uso.

Palabras Clave: aplicación, interactividad, motivación, herramienta pedagógica, vocaubulario.

1. INTRODUCTION

Learning English vocabulary is essential for students to develop effective language skills, as an extensive vocabulary allows them to understand and use the language efficiently (I. S. P. Nation, 2018). In an ideal environment, teaching methods combine traditional techniques with modern technological tools, increasing student interest and participation. Interactive platforms such as Nearpod are especially useful, as they offer dynamic lessons that encourage retention and practical use of new vocabulary (Tyson, 2021). However, in many classrooms, memorization of words is still prioritized without actively engaging students, which limits their learning. Therefore, it is essential to create an environment where students not only acquire vocabulary, but also actively use it in their daily lives.

As important as learning English vocabulary is, many students in Ecuador face problems that limit their learning. For example, conditions in schools present major obstacles: access to modern technology is limited and teaching methods are often largely traditional (González, 2020). However, in a world where interaction and the use of technology are key to learning, students are placed in classrooms that do not encourage their active participation. Unfortunately, this creates a huge gap between what should be—a dynamic, student-centered educational approach—and the reality of a system that focuses more on memorizing words without giving the necessary tools to use them in practice. As a result, students not only have difficulty learning new vocabulary, but they also lose motivation and interest in the language (Javed, 2021).

Previous studies have highlighted the potential of Nearpod as a tool to enhance English learning and student engagement. For example, Burton

(2019), at Griffith University in Australia, found that Nearpod helps create a positive learning environment that facilitates vocabulary acquisition through interactive activities. Similarly, Simpson (2024) at the University of Louisville, highlighted how Nearpod's customizable features allow teaching to be tailored to different learning styles, helping teachers engage students. In Vietnam, Nguyen & Nguyen (2023) studied the perceptions of English learners in online classes and concluded that Nearpod increases student engagement and confidence. Finally, Sanmugam & Selvarajoo (2019) at Sains University in Malaysia, compared Nearpod to traditional teaching methods, showing that this platform fosters more dynamic learning, although it faced some technical challenges. These studies show the effectiveness of Nearpod in language learning, although more research is needed on its impact in Latin American contexts to better understand its benefits and limitations.

Although the above studies highlight the value of Nearpod for teaching English, there are some important shortcomings that require further exploration. First, most research has been conducted in specific contexts, such as Australia, the United States, Vietnam, and Malaysia, which limits the generalizability of the results to other settings, such as Latin America. Furthermore, the available studies do not explore in depth how students' sociodemographic or cultural characteristics influence their perception and effectiveness of using Nearpod, leaving a gap in the literature on its impact on diverse populations. It is also necessary to consider that the samples studied do not include high school students or those from contexts with low technological access, which limits the understanding of the potential of Nearpod in environments with limited resources (García, López, & Pérez, 2020). These gaps point to the importance of expanding research towards underrepresented groups and in varied contexts, replicating studies in different regions to validate or contrast previous

findings, as well as to adapt learning strategies to the needs of specific contexts.

This study is relevant because it addresses the teaching of English through interactive technological tools in Latin American contexts, where access to modern resources may be limited. Teachers, students, administrators, and educational policy makers will benefit from this research. For teachers, this study offers methodological alternatives that encourage active student participation and improve vocabulary retention. Students, in turn, could experience more effective and motivating learning, moving away from traditional approaches based on memorization. School administrators and educational policy makers may also find in this study support for implementing technology such as Nearpod in their institutions, supporting an updated, student-centered teaching model (Hakami, 2020). In a global context where English proficiency is increasingly necessary, especially in the workplace, this study provides a basis for improving language teaching and, therefore, expanding the academic and professional opportunities of students in the region.

This study aims to analyze how digital tools such as Nearpod can enhance English vocabulary learning compared to traditional methods. The research is valuable for students, teachers, and the educational community as it addresses the need for more effective and motivating methods. Since conventional methods have limitations, especially without interactive technology that encourages participation, the study seeks to demonstrate how digital tools can offer more dynamic and effective vocabulary learning. Thus, the general objective of the research is to examine the effectiveness of Nearpod as a tool for enhancing English vocabulary learning among ninth-grade students at a Public School in Loja, during the 2024-2025 school year. The present Research aims to answer the following research

questions: How effective is Nearpod in enhancing English vocabulary learning among students compared to traditional vocabulary learning methods? To solve this question, it is necessary to answer the following question: How do students perceive the interactive features of Nearpod as a tool for learning vocabulary? By answering these questions, the study will provide important information on how the Nearpod can improve English language learners' vocabulary.

2. LITERATURE REVIEW

2.1 The Importance of Vocabulary Learning in English

Vocabulary is the foundation of any language learning process, and mastering a broad vocabulary is crucial for effective communication in English. Hatch & Brown (2015) define vocabulary as the collection of words an individual uses to express thoughts, ideas, and emotions. In language learning, vocabulary directly influences the ability to read, write, listen, and speak fluently. Schmitt (2000) points out that a robust vocabulary improves critical thinking and understanding of complex ideas, which is essential in academic and professional settings.

However, traditional methods of teaching vocabulary often fall short in fostering deep, lasting word retention. These traditional techniques rely heavily on rote memorization and passive learning methods. In contrast, digital tools, like the Nearpod platform, are transforming vocabulary instruction by creating more engaging and interactive experiences for learners. This literature review will explore traditional teaching methods, the role of digital resources, and how Nearpod enhances vocabulary learning through interactive and personalized strategies.

2.2 Factors of vocabulary

- **Use:** It is the way words are used in different contexts when making a sentence. In addition, it implies understanding when to use words in formal or informal moments, for which it is necessary to know the social and cultural context (McCarthy & O'Dell, 2017). As a result, vocabulary is necessary to elaborate the message to be communicated, since it is an important part of linguistics and communicative competence.
- **Meaning:** Knowing the definition of a word, it is important to understand its nuances and the different contexts in which it can be used Words can have various meanings depending on the context (Jackson & Amvela, 2000). For example, "home" can be used to detail qualities such as warmth or comfort. Understanding such meaning is necessary to craft or manifest well-structured words to convey thoughts and emotions appropriately.
- **Form:** The form of vocabulary includes structural aspects of words, which are: morphology, phonology and spelling (Laufer, 2006). First, morphology helps students recognize the patterns and rules that govern the formation of each word, such as prefixes, suffixes, and roots. Then, phonology allows for correct pronunciation and writing, which are important for improving linguistic skills and the ability to perceive and generate language accurately. Lastly, spelling allows us to identify the types of words, such as nouns, verbs, adjectives, and adverbs.

2.3 Activities to learn the Use of vocabulary:

Interactive Lessons. Nearpod proposes some benefits for learning English vocabulary in classroom. One of the most important benefits in this platform is the ability to create joining and interactive lessons. Also, by

incorporating multimedia elements, for example: slides, videos, songs, and collaborative tools. Additionally, this app "makes learning more dynamic and helps learners better understand and retain new language" (Sanmugam & Selvarajoo, 2019). Because of these elements, learners that are visual, auditory, or kinesthetic will all benefit from the lessons.

Real-Time Assessment Tools. These allow teachers to monitor learners progress and understanding, making it easier to identify areas where students may need additional support. "This can be done through quizzes, polls, and open-ended questions, allowing teachers to provide immediate feedback and address any misunderstandings promptly" (Worrell, 2021).

2.4 Activities to learn the Meaning of vocabulary:

Visual Aids. These **activities** are complementary and help the teacher to improve students' vocabulary since most of them learn by observing. The **most used** visual aids are flashcards, graphs, and mind maps because they connect words with images, thus reinforcing word comprehension through visual representation. As a result, this visual connection helps learners retain and remember new vocabulary by associating words with visual cues, making the learning process more interactive and effective.

Mnemonics and Acronyms. "To additional reinforce memory, mnemonics and acronyms serve as effective tools, supporting students to recall words more easily by associating them with memorable phrases or concepts**"** (Atkinson, 2021). These retention aids make it easier to learn new English vocabulary by connecting words to well-known and easily remembered associations.

2.5 Activities for learning vocabulary Form:

Customizable Lessons and Resources. In Nearpod application there is a library with different lessons and academic resources that help teachers to design lessons to help the individual needs of their students, in order to encourage a personalized learning experience. Definitely, Nearpod application has an important option that permit design lesson that adapt to the diverse needs and learning pace of students, improving the overall effectiveness of each class (Sanmugam & Selvarajoo, 2019).

2.6 Traditional Vocabulary Teaching Methods

Historically, vocabulary learning has been approached through methods such as memorization of word lists, fill-in-the-blank exercises, and spelling tests. Mediha & Enisa (2014) describe these techniques as "direct instruction," where teachers provide words for students to memorize without offering much context for real-world application. The limitation of these traditional methods is that they treat vocabulary learning as an isolated task rather than integrating it into meaningful communication or contextual activities. As a result, students often struggle to retain and apply the words they learn, which can hinder their overall language development.

Richards & Rodgers (2014) argue that these methods are effective to some extent, especially for beginners, but they lack the interactivity and engagement needed to sustain long-term vocabulary retention. Students are often expected to memorize words without fully understanding their usage, which can lead to confusion, frustration, and a lack of motivation to continue learning. Additionally, these techniques do not cater to different

learning styles; for example, visual and auditory learners may find it difficult to engage with simple text-based activities.

In summary, while traditional methods provide a foundational approach to vocabulary learning, they are limited in their ability to make the process engaging and relevant to students' lives. This has led educators to explore more innovative teaching strategies, particularly those that leverage technology to create more interactive and personalized learning experiences.

2.7 The Shift Toward Digital Resources in Education

With the rise of technology, education has seen a significant shift towards integrating digital resources into the classroom. Digital tools not only make learning more engaging but also allow for a more personalized approach, accommodating the diverse needs of students. Mayer (2021) defines digital resources as tools that use multimedia, such as text, audio, video, and animations, to enhance learning experiences. These tools provide teachers with the ability to create lessons that are interactive, dynamic, and tailored to the learning styles of individual students.

Dillenbourg, Schneider, & Synteta (2002) emphasize that digital platforms, such as Nearpod, offer a range of resources that can support both teaching and collaboration. These platforms create a more interactive environment where students can engage with content in real-time, participate in quizzes, and collaborate with their peers. Additionally, digital resources allow students to access learning materials from any location, at any time, which is especially beneficial for learners with irregular schedules or those who need extra time to absorb information.

The accessibility and flexibility provided by digital resources have transformed the way vocabulary is taught. Rather than relying solely on textbooks and worksheets, teachers can now incorporate multimedia content, real-time assessments, and collaborative activities into their lessons. This shift has not only made learning more engaging but has also improved students' ability to retain and apply new vocabulary.

2.8 Nearpod: A Digital Resource for Vocabulary Enhancement

Nearpod is an interactive platform that has gained popularity in educational settings for its ability to create engaging and effective lessons. Sanmugam & Selvarajoo (2019) describes Nearpod as a versatile tool that supports a wide range of content formats, making it suitable for both in-person and remote learning environments. The platform allows teachers to design lessons that include multimedia elements such as videos, interactive slides, and quizzes, which cater to various learning styles.

One of the key features of Nearpod is its real-time assessment tools, which provide immediate feedback to both teachers and students. Worrell (2021) highlights that these assessments, including polls, quizzes, and open-ended questions, allow teachers to gauge students' understanding of new vocabulary and address any gaps in knowledge promptly. This real-time feedback is essential for ensuring that students are on track and allows teachers to adjust their lessons accordingly.

Nearpod also offers a library of customizable lessons and resources, which teachers can adapt to the specific needs of their students. Sanmugam & Selvarajoo (2019) notes that this flexibility allows for a more personalized learning experience, as teachers can modify lessons to suit the pace and learning style of each student. By catering to individual needs, Nearpod

enhances the effectiveness of vocabulary teaching and helps students retain new words more effectively.

2.9 Interactive Strategies for Vocabulary Learning Using Nearpod

One of the main advantages of Nearpod is its ability to make vocabulary learning more interactive and enjoyable for students. Atkinson (2021) points out that interactive activities, such as word games and puzzles, can transform vocabulary learning into a fun and engaging process. These activities encourage students to actively participate in the learning process, rather than passively memorizing words.

For example, Nearpod allows teachers to incorporate word searches, crossword puzzles, and matching games into their lessons. These activities not only help students learn new vocabulary but also improve their ability to recall and use the words in different contexts. By making learning more engaging, these interactive strategies help students stay motivated and interested in expanding their vocabulary.

Visual aids are another important strategy for vocabulary learning. Visual learners, in particular, benefit from seeing words associated with images or diagrams, which helps reinforce their understanding of the word's meaning. Burton (2019) notes that Nearpod allows teachers to use flashcards, graphs, and mind maps, which visually connect words with their definitions and usage. These visual aids make it easier for students to remember new words and understand their context.

Auditory techniques also play a crucial role in vocabulary acquisition. Listening to words in different contexts helps students develop a better understanding of their meanings and usage. Le Huynh Ha Van (2024) explains that incorporating songs, podcasts, and conversations into lessons

allows students to hear new vocabulary in real-life scenarios, which reinforces their comprehension. Nearpod supports the use of these auditory techniques by allowing teachers to embed audio files and videos into their lessons, providing students with diverse listening experiences.

2.10 Challenges and Considerations in Using Nearpod

Despite its many advantages, the use of Nearpod in vocabulary learning is not without challenges. One of the main issues is access and equity. Worrell (2021) notes that not all students have access to the necessary technology, such as computers or stable internet connections, which can create barriers to using Nearpod effectively. This digital divide can limit the platform's ability to reach all students, especially those in underserved communities.

Another challenge is teacher training and support. To use Nearpod effectively, teachers must be comfortable with the platform and know how to integrate it into their lessons. Without proper training, teachers may struggle to use all Nearpod's features, which could diminish the platform's effectiveness in enhancing vocabulary learning. Worrell (2021) emphasizes the need for professional development and support for teachers to ensure they can fully utilize Nearpod's potential.

Managing distractions is another concern when using digital resources in the classroom. Schmitt (2000) points out that students may become distracted by other applications or websites while using digital devices for learning. To mitigate this, teachers must establish clear guidelines and create engaging lessons that keep students focused on the content.

2.11 Effectiveness of Nearpod in Vocabulary Learning: A Comparative Analysis

Several studies have examined the effectiveness of Nearpod in enhancing student engagement and vocabulary acquisition. Burton (2019) conducted a study at Griffith University, Australia, which found that Nearpod significantly improved classroom engagement through its interactive features. The study concluded that students who used Nearpod in vocabulary lessons were more likely to retain and apply new words than those who relied solely on traditional methods.

Similarly, Hakami (2020) highlights Nearpod's adaptability to different teaching needs and learning styles. His study at the University of Louisville demonstrated that Nearpod's interactive features, such as real-time assessments and multimedia content, helped improve students' overall learning experience. Students reported feeling more motivated and engaged when using Nearpod, which contributed to better vocabulary retention.

Le Huynh Ha Van (2024) also conducted a study in Vietnam, focusing on students' perceptions of Nearpod in online English classes. The study found that Nearpod significantly improved student interaction and participation, which are critical factors in vocabulary learning. The results showed that students felt more confident using new vocabulary after engaging with Nearpod's interactive activities.

2.12 The Role of Nearpod in Vocabulary Learning

In conclusion, vocabulary learning is an essential component of mastering the English language, but traditional teaching methods often fail to engage students or promote long-term retention. Digital resources, particularly

Nearpod, offer a promising alternative by providing interactive, personalized, and engaging learning experiences. Using multimedia, real-time assessments, and customizable lessons, Nearpod helps students develop a deeper understanding of new vocabulary while catering to their individual learning styles.

Although challenges such as access to technology and teacher training remain, the benefits of using Nearpod in vocabulary instruction far outweigh the limitations. Studies have shown that students who use Nearpod are more engaged, motivated, and successful in retaining new vocabulary compared to those who rely solely on traditional methods. As technology continues to evolve, platforms like Nearpod will play an increasingly important role in enhancing language learning.

3. METHODOLOGY AND METHODS

3.1 Research Setting

The research was carried out during the 2024-2025 academic year in a public school in the city of Loja. This research sought to improve English vocabulary learning through Nearpod among students. In addition, the study responded to an action research model, involving key steps such as planning, acting, developing, and reflecting (Mertler, 2016). It should be noted that this research work employed a mixed approach, which refers to the combination of quantitative and qualitative methods within the same study to provide a more complete understanding of the research problem. Finally, the hypothetico-deductive method in scientific research and critical analysis were used to develop and test theories or hypotheses about the observed phenomena.

3.2 Research Participants

The study population consisted of 28 ninth-grade students from a high school, selected through a convenience sampling method based on their availability and accessibility. These students, aged 13 to 14 years, had an A1 level of proficiency in the English language according to the Common European Framework of Reference for Languages and faced similar challenges in learning English vocabulary. Due to their age, their legal guardians provided signed consent, authorizing the researcher to implement various classroom activities and strategies.

3.3 Research Approach and design

This research study employed a mixed-methods approach, combining quantitative and qualitative methods to achieve a comprehensive understanding of the research problem. The quantitative approach involved the systematic study of phenomena through the collection and analysis of numerical data, while the qualitative approach focused on interpreting the meaning of human experiences, behaviors, and interactions within their natural context (Creswell & Creswell, 2018). Both approaches addressed the research sub-questions. Quantitative data were collected to assess improvements in students' vocabulary learning before and after using Nearpod, while qualitative data captured students' perceptions of the tool. This combined approach strengthened the findings and enhanced the study's credibility.

3.4 Data Collection Sources and Techniques

The researcher used two techniques and instruments to collect quantitative and qualitative data in this study. At the beginning, a test technique was applied with a "pre-test, and at the end of the study a post-test as data collection instruments" (Creswell & Creswell, 2018). The pre-

test was applied to evaluate the knowledge of students in vocabulary in English before the intervention plan. In turn, the post-test was used to analyze the level of improvement in vocabulary learning in terms of form, meaning and use of words. It is important to note that the national grading scale of the Ministry of Education was used as reference of students' scores obtained in the pretest and posttest. In this sense, both tests were designed with ten multiple choice questions, where students had to select the correct answer from the options given.

The second technique employed was a survey using a questionnaire as the research instrument (Kumar, 2011). The questionnaire included five Likert's scale questions, ranging from "strongly agree" to "disagree," designed to gather students' perceptions of various activities implemented through Nearpod. These activities included "Interactive Lessons", "Real-Time Assessment Tools," and "Customizable Lessons and Resources." Additionally, an open-ended question was included after each closed-ended question to explore why students held certain perceptions regarding each activity. This allowed the researcher to gain deeper insights into the students' responses, offering a more comprehensive understanding of their views. The open-ended responses helped justify and clarify the answers to the closed-ended questions, providing context and further explanation to the quantitative data collected.

3.5 Data analysis

The quantitative data collected from the pre-test and post-test were analyzed using inferential statistics (Creswell & Creswell, 2018). This approach enabled the researcher to assess the central tendency of the grades obtained by basic high school students before and after the

implementation of the intervention plan. Additionally, the quantitative data from the questionnaire were analyzed using descriptive statistics, including frequencies and percentages, to present the students' perceptions regarding the use of Nearpod. These perceptions were related to activities such as interactive lessons, visual aids, real-time assessments, customizable lessons, and memorization activities.

Qualitative data were analyzed through thematic analysis, which allowed the researcher to validate the findings from the open-ended questions. The researcher used JAMOVI for conducting the entire data analysis process. Using JAMOVI, descriptive statistics were first applied to examine the distribution of the data, followed by inferential tests to determine if the observed patterns were statistically significant (Sánchez, 2023). This combination of descriptive and inferential analysis, facilitated by JAMOVI software, allowed the researcher to draw meaningful conclusions and insights from the data.

3.6 Procedure

This study used practical action research, where the researcher implemented an intervention plan to help students at a public institution in the city of Loja improve their English vocabulary learning. According to Mertler (2016), "The action research model includes four stages: planning, acting, developing, and reflecting". In the first stage, the researcher identified the problem in English vocabulary learning, dialogued with other teachers to gather suggestions on the topic, reviewed relevant information in books and scientific journals to provide further support, and designed the methodology, detailing the study design, context and participants, methods, approaches, instruments, techniques, and data analysis procedures. It should be noted that a consent letter authorized by the

students' representatives was applied, since they were students. In the second stage, the researcher implemented the intervention plan using four Nearpod activities aimed at improving students' vocabulary learning in terms of meaning, use, and form. This process was monitored and evaluated by applying test and survey techniques with a pre-test, a post-test, and a questionnaire as data collection instruments. In the third phase, the researcher carried out an action plan to implement changes in Nearpod, which enabled future teachers to obtain better results in students' vocabulary learning. Finally, in the last stage that is results and findings, the researcher reported to the educational community and offered recommendations for future research.

4. RESULTS

Theme: Using Nearpod application on enhancing English vocabulary learning among ninth-grade students at a Public School in Loja. School year 2024-2025

Objective:

To examine the effectiveness of Nearpod as a tool for enhancing English vocabulary learning among ninth-grade students at a Public School in Loja, during the 2024-2025 school year.

Tabla 1.

Pre-test for vocabulary learning

Vocabulary Components	N	Mean	SD	Minimum	Maximum
Use (4 points)	28	2.38	0.69	1.25	3.5
Meaning (3points)	28	2.24	0.68	0.75	3

Form (3points)	28	1,72	0.85	0.50	3
TOTAL Pretest (10 points)	28	6.35	1.60	3.25	9

Table 1 presents 28 students' scores obtained in the pretest. This instrument was administered with the purpose of measuring knowledge about vocabulary factors: "use", "mining", and "form". All in all, students got less than 70% of the total mean score (6.35/10) with a standard deviation of 1.60. Unfortunately, their mean scores were low; they ranged from 3.25 to 9. The total mean score represented an issue for the teacher-researcher who decided to carry out this action research with his ninth-grade students.

From the three factors under study, "form" got the lowest mean score (1.72/3) with a standard deviation of 0.85, and the scores ranged from 0.50 to 3 points. These results show that students did not fully understand the form of the vocabulary nor were they able to use pronunciation and writing correctly, or to understand the functions of the different grammatical classes in a sentence. This makes sense, when analyzing the indicator for "mining" in which students obtained 2.24/3 (SD 0.68) in a range of 0.75 to 3 points. These results show that students did not fully understand the "meaning" of vocabulary, including its definition, connotation and use in different contexts, which is essential to express thoughts and emotions appropriately and understand language and communication.

Regarding "use", the results indicate that students obtained a little more than half of the total score (2.38/4), the standard deviation of 0.69. It is worth noting that the students' scores in "use" of vocabulary ranged between 1.25 and 3.5 points, this implies that no student achieved the highest score. These results show that students did not understand how to

use words according to context or distinguish between formal and informal situations, which is essential to construct clear and effective messages in communication.

Table 2.

Post-test for vocabulary learning

Vocabulary Components	N	Mean	SD	Minimum	Maximum
Use (4 points)	28	3.11	0.62	2	4
Meaning (3points)	28	2.66	0.45	1.5	3
Form (3points)	28	2.25	0.64	1	3
TOTAL Posttest (10 points)	28	8.02	1.03	5.5	9.7

On the other hand, Table 2 presents the same scores of the 28 students after the intervention. They were given a posttest to measure their knowledge of the vocabulary skills: “use”, “mining” and “form”. In general, the results show that the students obtained a total average score of 8.02/10 (SD 1.03), which exceeded the average score of 7 points proposed by the researcher (scale of the Ministry of Education). It is noted that the average scores ranged between 5.5 and 9.7 points, which are higher than those achieved in the pretest.

For “form,” the mean score increased to 2.25 (SD = 0.64), with all students scoring between 1 and 3 points. This indicates that students were able to understand the structure of words, including their spelling, pronunciation, and how they are formed. The improvement in this component suggests that the Customizable Lessons delivered through Nearpod were effective in helping students understand the “form” of vocabulary.

On the other hand, "meaning" showed an increase, with a mean score of 2.66 (SD = 0.45). Students demonstrated a greater ability to understand the definition or idea that a word conveys, with scores ranging from 1.5 to 3. This improvement highlights the role of Visual Aids and Activity for Memorizing in teaching the "meaning" of English vocabulary.

Finally, "use" had the highest mean score of 3.11 (SD = 0.62), with students scoring between 2 and 4 points. This reflects that students know how and when to use a word in different contexts, thanks to activities such as Interactive Lessons and Real-Time Assessment delivered through the Nearpod app. The total posttest score increased to 8.02 out of 10 (SD = 1.3), with scores ranging from 5.5 to 9.7. This increase in total score underlines the steady improvement in students.

Table 3.

Normality test Shapiro Wilk – Pretest/Posttest for vocabulary learning

		Shapiro-Wilk	
Tests	**N**	**W**	**P**
Pretest	28	0.96	0.51
Posttest	28	0.94	0.15

Once the results of the pretest and posttest were explained, the Shapiro-Wilk test showed a normal distribution of the data for the pretest (0.51) and the posttest (0.15). Therefore, a parametric test (paired T test) was used to determine whether the difference between the pretest and posttest results was statistically significant, as shown below.

Table 4.

Paired Samples T-Test

Comparison			statistic	gl	p
Pretest	Posttest	T de Student	-9.09	27	<.001

Table 4 presents the results of the Paired T-Test which compares the pretest and posttest taken by 28 participants of this study (ninth graders) to see if there is a statistically significant difference between them. The value - 9.09 reflects a large t-value that indicates a significant difference between the pretest and posttest. Similarly, the p-value < .001 is less than .001, which indicates a very strong statistical significance. In other words, there is a high probability (99%) that the intervention to improve vocabulary factors of ninth grade students was effective.

Questionnaire Results

Objective

- To describe students' perceptions about the Nearpod application in acquiring English vocabulary learning.

Table 5.

Perceptions for vocabulary learning

Indicators	Strongly agree	Agree	Disagree	Strongly disagree
Interactive Lessons	21%	61%	4%	14%
Visual Aids	21%	46%	29%	4%
Real-Time Assessment	53%	39%	4%	4%

Customizable Lessons	14%	40%	39%	7%
Activity For Memorizing	18%	49%	29%	4%

The results of the post-intervention questionnaire, presented in Table 5, reveal students' perceptions of the benefits of the activities implemented through Nearpod to improve vocabulary. In the case of Interactive Lessons, 61% of students agreed that this activity was beneficial, 21% strongly agreed, 14% strongly disagreed, while the remaining 4% disagreed. This level of agreement reflects the importance of this activity to practice the use of words in different contexts (formal and informal) and everyday situations.

In the case of Visual Aids, 46% of students agreed, while 29% disagreed, 21% strongly agree, while only 4% strongly disagreed, indicating that most students recognized the value of this activity to clearly associate words with their meaning.

When asked about Real-Time Assessment, 53% of students strongly agreed, 39% agreed, 4% strongly disagreed, and the remaining 4% disagreed. This response highlights the importance of understanding correct word usage, being able to correct mistakes in real time, and improving vocabulary comprehension.

The Customizable Lessons received very positive feedback, with 40% of students “agreeing” that the activity improved their vocabulary, 39% “disagreeing,” 14% “strongly agree,” and 7% “strongly disagree.” This result underscores the importance of these types of lessons for learning word structure.

Regarding the "Activity for Memorizing", 49% of the students "agree", while 29% "disagree", on the other hand, 18% answered "strongly agree" while the remaining 4% chose the option "strongly disagree", which indicates that the activity helped students remember the meaning of words through activities that reinforce the association of vocabulary with its definition.

Finally, the results of the questionnaire show that the activities "Real-Time Assessment" and "Interactive Lessons" received high ratings, reflecting their importance in helping students improve their vocabulary effectively. Although the proposals "Visual Aids" and "Activity for Memorizing" received slightly lower ratings, most students agreed on their importance and application. Finally, the least accepted activity was "Customizable Lessons" but despite this, it helps to improve specific aspects of vocabulary, such as spelling, phonology and morphology. Most comments highlight the success of the intervention in improving vocabulary aspects.

5. DISCUSSION

This research aimed to explore how activities through the Nearpod app could improve aspects of English vocabulary among ninth-grade students of basic general education in a public school in Ecuador. The action research design focused on addressing the central question: How effective is Nearpod in enhancing English vocabulary learning among students compared to traditional vocabulary learning methods? and the sub-question was: How do students perceive the interactive features of Nearpod as a tool for learning vocabulary?

To answer these questions, the study assessed the vocabulary skills of 28 students before and after an eight-week intervention, using pre- and post-tests graded according to an A1 rubric. In addition, a questionnaire using a rubric consistent with the Ecuadorian Ministry of Education collected students' perceptions of the activities implemented using Nearpod. Quantitative results revealed statistically positive improvements in vocabulary mastery, while qualitative data highlighted students' positive perceptions of the activities implemented through Nearpod.

The study on Nearpod, conducted by Burton (2019), concludes that this technological tool fosters a positive environment for learning vocabulary, although it does not specify the number of participants or offer quantitative data. On the other hand, the present study details the participation of 28 students and uses a post-test to assess technical vocabulary skills, showing an average improvement of 8.02/10, higher than the proposed goal of 7 points. While the Nearpod study focuses on the general usefulness of the platform, the second one provides concrete statistical evidence, which allows a more precise evaluation of the impact of the intervention.

Simpson (2024) analyzes in general how the platform can personalize content and adapt to different educational needs, concluding that it is an innovative tool for teaching English in various modalities. On the other hand, the present study focuses on the improvement in the understanding of the structure of words ("form"). This quantitative analysis shows that the average scores increased to 2.25 (SD = 0.64), evidencing that Nearpod's customizable lessons helped students to better understand vocabulary. While Ashe offers a broad view of Nearpod's potential, the second study demonstrates its practical impact in specific areas of learning.

Nguyen & Nguyen (2023) study focuses on the perceptions of 68 first-year students, showing that Nearpod improves interaction, motivation, and confidence in online English classes. On the other hand, the present study analyzes "meaning" and "use," where students achieved average scores of 2.66 and 3.11, respectively, thanks to tools such as visual aids and interactive lessons. While the first study highlights the general impact of Nearpod on the virtual learning experience, the second provides concrete evidence of how the platform's activities improve specific language skills.

Activities such as interactive lessons, visual aids, real-time assessments, customizable lessons, and memorization activities are essential to improving vocabulary through Nearpod. These tools allow students to actively participate in the learning process, adapting content to their individual needs and learning styles. For example, visual aids and memorization activities facilitate the understanding and retention of new terms, while real-time assessments provide immediate feedback, helping to correct errors and reinforce concepts. Additionally, customizable lessons allow teachers to design specific activities that align with learning objectives, while interactive lessons encourage student participation and engagement. This dynamic and adaptive approach makes Nearpod a powerful tool to enrich students' vocabulary in an effective and motivating way.

One of the main limitations of the study was the absence of a control group, which makes it difficult to compare the results obtained with a group that did not receive the intervention. Having a control group would have allowed the teacher to observe not only the results, but also the process, evaluating how students receive the content and develop their skills compared to the intervention group. In addition, it would have been useful to analyze whether the benefits of Nearpod, such as motivation, active

interaction and participation, would have been maintained in a focus group where teaching was done in a traditional way, without using this tool. Furthermore, the limited time of the intervention was an important constraint, as it did not allow for the assessment of the long-term effects of using Nearpod on vocabulary learning. Furthermore, the student sample was relatively small, making it difficult to generalize the results to other educational contexts. Another limitation was the lack of detailed follow-up on how students applied the learned vocabulary in practical or communicative situations.

6. CONCLUSIONS

The use of Nearpod in this study proved to be an effective tool for improving vocabulary learning in ninth graders. The results showed significant improvement in vocabulary components, highlighting the potential of platforms such as Nearpod for teaching languages.

This study showed that students had a positive perception of Nearpod for learning English vocabulary. They highlighted the interactive lessons, visual aids, and real-time assessments as useful tools. However, some preferred traditional methods. Overall, Nearpod was seen as an effective tool for improving vocabulary.

7. AUTHORS' CONTRIBUTION

FGAG: Data collection.

JFTS: Analysis of results.

ANVL: Discussion

MRAR: Final review of the article.

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