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**Use of Plickers app as an English Tool to Improve Vocabulary of Fourth Grade Students
at Jose Navarro Araya school, During 2024.**

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Chapter I

Introductory Framework

This first chapter presents different parts of the research that are of utmost importance because an explanation is provided, which consists of explaining what the research is based on. Research as the approach. This chapter is made up of the following points: the problem statement on which the facts of the research are based, the general and specific objectives with the fundamental points to be developed, the justification of the study developing the reason why the thesis is carried out, in addition, the background which presents complementary data provided by different people and their respective comments, as well as the scope obtained with the research. On the other hand, this chapter aims to show the problem and how to act in this educational situation that occurs in the institution, which is to improve students' vocabulary during their English lessons.

1.1 Problem Statement

The field of teaching and learning English with the use of applications has drawn the attention of numerous people since it increases the understanding of world events and the deciphering of information, which will make children stand out from a young age and obtain better opportunities in the future. According to Wardak (2020), most words are learned rote and mechanically through smartphone applications without being used in academic assignments. Furthermore, the main objective of this research is to describe how using Plickers as an English tool can improve the vocabulary of Fourth-grade students at Jose Navarro Araya School in 2024.

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On the other hand, explain the vocabulary type that is improved by using Plickers and report the methodology used in the lessons while using this application. However, how does the use of Plickers in fourth-grade students at Jose Navarro Araya improve vocabulary? It is because the use of technology has been part of the daily life of each person and child, and it is used in a more useful and innovative way during learning while students enjoy using their cell phones and computers.

At the same time, a collection of data and information is carried out on topics similar to this research, which describe how it is important to improve vocabulary in children, as well as how using technological applications for this purpose manages to attract the attention of students in an interactive and fun way—according to Wardak (2020) motivating EFL students to develop their EAP vocabulary knowledge outside the classroom, informally, in preparation for the formal use of the words in the classroom. This form makes learning and teaching more interesting. In short, the study not only focuses on the Plickers application but also on showing the methodology that can be used, at the same time inspiring the desire of the students to use this application. So, how can using an app like Plickers improve students' vocabulary?

1.2 Objectives of the Investigation

1.2.1 General Objectives.

To analyze Plickers as an English tool to improve the vocabulary of the fourth-grade students at Jose Navarro Araya school, during 2024.

1.2.2 Specific Objectives.

To identify specific vocabulary comprehension and usage problems among fourth-grade students.

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To implement the Plickers app as a tool for vocabulary improvement in fourth-grade classrooms.

To evaluate the impact of the Plickers app on vocabulary retention, student engagement, and overall academic performance in fourth-grade students.

1.3 Justification of the Study

This research is aimed at the interpretation and use of an English tool to improve students' vocabulary more actively. In comparison, before the classes, students were only taught to do the activities on the blackboard or copy it from there. Nevertheless, it was monotonous teaching, making the students feel disinterested and without wanting to carry out the activities. As a result, interruptions can occur. For this reason, the Plickers application is used in addition to expanding students' knowledge of written-visual vocabulary. It is also an interactive application that uses different codes in which students have fun.

Second, there is no specific allocation of time for teaching and learning in obtaining a widened knowledge of this language, but this study is focused on the ages of ten and eleven; however, it can already be instilled, as well as creating scenarios that can improve this ability. On the other hand, by using Plickers, different people are beneficiaries, such as teachers, parents, and even students who show interest in knowing what effect Plickers have in their study, how it works, and what is achieved.

Next, the learning path that students receive constantly changes because all possible methods are used to achieve the primary objective, which is for students to obtain the greatest knowledge, which is why technology increasingly grants more to students. Control over how they learn, making teaching important in their active, digital, and social lives, considering that this is preparing them for the future. All of this is thanks to technology and access to resources

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beyond the classroom walls, considering that it inspires students to solve different activities and become critical thinkers, collaborators, and creators. When technology is successfully integrated into classes, it allows students to develop a love of learning that lasts a lifetime.

This study aims to show how vocabulary can be taught more innovatively using technology (computer and cell phone simultaneously). Despite this, technology is very important because it forms skills, improves attention, and develops analysis skills in each student, which will always be used. At the same time, it uses an interactive application where students enjoy, have fun, and compete in some activities, such as guessing the answer to each question. Additionally, each student uses a different code print, which they can decorate as they want; besides, with these codes, the students have to change the position of the print according to the answer that they want to choose.

Educational applications also encourage great user interaction, breaking the classic passive learning experience that children receive and allowing richer and more effective learning in which the student is also an active participant throughout the process. By taking this issue into account, we want to ensure that the students' lives become the perfect setting for learning and that the barriers of time and space are blurred by using something innovative and allowing learning in any context, inside and outside the classroom.

1.4 Antecedents

Over the years, technology has been an important part of life, influencing all areas. However, we focus on the educational field, in which the use of applications as an alternative way of teaching English to both boys and girls has become very energetic and active. Likewise, teaching

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vocabulary through an application becomes a dynamic way for students to enjoy learning.

Besides, the use of apps on mobile devices to learn English also breaks time and place.

Restrictions. In addition, according to Davis (2023), using any of these apps will surely provide a new, innovative dimension to student learning that will boost their language learning productivity.

Since there are different teaching methods in the English language, the lessons can be given to students in a more revolutionary and different way every day, including changes in the activities. There are more than three methods that can be used when making use of technological applications to improve English skills in students. The research carried out by Ernawati et al. explains each of the methods that can be used when using applications for learning English: grammar-translation, direct method, audio-lingual, silent voice, and physical response. Overall, among others. You can even consider different types of intelligence; according to Ernawati et al. (2019), Students have a different nature as the object in the learning process. Some students enjoy singing, others love drawing, and some of them like reading.

This study shows that using an application to improve the vocabulary of boys and girls works since they acquire much knowledge through something they enjoy just by using a code, even surpassing themselves. It is also an innovative, easy-to-use method that considers new technologies' role in our daily lives since our society is constantly changing.

Smartphone applications are currently used in all areas of life, including education, Ramos (2020). People always use smartphones, computers, or other technology to learn a foreign language, mainly English, since it is the most powerful language around the world encompassing all social, educational, industry, and entertainment areas; therefore, it is an advantage to use an

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application to provide reforming teaching in which students receive effective learning in an original way.

Moreover, English, the most widely used and most needed language, has received many contributions from different people and institutions through applications since they allow different people to study this language more easily. According to Ramos (2020), the appearance of technological devices and the Internet have made the creation of platforms that offer online courses to learn English possible. It is comfortable to use different revolutionary tools suitable for people of different ages who study this language, and all the material used in each activity is always available.

An advantage of using applications is that they present a great variety of practices, quizzes, tasks, and even vocabulary and grammar, so it is striking and distinguished. According to Ramos (2020), Smartphone applications have become a popular way to learn English since students acquire new knowledge without noticing it. Furthermore, that is true because children nowadays depend a lot on technology, and every time they use their phone, tablet, or computer, they acquire knowledge about new things that will help them to develop personally and as professionals, including that they will do it in a way they enjoy.

Finally, these antecedents show that using apps can improve people's vocabulary while using technology; what was mentioned is important today. Then, the field of teaching and learning of different students with smartphones has attracted the attention of researchers for more than a decade because it has improved the quality of education and life. According to Wardak (2020), the development of smartphone applications used for vocabulary development and created by various developers has been positively perceived. It has resulted in numerous applications being

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developed, created, and made available for installation in the smartphone market. Android, as well as in Apple stores and smartphones. For this reason, integrating an application in the lessons can improve the vocabulary of the students, as well as the second graders, and will help them to learn more and, at the same time, develop as people.

This study focuses on vocabulary development, which is considered the priority area in learning English. According to Wardak (2020), academic vocabulary development is important for learners because they must use advanced-level academic vocabulary when submitting academic assignments. For instance, improving kids' vocabulary is useful because they will express themselves better in the future.

On the other hand, People have realized that the use of technology in student learning has been used as a revolutionary and different way of learning the language, and that is why, as new teachers, we must implement it in the teaching that provides so that they can improve each of skills as well as improving vocabulary. In addition, most language and linguistics teachers recognize the importance of vocabulary learning that each student must have since it is the main basis that it is about to learn to communicate with other people using this language.

Providing new knowledge for innovation and opportunities in language teaching and learning to teachers and students has been effective. According to Basal et al. (2018), Vocabulary learning is one of the most important aspects of language teaching. Despite this situation, if an interactive application is used so that young children obtain a better knowledge of vocabulary, it will show that the use of technology in classes does help improve skills that, despite the negative effects that applications can also present, children will receive better learning.

Additionally, it is considered that improving vocabulary will cover different areas, for example, food, places, objects, languages, and phrases to ask for help to give help, among others. As a result, and according to Basal et al. (2018), many studies have proved that SMS messages and other computer programs adjusted to be used on mobile phones could effectively teach vocabulary. Of course, the same students can present their phones to use the application since another type of activity can be carried out where each one creates their practice and presents it during the class. Another curious fact is that by using such a tool to improve vocabulary, what is needed is learned directly, and several skills are developed.

At the end of this investigation, it is shown that it works when using a technological tool to teach vocabulary; people can even observe the results obtained compared to how it started. In addition, the researcher recommends using this with our groups if good results are obtained. Basal et al. (2018) said this study's results indicate that both the control and the experimental group participants significantly improved their knowledge of the target languages independent of the activity type used in their respective groups. It results from the good use and development of an application that helps improve students' vocabulary.

Vocabulary has been essential from the beginning of learning a new language. However, it has received an impact with the arrival of technology, which has been of good help. According to Charpentier (2019), In Costa Rica, a country whose native language is Spanish, university students are expected to be somewhat proficient in one or two linguistic skills and interact with the language at a professional level. In particular, students studying or teaching English need a solid vocabulary foundation. Even so, it has been a great challenge for students to obtain a broad knowledge of vocabulary, and one advantage is that as children, they begin to implement all the

vocabulary that is possible but in different ways so that they can enjoy learning in addition to motivating them to want to learn more every day.

Later, it is important to think about the type of vocabulary taught since it must present a distinction between categories, as previously mentioned in another investigation, because they can be confused if there is a dispute with relatives. or co-workers. The researcher Charpentier (2019) believes that the appropriate instruments must be established to know if students have mastery over a given set of words, either in the receptive or productive domain. Of course, teachers can take tests to assess the learning they have acquired while using the tool.

Next, according to Charpentier (2019), In terms of English vocabulary acquisition, other scholars have also focused on the breadth of vocabulary knowledge (how many words learners know) and depth of vocabulary knowledge (how well learners know words) in particular groups of students. This investigation shows that using the Plickers application as an English tool to improve the vocabulary presented by second-grade children covering different areas and using an interactive code is possible.

1.5 Scope

1. This study focuses on using Plickers to improve the vocabulary of the fourth-grade students at José Navarro Araya school in 2024.
2. Demonstrate that the students gain a better understanding by making use of Plickers.
3. Explain what vocabulary is and what types are improved using this app during the lessons.
4. Reflect the achievement of students who were taught by vocabulary practice in Plickers.

Chapter II

Introduction

This chapter will give a brief tour of the different concepts, ideas, and pedagogical proposals developed throughout history on teaching foreign languages and vocabulary through innovative applications. At first, different ideas and general concepts about language learning will be explained, as well as the use of an application to improve the English vocabulary of fourth-grade children and the explanation of why pickers are used as a tool. All of this is found in the literature review to improve this skill. Second, we will find the explanation of what the application consists of, how we use it to improve this, and how students are graded when using the application. On the other hand, the types of methodology used during the development of the application are explained. Finally, a short review of the meaning of vocabulary and the types used in the application is included.

2.1 Literature review

Nowadays, we live in a society that is increasingly focused on the use of technology for the development of daily activities, and it is not strange to see how the appearance of new technologies has successively replaced learning methods, at the same time, teaching in the educational field. In addition, we can use this app in different areas of our lives. On the other hand, the students put aside their pencils and notebooks for a different way of learning because of the variety of applications used for this purpose. According to Syon (2023), using any of these apps will surely provide a new, innovative dimension to student learning that will boost their language learning productivity.

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This is why using clickers as the appropriate application to improve students' vocabulary develops children's learning in a more entertaining, fun, and challenging way. In addition, using an application during the development of a class increases each student's motivation, and with this, satisfaction is achieved both on the part of those who use it and those who develop the activity.

Why use Plickers?, The Plickers platform is designed with accessibility as a top priority, which means that it is perfect for most educational environments in all areas of learning and the development of interactive activities where each student answers the questions holding unique cards, so there are not. The best thing is that they do not need different devices or accounts for each student. As a teacher, you have free access to Plickers since it allows you to create a personalized online environment that adapts to each teaching schedule with that group of students.

Additionally, this application is unique and innovative as it shows something different from what is usually used for learning before. It is also easy for teachers to use this application since, as mentioned before, it is free to access, and students only need to use an individual code print in which they can decorate this print without covering the code. Furthermore, only the teacher must have a smartphone or tablet to scan the students' code print with their answers. At the same time, the questions and their options are reflected on the screen or in the video beam, and all this is in order to determine the correct answer and what students failed. At the end of the activity, the teacher can review the vocabulary played on Plickers to analyze each student's progress.

Finally, in this application, each teacher can modify their activity, taking into account the methodology that they want to apply, for example, cooperative learning, kinesthetic learning, direct method, and audiovisual method, with the purpose of making monotonous teaching more attractive for the students.

2.2 Plickers

Plickers is a free augmented reality tool that can be managed through the website or the application for Android phones or tablets or an iPhone or iPad, which can even be projected on a screen or video beam. Besides, multiple choice, true, or false question modes are available to use with the students on different topics teachers want to teach or review the material already covered in class. According to the University of Massachusetts Amherst's students (n.d), Tool helps students stay engaged during formative assessments. A worry-free way for all students to participate in answering questions with anonymity. Teachers can get immediate feedback to inform their instruction. Plickers is not just a fun online assessment tool for students but also fun and simple for teachers. Plickers allows you to check in on student understanding. You can inform your instructor for a follow-up class or in real-time with the data collected. For this, each student has to raise their card with the code that contains the answer they believe is correct.

On the other hand, all the teacher has to do is to point the cell phone with the Plickers application already installed toward the students with the above code for a few seconds, and the augmented reality system automatically recognizes the answer that each one has decided, transferring the information in real-time to a graph that can be seen on the screen of the connected classroom, for example, in which it is reported how many people have chosen each

one of the options and if they were good or bad. This motivates students as it is like "a game" for educational purposes. This fun way lets you know if the students understand the classes.

However, there are some considerations to keep in mind when using Plickers, which are as follows: having a smartphone with an internet connection in order to be able to see each of the results in real-time, you can only ask questions with four options, or with true and false in which each of the activities has to be adapted, but this is a good function for second-grade students since, due to their age, they present a proper structure in their learning; then each code presents the name of each of the students so it is for individual use and should not be exchanged between students.

On the other hand, there are various proposals for classifying the evaluation of the teaching-learning process through applications. Despite this, when using clickers are used as an evaluation of each of the students in a formative way in which the progress that each one presents during the study time is evaluated, as well as analyzing the topics in which it is necessary to improve, then it is taken into account that it is a process in which constant supervision is given in order to examine if they understand the topic and the activity as well as if they understand why each of the answers fails or is correct.

Also, evaluating students in each activity they carry out within the institution is an obligation. At the same time, this helps students understand what they failed and what they need to improve to achieve better learning. When using plickers, different important aspects are evaluated, such as the attitude and behavior they present when participating in the activity. Since rules must be followed to fulfill the objective of both the activity and the class, different tests, short exams, and progress evaluations can be carried out. Participation in the activity is also

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evaluated since each one must participate in developing their learning. Finally, taking notes can be evaluated or not; that depends on the teacher; however, it is a good idea since, despite their young age, the children can create doubts about some confusion they had or that a review of the subject is needed since due to some situation they were not in the explanation or for some other reason.

Additionally, using plickers has some advantages for teachers that can make their lives easier. In other words, teachers can use the website's score sheet and question history reports to track student progress over time. Also, they can organize their questions and upload them to their mobile folders, creating convenient question queues to save time in future lessons. Besides, the students' code can be used in different activities, not just in one. As a teacher, you can check your exercises wherever you want, only using the Internet.

2.3 Methodology

First, the proposed solution to this challenge is to identify students' interest regarding the English language and motivation for self-learning, then prepare a weekly or daily practice with assigned tasks that change according to the progress and weekly performance of the students the measure of that performance is shared in class with a discussion after each activity. It was essential to start on-device testing early, as students were more likely to succeed when shown the app on an institutional device. For this type of activity, teachers can use different teaching methods to make more interesting classes and improve all of the areas of this learning.

Next, the main method used when using plickers in the lessons and to improve the student's vocabulary is audiovisual, which consists of a behavioral approach, which holds that

language is acquired through forming habits through visual and listening means. According to Rubino (2021), the audiovisual method refers to sound and pictures, typically in the form of slides or video and recorded speech or music; all are visual presentations that the teacher shows to the students. As mentioned above, now the use of technology has become part of people's daily lives, which is why using this application with the learning of second-grade children helps prepare them and teach them everything that can be achieved with the use of technology in the educational field, including in other fields.

Audiovisual aids are devices used in the classroom to make learning engaging and easy. This also helps students develop basic skills during their learning and analyze situations that are reflected through a screen, even generating a dependency on the use of technology as they need it in the future. According to teachmint@wp (2022), It is a known fact that individuals tend to forget things. Creative methods like images of characters, objects, and voiceovers attract the attention of students. It also helps them to retain what they learn. Plickers is used since, with this application, a more creative way of teaching school children is used, which is different from the usual.

Besides, an interactive method consists of creative tasks, games, new material and interactive lectures, video and audio materials, a student as a "teacher," Socratic dialogue, and asking questions. This method helps the learning process to be carried out so that all students are equally involved in the cognitive process; each individual contributes to the teaching process. According to the University of Massachusetts Amherst's students (n.d), Students stay engaged as they watch to see if their cards are scanned and their answers are displayed. The cards can either be bought online or downloaded and printed. Students of all ages find Plickers fun and easy to

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use. This form of vocabulary improvement has been overused but has had very good results for students using plickers and other applications.

On the other side, according to Lindsay, C., & Knight, P. (2010),” Teachers are responsible for a large amount of what happens in the classroom, what is taught, the resources used, the type and order of activities, classroom management, assessment, feedback, correction, and so on.”. It is important to consider that a good teacher understands the language the student needs and responds positively; in addition to designing the lessons, they will reflect what the learner needs and develop their communication skills. The teacher also monitors and corrects sensitively and provides feedback to each student so that they improve.

It is mentioned that technologies are of great wealth for the learning of boys and girls. However, they do not achieve anything, so it is of utmost importance that teachers generate spaces and strategies that allow them to be empowered by the curriculum. This is because not only does it generate advantages, technology cause conflicts or difficulties, but it is also more entertaining for them; therefore when arriving at the classroom with an activity like this, it must be well prepared with the appropriate tools to provide a more appropriate education to the new generations. It is also vital to start with an initial diagnosis of the learning that the boys and girls have and what that prior knowledge is concerning the topic in question since it may happen depending on the context that the boys and girls have in the school.

On the other hand, it must be taken into account that students may have resistance at the beginning of using something new since it will be more comfortable for them to communicate in their native language and follow a pattern in the class. Learning a new vocabulary can take several weeks to process, so you have to be patient and rather sell the idea to students that this

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challenge will be a new adventure to conquer. So, using all the previous methodologies will achieve successful learning. Additionally, real-life cases should be used to obtain better knowledge when carrying out the activities mentioned above. However, the personal tastes of each student can also be included in movies, series, and music to make use of this as a strength in them and of which they will understand better.

Applying educational methodologies allows us to enrich the activity and interaction with students. Thus, those who learn become active elements of the learning process since they help build knowledge and not only memorize it. On the other hand, the new learning methodologies are cooperative and generate a process in which each student investigates, reflects, debates, agrees, and produces a final product. Traditional teaching reveals a very particular relationship between teachers and students. While teachers broadcast information, students limit themselves to listening and taking notes—consequently, the former play an active role, and the latter a passive one. In general, the traditional teaching-learning process is conceived as passive and rote. For this reason, precisely, it contrasts with a type of meaningful learning that promotes participation and is called to be built online.

In this sense, when educational methodologies are put into practice in the visual-practical environment, the person who exercises the teaching role becomes a facilitator of explaining the activities and guiding each of them. That is, someone with resources and tools so students can develop activities and build new knowledge based on the acquired vocabulary. In this way, the old paradigms are left behind, and their role is adapting to the future education.

However, discovery learning is another methodology currently widely used in educational institutions. Under the application of this technique, students, instead of receiving the content passively, receive it in a more participatory way. Optimal conditions are created and designed for them to discover concepts and their relationships in an active way. An example of an application that can be used to develop this methodology is Plickers. It allows you to show images or scenarios where students must discover what they refer to or belong to. As mentioned above, when using a methodology different from the traditional one, the contents and previous ideas of the students must be taken into account, where they are implemented, the ease of application, and the time of application.

Again, it is important to remember that at all times, the main objective of the methodology that each student receives is to allow the development of skills and correct development in all areas of learning. At the same time, movement and motivation are important because they favor the construction of knowledge. Furthermore, the educator has the materials, spaces, times, and resources used according to the age they are aimed at, as well as creating a climate of security, affection, and trust in the classroom that favors the development of the students. All these aspects influence children's teaching and development, which will be present throughout their lives and must be adequate to function in society. This is why the importance of the methodology used is observed. Use in the educational field to achieve the greatest learning.

In conclusion, the needs of the world have driven the creation of teaching methodologies that adapt to today's way of learning. These methodologies focus on the student as the main axis of the learning process, promoting their natural interests. Within the educational environment, these methodologies favor the development of all kinds of skills. Collaborative work will allow

students to improve their communication skills and strengthen their leadership to achieve the objectives of each project.

2.4 Vocabulary

It is important to know the meaning of vocabulary since it is an important part of learning and everyday use. According to State (2021), Vocabulary is all about words — the words in a language or a special set of words you are trying to learn. Therefore, for many people, word vocabulary is primarily associated with the number of words a person knows; one has a large or small vocabulary that depends on the time given to education. However, the word has many shades of meaning and is very representative of the nuanced and multicolored nature of much of the language's lexicon.

On the other hand, the type of vocabulary used with Plickers is used to improve the skill. Depending on the subject that is being seen, the vocabulary varies. For example, the topic subjects were seen in which vocabulary was used with proper and common names, objects, places, and pronouns; also, in the topic of adding commas and capital letters to the date, vocabulary of the days of the week is used as well like the months of the year, another topic in which it is essential to know much vocabulary is the parts of sentences; therefore verbs are taken into account in both present and past tense, prepositions, numbers, adjectives; among others.

In addition, the English reading book that second-grade students have is taken into consideration, from which much vocabulary is taken from different topics, and when used in plickers it makes the class more interactive and fun. Also, the oral vocabulary that they hear from the stories is used in the application to measure the understanding that they acquire during the

listening; furthermore, another type of vocabulary that is taken into account when using the application to improve the skill is that of written vocabulary, and it is the most important since this. The app helps them to visualize each of the words they are learning. Finally, the type of vocabulary varies depending on the need presented by each student or the group in general.

Next, the main idea of this investigation, which was mentioned before, is to improve students' English vocabulary. In fact, most institutions do not give only English subjects in this language. Now, students can receive other subjects using the English language, in which they learn different vocabulary according to the area. For example, in math, they solve equations or word problems, and it cannot be easy if they do not have the vocabulary necessary to understand each situation.

Another example is the science subject in which teachers can use clickers to pre-assess vocabulary before starting a unit. Also, it can be used at the end of each unit to review the vocabulary seen in the unit. In addition, social studies is another subject that can be taught in English; teachers can check on students' different events, parts of historical elements, and geographical aspects by asking questions to analyze the knowledge on the topic.

Further, fun voting activities can be used by pickers since students are always excited to do this type of activity, and they can vote on possible reward choices. Moreover, in English, teachers can assess reading comprehension by considering the story's vocabulary, such as plot, setting, theme, and characters. To summarize, we can use Plickers as an English tool to improve the student's vocabulary in different areas of the language that can help their learning.

Then, when using an application, try to include small phrases and words relevant to children and review them from time to time so that they can keep them in mind and avoid forgetting them completely. As teachers, you can look for opportunities to use these newly learned words frequently. Even if some student or students make mistakes, teach them to learn from them and move on. What matters is that the students have fun and do not give up because with this, both the teacher and they can cultivate a beautiful garden of words in English.

Moreover, there are different ways vocabulary apps help others learn English words. According to Architamitra (2023), they usually have the relevant vocabulary to suit your needs as they often feature interesting and fun games; they encourage you to use them daily. Practice makes perfect, and they often have multiplayer options so that you can learn and compete in a study group. In some cases, if you try to memorize many words from a list, you will remember only some of them. However, if you encounter those words in a game or something funny, you can better associate them with pictures or events. Additionally, the students can compete with friends or have a scoreboard that allows them to see how they are doing. This makes them more invested in the game and helps them learn faster.

In teaching vocabulary, teachers seek to use ideas, suggestions, demonstrations, and examples of techniques or strategies that can be developed well in class. In order to provide knowledge consistent with established theoretical principles, teaching vocabulary to students is very important since they learn thousands of words that English speakers and writers use, allowing them to understand the language better.

The main reason for the emphasis on vocabulary in this work is that students show a new interest in vocabulary study vocabulary. Also, lexical problems have arisen, broken when people

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need to learn how to use the correct words. According to French, V (n.d), "such English words are usually learned without being taught, without being explained or drilled in class.". This is because when reading the word in a text, listening to it, or simply seeing it, students can easily recognize it as long as they keep it in mind more than once during learning; this is why when using the Plikers application to review the previously seen material as well as the vocabulary.

In books or programs, lesson vocabulary usually contains words about people and things like boy, girl, book, pencil, window, door, learn, study. All this depends on the topic, which is developed, as mentioned above, in the fourth-grade program and includes vocabulary in different scenarios such as Weather-wise, Natural treasures, Farm to table care, What a disaster, and Oh, the places you will go, in these scenarios different areas are covered in which much vocabulary is taken into account. This is important because success in learning depends on the number of senses used in the learning process. On the other hand, teachers and students understand the value of introducing basic words, such as the names of things found in the class and the community.

Furthermore, much of the vocabulary in the lessons will be needed to write and speak English in future months and years. Obviously, there are different strategies, such as creating a sense of need for a word, what to do about the list, showing the meanings of words, and drawing attention to meanings before drilling words. French, V (n.d). All this is done to apply vocabulary learning first, creating a sense of need for a word. According to French, V (n.d), "the need may indeed produce learning, especially among certain individuals and in certain cultures, but more often than not students who learn for such reasons."

For this reason, it is important to keep the students motivated to learn something, applying different techniques such as using an interactive application such as Plickers so that the development of the class is more dynamic and they can understand the meaning of each word. Second, create a list with the vocabulary in the book or class. According to French, V (n.d). "At such times, students are encouraged to look at the word while hearing it pronounced."

There are many ways to help students remember what they learned, either as mentioned in the previous quote or by having them repeat each word after the teacher says it, as well as through guessing games, dynamics, and the use of Plickers, among others.

Another strategy is to show the meaning of the words in the student's native language. We can explain by describing things we currently have but can say in another language. In this case, the teacher calls attention to the meaning after calling attention to the English word. It is interesting because, as teachers, we can let students think about how to say a word or give them synonyms to learn what the word is about. After all, by explaining the meaning, the Plickers application can be used as a backup activity to observe and analyze the vocabulary retention that each student is obtaining.

Third, draw attention to meanings before drilling words; with this strategy, teachers can carry out different review activities to know how much vocabulary they remember from the previous class and present images through Plickers, of which students must identify the corresponding name. If we cannot draw, we can ask someone in the class who wants to draw the figures or figures corresponding to the word provided. On the other hand, an advantage of using Plickers with this strategy is having each student have a personal code sheet to answer each question. It will be observed if the vocabulary seen needs to be reinforced further and if the

strategy has to be changed. With this app, we can give students options to analyze the word or image according to the activity.

Taking into account, according to French, V (n.d) ." Why commands are useful in vocabulary teaching, other communication experiences for the classroom and the value of pictures that students draw are others techniques/strategies used in teaching vocabulary." We have seen that understanding the meaning is only the first step in learning a word. However, practicing the new words learned for real communication is important. In addition, why commands are useful in vocabulary classes, this is because when we ask students about new words learned using both physical and oral commands, it makes the activity much more active for them; in addition, children have frequent experiences following commands; These experiences appear to play an important role in vocabulary learning.

Then, when students observe an action, such as touching, combing their hair, brushing their teeth, or exercising in this Teka care scenario, students will answer that the action is called in English. As teachers, we can make students obey certain commands in order for them to identify the actions they have performed and their meanings. Nevertheless, it is important to know what a command is, and according to the school run (n.d), "Commands are a type of sentence in which someone is being told to do something. There are three other sentence types: questions, exclamations and statements. Command sentences usually, but not always, start with an imperative (bossy) verb because they tell someone to do something." . As teachers, we can use these when the students have been taught and can identify the following word classes: noun, verb, adjective, and adverb.

Next, using real objects for vocabulary teaching is another technique/ strategy; according to French, V. (n.d), "For helping students understand the meaning of a word, we often, find that a picture is useful if it is big enough to be seen by all members of the class.". However, real pictures are better than pictures whenever we have them in the classroom. Besides, Our brain is tuned to understand, remember, and analyze visual information, which supports the need for images in learning. Although brain processing is multifaceted, it is indisputable that images effectively attract students' attention, transmit concepts concretely, and improve information retention.

Also, it has been shown that we people process images faster than text. Specifically, it is estimated that we remember around 80% of what we see, in contrast to 20% of what we read and 10% of what we hear. On the other hand, images are beneficial, both for the teacher in teaching and for the student in their learning process, because they help stimulate awakening their interest and attention in understanding and memorization, creativity, and participation, given that their Interpretation can be subjective, it is capable of promoting the generation of discussions in forums and other workspaces in which students share their perspectives, as well as helping in universality and versatility in each of the students.

Moreover, another strategy/ technique is other communication experiences for the classroom, and according to French, V (n.d),” there are many other ways to create a communication situation in the classroom." After the teacher introduces the specific topic and provides his images as reinforcement to each student, they must create a drawing explaining each one, taking into account the image with the name provided in English. It is also. It is important to consider that this is an activity to exemplify the understanding of the topic; as practice, you can

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use the Plickers application to show different images where students must choose the correct option corresponding to the name of the object in English.

Showing situations or scenarios to students through virtual images is innovative, and, according to French, V. (n.d), "it is good for students to see the total scene or picture, to see how its parts are related to the whole.". Visual learning is an effective tool because it gives our brains primarily a repository of images, not words. The area of the brain that processes images is larger than the one responsible for acquiring new concepts. Images are concrete and direct, so they have an advantage over words, which are often abstract. According to Ricaurte, D. (2023),” Visual resources, in general, are an excellent way to learn and teach languages and any other type of knowledge. Certain advantages are considered, such as they are simple, practical, and easy to use; through them, we can express ideas, emotions, and knowledge. They facilitate learning since they condense or summarize a lot of information in a little, among others. ". It turns out that visual resources are an extremely effective tool because, with images, a universal language is spoken with direct access to meanings; they also facilitate learning since they condense or summarize much information in a little.

Alternatively, there are also strategies/techniques to teach intermediate vocabulary in which students present certain knowledge in English, which is more basic than the understanding of listening and reading in the language of the case; despite this, the students who present knowledge yet. They need help to express themselves more. According to French, V (n.d), "using simple English to show meanings of words, more words for common areas of living and the value of games for vocabulary learning are other forms to teach vocabulary in classes.

Firstly, simple English is used to show the meanings of words; in this way, a group of words from the same scenario can be given so students can guess which ones they belong to. In other words, they are like synonyms that help us discover new words or classify them. Furthermore, teachers also model a self-questioning strategy to identify different types of contextual clues, whether from an image or text. Contributing to this, you can ask questions designed to focus students' attention on the unknown word or scenario and possible clues to its meaning, such as: What are the objects around it? Which items do you observe in the picture? What does this word mean in terms of context? Where can we see these objects? What things in this image have you seen in real life? Among others? Thus, providing students with frequent reminders and examples of the different types of contextual clues is useful. Using online tools like Plickers, you can publish the list of context clues and some corresponding examples in your classes through dynamic and active activities.

Secondly, The value of seeing a new word in a sentence, often an example sentence, can help the student more than a definition since sentences are helpful to all students. According to French, V (n.d)," They have a special usefulness when teaching students whose home language is related to English.". Where the meaning of similar-looking words is different, the example in the sentence will attract a lot more attention. However, since there are many learning words, we must remember that a small amount must be taken into account in a given time. Each person absorbs knowledge differently; for this reason, there is no single infallible teaching method for mastering the English language. However, care must be taken to ensure this experience is the most memorable so the child does not feel comfortable.

Thirdly, more words for common areas living and according to French, V.(n.d), "there is a more systematic attempt to include the most commonly used words in various categories: categories like buildings, parts of a house, furniture, occupations, transportation, weather, health, and many more." As mentioned above, it is important to take into account both the topics in the program and the previous recommendations since there are different scenarios, the vocabulary can be very extensive, and this is why the best recommendation is that examples should be given with emphasis on life, real or of things that surround us since it will help to obtain a better understanding, understanding on the part of the students and good development of the classes.

Finally, the value of games for vocabulary learning, according to French, V.(n.d), "language teachers are responsible for creating conditions with encourage vocabulary expansion, and a well-chosen game can help the students acquire English words." Subject vocabulary goes hand in hand with deep and meaningful knowledge of the content; this allows us to engage with that topic, unlocks understanding, and promotes clear and precise communication. On the other hand, at the end of a topic or unit of work, a game can be used to encourage students with the words they have learned through the Plickers application. In my experience, the light-hearted nature of these games provides students with a fun, safe, low-risk environment where they feel safer to try it.

The impact of technology on learning has allowed access to information, as students can access a large amount of information on different topics and find online resources to support their learning and expand their knowledge and comprehension. Technology also allows access to the application of our interest, which is Plicker's consequence of making learning more enthralling and attractive for students than traditional teaching methods. Likewise,

personalization of learning occurs since online learning programs can be adapted to the needs and abilities of each student, meaning that students can progress at their own pace and focus on areas that need improvement. This way can help students feel more motivated and engaged in their learning.

Maldonado, L. (2020) states, "Technological resources also promote social integration. By working with a computer or portable devices, people with disabilities enter the digital world, where it does not matter their physical characteristics or sensory impairments.". It is relevant to state that the implementation of technology for the learning process can certainly facilitate teaching for people who have any disability or even learning difficulties. As a matter of fact, applying technological devices to students can open a world of facilities for every student, leaving aside any problem they have or could present in any circumstance that can obstruct them.

Also, according to Araya, A., & Castrillo, M. (2023), "In this sense, it has become clear that technologies are useful and interesting, that they allow learning about a large number of subjects and that on some occasions They improve performance and motivation when learning, significantly." As a means of teaching in an educational environment, this seeks to implement teaching environments in which activities aimed at constructing knowledge and educational innovation are carried out .in order to make students feel more motivated.

In conclusion, this chapter provides important information regarding the methodologies with which Plickers can be used. As well as what this application consists of and how to use it. At the same time, it explains the vocabulary that is considered throughout the learning of fourth-grade students; in the same way, the vocabulary that is taken into consideration is provided by the MEP for the development of the classes. On the other hand, the strategies to apply and

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evaluate it. Finally, we consider why this application should be used, the impact of technology on current learning, and how it has changed over time.

Chapter III

Methodological Framework

This third part shows the entire research methodology used since the beginning of this research, which consists of six different points to analyze this work. The first point is the research approach, which consists of the description of the method used in the application of the activities, taking into account the other points of the research. Then, there is the research design that explains the plan used for data collection to solve the problem statement. In addition, the selected method is based on the problem posed, objectives, time, and even the budget allocated for the research. Furthermore, each step of the design and how it is used in this research is described.

Next, we can find the different sources of information in which it is explained from which sources the information collected comes, as well as the population and group covered in the research. In addition, the analysis category and data collection instruments are part of this chapter and show details such as the conceptual definition, the theoretical meaning, the activities or operations to measure variables, and the instruments used. Also, in the collection instruments, each instrument used in the research is explained, and why that instrument was chosen. Finally, the process of data collection and data analysis of the information collected is explained.

3.1 Research Approach

In this research, the qualitative method is used because it allows continuous improvements to the structure of social reality in the training of students, teachers, and the educational community to be applied and proposed. Also, it is supported by the concrete production of knowledge, ideas, actions, and materials, which are necessarily corrected, rectified,

modified, surpassed, and renewed through revitalization. Furthermore, in education, all the skills each person presents are measured by students during lessons. According to Rojas (2018), "It is a form of flexible, systematic, and critical research into the regularities of the behavior of educational agents. "This method shows how knowledge and learning are transduced in its natural environment, as well as ways of teaching-learning in the social structure to which it belongs. In addition, it is essential to analyze how each student learns in order to provide them with good learning and make them feel comfortable while they are in class carrying out the activity, including allowing them to establish whether the objectives are being achieved and what the pace of evolution is of each student.

Second, in this method, there is a structure in each of the activities carried out with this application since it shows different skills that students acquire when using it, as well as enhancing each of the important qualities in learning. The qualities that are taken into account are the analysis of the questions or critical thinking, providing possible answers, hitting or missing the correct option, as well, as accepting the result obtained. At the same time, other skills are collaboration and teamwork, communication, and adaptability. Likewise, peer feedback allows the building of solid and integrated knowledge that can be mentally reviewed.

3.2 Research Design

The strategy to carry out this research is a action research in which the use of Plickers application as an English tool to improve students' vocabulary dynamically. This application allows quick check-in and check-out tickets so that teachers can evaluate students' prior knowledge or what they have learned during class to identify areas needing further clarification. This research aims to describe how this application can improve the vocabulary of fourth-grade

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students during English lessons this year in 2024. On the other hand, this research design is based on action research since it shows the participation that each of the students has when using the application in a specific activity. In addition to this design, it contributes to identifying the problem under study and identifying possible solutions that are given when using Plickers.

This design consists of improving a problem that occurs in real life. According to Ocampo (2020), qualitative action research processes favor people's involvement and active participation in a group or community, focusing on reflecting and analyzing problems or situations in their environment through committed mediation, open dialogue, and listening. For this reason, each element of the investigated educational reality moves dynamically, configuring itself as an emerging phenomenon. Such phenomena are observed, analyzed, interpreted, and described since with this, the objective is achieved.

The design steps used in this research are as follows: first, have a clear idea of the research problem and its connection to the learning of each of the fourth-grade children. Next, we will continue creating solutions for this problem using the Plickers application. Then, with the creation of each of the materials that need to be used in the activities, we continue with the development of the activity with the app, which explains to the students how to use it, where the responses are recorded, how they should manipulate the codes to choose one of the options and at the same time an analysis is given of the qualities and characteristics that each of the participants presents at the time of the test. Development of the activity. Another analysis is carried out to analyze the results obtained at that moment and what things should be improved or changed in the methodology, development, or instructions. However, it should be considered that

positive results occur when developing this learning method in students, which will be shown later.

In this same design, it is taken into account that the involvement and active participation of the group of fourth-grade students is favored around the analysis of vocabulary, sentences, and images that refer to things in the environment in which we live, this with a mediation open to dialogue and listening through harmonious discussions between students and teacher on the topic. In addition, the time used in the research is around three and a half hours, which includes the development of the activities from which the information for the research is collected, observation of the teacher, and icebreakers to start each class. Further, the budget allocated for the research varies according to the moment's needs. This includes printing the codes for the development of the activities, color ice breaker sheets, printing the pretest and posttest for the students, and sweets to motivate students.

3.3 Information Sources

The source of information for this research is based on me since this study is conducted with fourteen fourth-grade students. It is important to specify the inclusion and exclusion criteria, which allow students to choose whether to participate or whether they are considered when collecting information or not for specific reasons. In addition, the institution's management must obtain consent to collect said information. In this regard, for the implementation of instruments to collect data, the entire fourth-grade population, both genders, was covered. And, of course, in English classes. On the other hand, the sampling presented in this study is non-probabilistic since it uses a certain group with a certain number of students.

In addition, the type of non-probabilistic sampling used is convenience since, according to Maguire (2022), "sampling for convenience is the one based on the available subjects." For this reason, as mentioned above, the participants in this research are the fourteen fourth-grade students at the José Navarro Araya school in 2024.

Furthermore, the sampling used is consecutive since, according to Ortega, C. (2023), "This sampling technique allows the researcher to work with many topics and refine their research by collecting results that They have vital knowledge." Consequently, in consecutive sampling, the researcher chooses a sample group in which research is carried out for some time, the results are analyzed and then moves on to another group of subjects if necessary.

Therefore, the sample for this research project is the fourth grade of the José Navarro Araya school. In terms of the exclusion criteria, the researcher decided to work with this group due to their willingness to cooperate in the investigation; both the teachers and the students are open to the idea of being the subject of research that could improve their quality of learning, In addition to the fact that due to the low total enrollment of the institution, fourth grade is the only group that is alone, the small number of students in each group unites the other groups.

3.4 Analysis Categories

The analysis categories of this research are based on the objectives found in the first chapter. According to Gallay, R. (2024), "Its main function is to describe the object of study or phenomenon about which we are investigating." This part explains three categories, describing what they consist of and how they develop in the research. Firstly, this category is based on Identifying specific problems of comprehension and use of vocabulary among fourth-grade

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students through three different activities, the pretest which are carried out at the beginning of the research with the intention that the researcher knows and measures the level of vocabulary knowledge that the students present in a specific topic which is a trip to a National Park, in addition, the researcher wants to know if the students are prepared to face real-life situations outside the classroom, using their current level of English through a ten-question survey, this survey is the appendix 1.

Secondly, the next category is based on Implementing the Plickers application as a tool for improving vocabulary in fourth-grade classrooms. This is done by developing an online activity with the Plickers application in which teachers create a test on any topic. In this case, the same topic, "A trip to a National Park," is continued, and students respond in class by showing cards. With a special code generated by the program, they must rotate the code, considering the response choice. The teacher 'scans' the class (student codes) with the camera of his telephone device to recognize each of the answers and check who got it right and who did not, which will be reflected on the screen. It is influential to use this app because it is something innovative and different from other apps. Students show curiosity when using it and learn vocabulary more actively and more captivantly than the classic way. A representation of the app activity is found in Appendix 3.

Thirdly, this objective is the last one proposed for this project and is based on evaluating the impact of the Plickers application on vocabulary retention, student engagement, and overall academic performance in fourth-grade students. This category is evaluated through a posttest (appendix 4) consisting of twenty-five questions to evaluate the impact the app had on the acquisition of vocabulary on the previously seen topic. In addition, the participation of the

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students during the activity is evaluated, as well as the evaluation of academic performance in general. However, in order to evaluate this, the rubric in Appendix 8 is taken into account.

Another way in which this category is evaluated is through activity in the Plickers app because it is the app on which the investigation is based. This activity shows each student's response when using it and the knowledge they have acquired.

On the other hand, a class observation is carried out in which the teacher explains a topic and carries out an activity so that the students review the topics previously seen. In this observation, a six-question survey is also carried out to the teacher (see appendix 8), which consists of knowing what techniques and methods are used with the group for the researcher to get an idea when applying the activities; another thing that is important to take into account is what technology and applications are used in the development of English lessons because when implementing something new to students it can be suffocating for them, in addition, the most important thing to know is to know how the teacher teaches vocabulary to the students and whether the form he uses works or makes changes until he finds the right one for each student.

3.5 Data Collection Instruments

According to the research, the instruments used to collect information are surveys carried out in Microsoft Word but delivered in print to each student because they are fourth-grade students, a survey on an app called Plickers. One of these surveys is carried out at the beginning to Identify specific problems of comprehension and use of vocabulary in the students, the second to Implement the Plickers application as a tool for improving vocabulary in fourth-grade classrooms using the codes, and the last survey to evaluate the impact of the Plickers application on vocabulary retention, student engagement, and overall academic performance in fourth-grade

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students. On the other hand, this research is based on using the Plickers application to improve the student's vocabulary; an activity is carried out with a topic provided by the teacher to identify both the weaknesses and strengths that the students present in that topic or topic.

As mentioned above, the first instrument consists of a survey with ten questions about the natural treasures scenario - a trip to a Natural Park, which the teacher previously indicated. This pretest (Appendix 1) measures the comprehension and vocabulary problems that students may have due to a lack of knowledge of these words. However, with a large vocabulary, students benefit significantly in reading comprehension since understanding the concepts of the text entails achieving great progress. This survey is used because it covers a lot of the selected vocabulary, and it also has a structure known to students in which each question presents three options and can only be marked with an x. This instrument is also concise and helps the teacher and the researcher to find the causes of problems in vocabulary and clarify them.

The second instrument is the Plickers application, an educational tool that allows teachers to carry out formative assessments in the classroom using cards with codes and a mobile application to collect and analyze data from students' responses. In this application, a series of questions are asked about the same topic, and since it is an innovative application, different images, videos, gifs, and even audio are added so that students understand more about what is being asked. This instrument has twenty-five questions, each presenting four options, where students must turn the code sheet to choose their answer. This instrument is appendix 3. This instrument is chosen because Plickers has the following characteristics: interactive, collaborative learning, time-saving, active participation of students, and healthy competition: this tool

encourages healthy competition, and Plickers makes it easier for us to capture the attention of our students, promoting their understanding.

The third instrument is the posttest, which consists of a tool to collect information and measure changes over time. This instrument has twenty-five questions, collecting all the vocabulary seen in the two previous activities. In other words, the posttest is carried out with tools similar to those applied in the pretest. However, it is applied over a certain period after the pretest to provide information on the effectiveness of various techniques in acquiring knowledge in students. This instrument represents the monitoring of using the Plickers application to improve students' vocabulary since it demonstrates the knowledge that students have acquired after using the app in class. This instrument is chosen because, through the gamification of the subsequent activity, it is determined whether the activity works in Plickers or not, in addition to showing the impact that Plickers had on the students' vocabulary learning.

The last instrument is the evaluation rubric, which is used when classes are attended at all times to evaluate students during classroom activities and their development. This instrument consists of evaluating students with four criteria, which are: behavior where the student was always focused throughout the activity, understanding in which they demonstrate a complete understanding of the information required to complete the task, and they can make connections and use previous learning to support your answer., interest and participation show interest during the explanations and participate continuously during the development of the activity. Moreover, finally, the application of knowledge is in which the student applies relevant information to reach a solid result; all this is on a scale of one to four, with four being outstanding and one needing to improve. This instrument was chosen because being an evaluation rubric (appendix 8) helps as a

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guide in the process of completing the task, gives you important information about the success of your instruction, and helps improve student performance because they know what to focus on. In addition, the evaluation rubrics help to understand the effect that applications, extracurricular activities, or some other activity other than the usual ones can have on the students and how this Plickers application is being used, which is unusual for them; it will help to identify their behavior in response to this.

3.6 Collection data process and data analysis

The information for this research is collected through different instruments such as the pretest, posttest, and the application of the Plickers app. Besides, the data analysis needs to examine each collected data, identify common patterns, and compare them, creating graphs demonstrating important data. On the other hand, the data analysis will also be reflected in the conclusions since it must justify how that conclusion was reached.

Chapter IV

Data Analysis

Educational data is used to receive and use the input of information to help execute the educational process, producing results that include things like progress, success, and achievement. The use of data depends on critical input, in this case, from students and teachers who are evaluated. According to Garner, I. (2019), "Data analysis helps teachers understand their students' learning abilities and challenges and facilitates an ingrained cultural process that uses detailed inputs (information) to ensure optimal outputs (results for students)." When data is interpreted effectively, it can be used to understand the individual needs of each student and employ strategies to differentiate the learning method that best suits each student, all through personalized instructions.

On the other hand, Taking the previous sentence into consideration, it is important to know that data analysis can provide teachers with a snapshot of what students know, what they should know, and what can be done to meet their academic needs in order to make informed decisions that positively affect each student's results.

4.1 Analysis and Interpretation of the Results

This section explains how the data was collected when applying the activities necessary to know the knowledge presented by each student in the selected group and how the students are evaluated in each activity. In addition, the interview conducted with the subject teacher and the questions asked to learn more about the development of his lessons will be explained. At this point, three different activities are considered to analyze and obtain results: the pre-test, Plickers,

and the post-test; this is to get all possible results to be able to interpret them and obtain different data, which helps us in this investigation.

First, the pre-test is used and applied in short tests that examine the student's initial preparation in the topic studied, both from a theoretical and practical point of view, particularly when the objective of the teaching-learning process is the acquisition of competencies and technical skills. Consequently, the pre-test applied in this research consists of a survey with ten questions, of which the following is analyzed: the extension in duration and interpretation, readability at the time of reading each of the questions, and the options. , knowing how to understand what each word says, and the difficulty that each student has in completing the questionnaire or understanding vocabulary, among others.

Furthermore, not only is the above analyzed, but it is also good to know the students' vocabulary level. In addition, for the interpretation of the results of this test, the points of the evaluation rubric (Appendix 9) are considered; they evaluate the students' interest at the time of the questionnaire application and their participation, including their behavior. This activity primarily analyzes the students' vocabulary knowledge in addition to advanced preparation for using the Plickers app.

Second, there is the analysis and interpretation of the results through the application of Plickers because the purpose of this is to optimize the knowledge and skills of the students, and its objective is to give structure to the content. It analyzes how students acquire knowledge, how functional the application of Plickers is in the topic being learned, how students react from the first moment they see the app, how they handle it during the activity, and the duration of

applying it. In addition to understanding the vocabulary through tips given in the activity, the activity includes images, gifs, audio, and videos.

On the other hand, the results are analyzed through the evaluation rubric, which is found in Appendix 9 of this research. Stems from using technology in education allow them to acquire digital skills and promote the ability to adapt and learn continuously. This is why data analysis is also taken into account through the application used, as the main purpose of this research is to improve the students' vocabulary learning process.

Finally, the post-test is carried out with tools similar to those applied in the pre-test. However, ideally, it is applied over time, one week after the pre-test, to provide long-term information on the effectiveness of various techniques in consolidating knowledge. On the other hand, the post-test describes the final result: changes and improvements in the student's knowledge and skills. This is to optimize the educational process by selecting the methods to obtain the best result. Thus, the correspondence of teaching methods contributes to the solution of the triple educational objective.

A learning curve can be constructed based on various tests, such as pretest-posttests, applied throughout the classes. However, everything depends on the student's progress and time, in addition to how the teacher applies the activities since this helps them make great progress in learning, and the knowledge is noticeable. Acquired. Additionally, data analysis allows students experiencing academic or other difficulties to be identified on time, allowing early intervention and providing the necessary support. In addition, by analyzing student performance data, preferences, learning styles, and interactions, teachers can adapt their teaching strategies more effectively, providing a personalized learning experience focused on individual needs.

4.1.1 Observation.

The observation of the class was in the public school José Navarro Araya, San Isidro del Alumbre, Corralillo, Cartago, with the teacher Willian Badilla Padilla, and the level that the school gave me the opportunity for the observation was 4° level; this observation was on May 29, 2024, from 1:50 pm am to 3:10 pm, face to face form. The fourth-grade class had fourteen students (seven girls and seven boys). In addition, it is crucial to know that the group was not easy for the teacher to manage during the class. It is important to share that each classroom has Wi-Fi; teachers must use their computer and the printer in the principal office. Even the English classroom and the others had screens to project the activities to the students. On the other hand, the students and the teacher presented good communication, order, and trust, and the teacher showed great knowledge of the topic during class.

Next, as material, the teacher used cards with things that people can find when going to the beach or natural park; he explained with examples on the board. The class was fifty-fifty, oral and written. She believes this is a good way to explain the topics to the students because the students can learn to listen simultaneously when they are writing. On the other hand, during the class, the researcher saw that the teacher used grammar-translation and audio-linguistic methods because he pronounced the vocabulary in each activity. The students repeated after him, and the students asked him, or vice versa, about the translation of the words; some examples of activities where she could notice with these methods were: a review of the simple present where the students had to translate the sentences that the teacher said in Spanish and create their sentences using the vocabulary of Natural treasure saw before in the classes; another activity was with the descriptions of places what they visited, in this the teacher asked his students how they felt in

that place and how was the place describing with their own words and sharing with their classmates. Furthermore, he started an explanation of the topic there is/are with conjunctions and explained it in both languages. All the activities were in oral and written form.

On the other hand, The researcher could see three Multiple Intelligences that were, Visual/ Spatial, because the teacher used different pictures in every topic; in the case of the vocabulary he had images describing the national parks and with this, the teacher practiced asking the name of the thing; and naturalistic is the other MI because the scenario of the class is about natural treasure, a Trip to a National Park, besides linguistic- verbal since the students and the teacher gave the examples and answers orally according to the teacher's instructions. Next, the positive and negative aspects she noticed during the observation were not equitable because the class has more positive aspects than negative ones. The positive aspects that stood out in him were the following: the teacher showed great optimism that each child understood what he was explaining to them; also, what she noticed is that the teacher inspired confidence and desire to learn, the teacher was so polite, enthusiastic and empathetic but was also firm respectful, flexible, and communicative with his students, but the most important positive aspect was that he showed to his students the planning for this week and explained to them what they would learn from the topic.

The two negative aspects that she noticed were the need for more dynamics for the class to be active; since the teacher asked them to participate, most of them did not, and only two or three did. At the same time, there is a lack of classroom management because the students talk a lot between them when the teacher is giving the class or stand up at every moment to interrupt it. In the case of the students, the researcher remembered that some had a great desire to learn and so motivated, but others only wanted to talk with others. Lastly, the things that she thinks

could have been done differently were the activities and practices as games so that there was more participation by the students since this is important for them to learn more, he would also motivate them to follow the instructions because this is so important when a person is giving the lessons as a teacher.

Second, the observation is carried out when applying the pre-test to the fourth-grade students, which begins with a short presentation made by the teacher about the researcher present. The students received it with joy and curiosity to know what they would learn new and what activities they would do. After this, she gave the rules to the students, which consisted of maintaining order, raising your hand if you had doubts, you cannot speaking when taking a test, and respecting others by not interrupting your classmates when they were doing it—the surveys since it is individual. Before starting the pre-test, she performs an icebreaker consisting of saying her name, what she likes, and something else she would like to share with others to create a harmonious and trusting environment. In addition, this achieves more fluid communication between the group. In this investigation, the lesson plan she created is Appendix 5, and the pre-test is Appendix 1.

When the pre-test began, the researcher explained each question, one by one, with its options; simultaneously, she clarified general doubts that the students had about the pre-test; the students paid attention and answered each question carefully. The activity was fluid, with a lot of participation from the students; they showed great interest and curiosity to know what other activity they would do with the researcher. Finally, it is important to consider that the fourteen students attended the test on the day of the test and, as a group, showed excellent behavior.

Third, the activity of the Plickers app is applied to the fourth-grade students; however, the ice breaker on this day is carried out, which consists of guessing the name of the characters that the researcher showed them on the cards, then it is given to each one of the students the qualified pre-test that they took in the previous class; also general feedback is given about the failures and what should be improved; Doubts were clarified, and the Plickers activity continued where she began to distribute the code that corresponded to them to the students. In this investigation, the lesson plan she created is Appendix 6, and the Plickers activity is Appendix 3.

Next, the researcher explains how the code is used and how each one's response is recorded; then, she explains what the activity consists of. After this, the activity began, and it should be noted that all the students showed interest and participation in the activity; the behavior that the students presented in this activity was great concentration when wanting to continue with the activity and according to the teacher for others, it is arduous to keep these students at the level of concentration that they have in the activity.

Besides, it is important to consider that the activity at a certain point became competitive but harmonious since the students were analyzed in the order in which each one's responses were recorded. The researcher in the activity read each question and its options so that the students obtained a better understanding; however, they did it independently and paid attention to the images, sounds, or videos the questions included.

Finally, the results of the number of correct answers obtained by each student are shared on the screen. Some students commented to the researcher that taking the pre-test was helpful because, with this, they learned new words, and their translations, which they did not know, were translated. They increased their vocabulary by using this activity.

Fourth, the last activity is carried out, which consists of the post-test to determine the level of vocabulary acquired by the students through the previous activities and is reflected in it. To start the class, a different icebreaker is performed, which consists of each student having to describe their favorite movie. Therefore, the icebreaker is performed, which ends with the teacher's response. The lesson plan she created is Appendix 7, and the pre-test is Appendix 4 in this investigation.

Moreover, the researcher explains the rules as in the previous activities and the instructions on how to complete the post-test; she gives them a set time to complete it as if it were a real exam; when everyone turns it in, the researcher proceeds. Please review each student's test, including the grade, and return it to them. The results were very good since out of fourteen students, only two had a lower level acquired when using Plickers and completing the tests.

4.1.2 Evaluation rubric

Below is the evaluation rubric that is used to evaluate students during the development of the activities carried out to collect data in the research. On the other hand, the rubric is an evaluation instrument based on a qualitative scale associated with pre-established criteria that measure the students' actions on the aspects of the activity that is evaluated (appendix 9); it also provides informative feedback to the students about the development of their work. Using the rubric in evaluation is essential for improving student results since it directly influences teaching-learning.

It is important to identify that each rubric can even be categorized and divided to fit each student's unique needs and requirements. Due to this, no two classrooms are the same, and no two students are similar. As a teacher, you must adapt to learning trends and review new strategies from time to time to continue improving and thus be able to help students. The structure of this rubric is because it is adapted to primary school children since this is the population to be evaluated; rubrics are precise guides that assess and analyze the learning and products made by students. At the same time, they are tables that break down the levels of student performance in a given aspect. This rubric presents four levels: outstanding, good work, could be better, and need to improve, rated with a score from one to four following the order of mention; it also has specific criteria on performance in different aspects.

On the other hand, the criteria that include the rubric when evaluating students are behavior, understanding, interest and participation, and application of knowledge during the development of the activities because they are evaluated according to the use of an application they have never used. In advance, it is important to know students' behavior or compatibility when using this app and its codes, including what is acquired when using it. Neutral comments are used in each of the evaluation criteria because the compatibility of the Plickers application with the students will be measured in order to improve their vocabulary.

Finally, it is significant to include an observation section in the rubric to include a positive comment or feedback for the student since this increases their motivation and self-esteem, in addition to helping them identify the aspects that need improvement. The same thing happens if, in this communication process, the strengths you have demonstrated in your performance are reinforced. However, it is taken into account when giving feedback that the

message must show objectivity, understandability, relevance, and constructive nature, as well as information oriented to the student's activity rather than to his person.

4.1.3 Questionnaire.

A questionnaire is a data collection instrument used to obtain organized information about variables of interest in a study, investigation, poll, or survey. According to Farías, G. (2024). "Every questionnaire consists of a set of questions to be answered, which must always be written as clearly as possible to avoid confusion or misinterpretations.". The purpose of the questionnaire is to help gather general information from the participant or participants. This questionnaire is given to the teacher on the day of class observation to learn about the different aspects that affect the students' learning.

Additionally, the questionnaire has six questions (appendix 8), which cover the following aspects: the techniques used in the class, the methodology you prefer to use with the students, and the activities developed so that the students can learn. In addition to what technology he uses in classes, it is important to know if the teacher implements innovative things in his classes and, if so, if he uses technology, what applications he uses for student learning. The teacher is even asked how he teaches vocabulary to his studies to identify influential aspects in developing the activities.

On the other hand, when answering the questions, the professor was very direct; he did not specify much. In the first question, what techniques do you use for the class? He answered that cooperative learning is important for each group participant and significant for everyone's learning. What method do you prefer to use with your students? It is the second question in

which the teacher answers that grammar-translation is the one he uses the most in his classes; another answer to the question, which types of activities do you use for the students to learn? It mainly involves writing debates occasionally and analyzing videos, cases, and images. Also, what technology do you use in your classes? This responds that only those provided by the institution are used, in this case, the screen and the personal computer; simultaneously, it answers the question of what applications you use in your classes. Mentioning that the application he uses the most is YouTube. Finally, how do you teach vocabulary to your students? The teacher answers the final question: Create mental associations, read and write, and include cards.

4.1.4 Interview.

Nowadays, teachers need to be well prepared for the subject they teach; they need to have a rich repertoire of pedagogical strategies in order to be able to work collaboratively, acquire technological skills and use them efficiently, and develop the ability to help design, lead, direct, and plan learning environments. For this reason, the teacher's group answers six questions in the interview to learn how he develops the lessons for the fourth-grade students so they can acquire knowledge. The first question is, what techniques are used for the class? He answers that his most common techniques are summative assessment, evaluating what students learn at the end of a chapter or unit, and gamification because it can help students focus and build essential skills. The second question is, what method do you prefer with your students? Moreover, the answer is Communicative language teaching and grammar translation because the first emphasizes the student's ability to communicate in real-life contexts. In the second, students learn grammar rules

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and then practice the rules by doing grammar drills and translating sentences to and from the target language.

The next question is, which activities do you use so the students can learn? Furthermore, the answers are activities on the board and completing worksheets. The fourth question is, what technology do you use in your classes? Only the computer and the screen share different things with them. It is his answer. Carry on with the questions; another is, how do you teach vocabulary to your students?

Moreover, he says that he uses different forms, creating a list of words and their translations, asking orally, writing in the notebook, or underlining the words in the book. The last question is, what applications do you use in your classes? He explained that the most used application in their classes is YouTube. All of these questions help develop your thinking and teaching skills when is teaching since they come with very informative answers from a teacher who has been teaching English to fourth graders for years.

Moreover, as an extra question, how is your experience as an English teacher? , but the answer is so interesting to me because the teacher answered that his experience as a teacher has been awesome because it has been almost thirty years of teaching different students. Over the years, he has bumped into ex-students. The nostalgia appears; besides that, he has had distinctive events in which he had to change some things but never gave up. When we do things for real and with our own hands, it is much easier to remember what we have learned because it is much more relatable and commemorating.

4.2 Didactics Guide

Lesson planning is how teachers synthesize curriculum objectives with pedagogy and knowledge of their specific teaching context. This section details the development of each lesson plan used to acquire information that helps support this research. Each lesson plan includes the objectives amplified by carrying out the activities. It also includes an explanation of how the students will be evaluated during the lessons and the duration of each activity and procedure.

Next, each plan shows an informative section because it is a very important point, including the development time of the activities. Despite this, the planning presents a table with six aspects that are taken into account in the development of a class, starting with the objectives that are applied according to the activities, second, the activities that are carried out during the class but only name them, then in the procedures it is explained what is carried out in each activity mentioned in the previous column and the planning includes a column called materials, which consists of the instruments to be used in the development of each activity. Also, the duration column is included, which explains the time it will take to carry out the activity. Finally, the evaluation column shows students' evaluations in classes.

4.3 Tables, Figures, Appendices

Using data allows for more effective evaluation of programs, resources, and interventions to facilitate student success in schools. Pre- and post-assessments help plan instruction and interventions and improve student learning. Additionally, data collection, accuracy, analysis, and interpretation facilitate the identification of achievements and interventions to ensure that

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students' academic needs are well understood. On the other hand, Appendices, figures, and tables communicate and express information clearly.

This section recapitulates the results obtained in each activity and the most outstanding issue in the group activities. In the first activity, a diagnostic survey is carried out, a pre-test to determine whether the students know the vocabulary.

The following results stand out in the activity pre-test:

Figures

Figure 1

1. Results of the pre-test

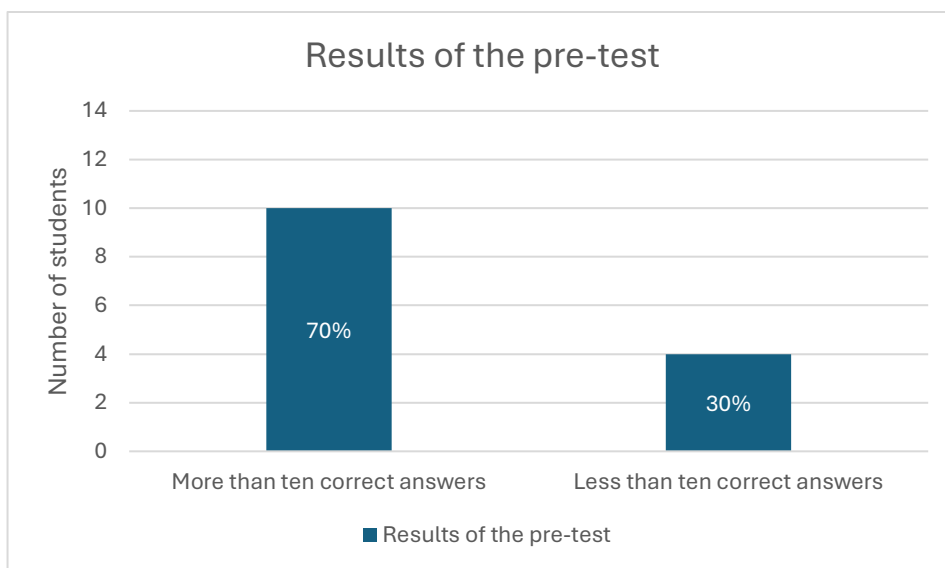


Figure 1 Results of the pre-test.

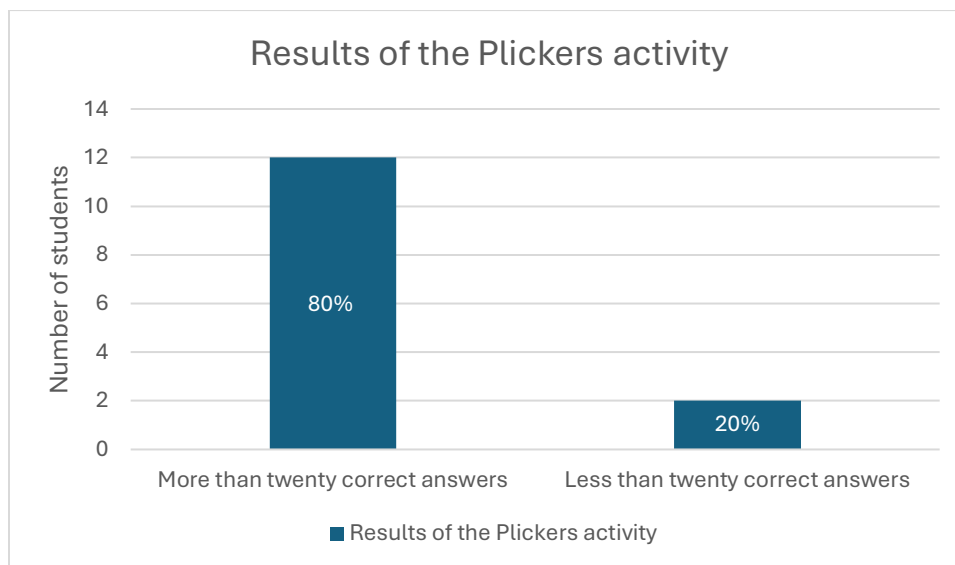
This graph shows that of fourteen students in total, only ten students obtained more than seven questions correct, and the other four students obtained less than seven questions correct; this is because some students have low vocabulary acquisition they were guided in the incorrect options by the words they recognized; as well as the words animal, garbage, nature, among others. However, since it is the initial test (appendix 1), it is not considered that they have low results because it is a topic they were recently starting. Additionally, this test is carried out to analyze the level of vocabulary presented by each student in the class. The seventy percent in the graph refers to the total number of correct questions that the students obtain, and the thirty percent refers to the three incorrect answers that some students present. However, an

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intermediate level is shown in terms of vocabulary knowledge in this area because more than half of the students obtained a score greater than seven.

Figure 2

2. Results of the Plickers activity

*Figure 2. Results of the Plickers activity*

The second figure deals with students' knowledge development when using the Plickers app. Furthermore, twelve out of fourteen got more than twenty questions correct, and only two submitted fewer correct answers. Therefore, when this activity is carried out, it is analyzed that the students have a greater understanding of the vocabulary present in the activity since using this innovative app engages the students more. If it was difficult for them to understand any question, they were guided by the advantages of Plickers: the images, gifs, and audio present in each question (appendix 3). On the other hand, when feedback is given, each word's meaning is analyzed, making it clearer to students what the words in the options mean. The eighty percent in the graph refers to the total number of correct questions that the students obtain, and the twenty percent refers to the three incorrect answers that some students present.

Figure 3

3. Results of the post-test

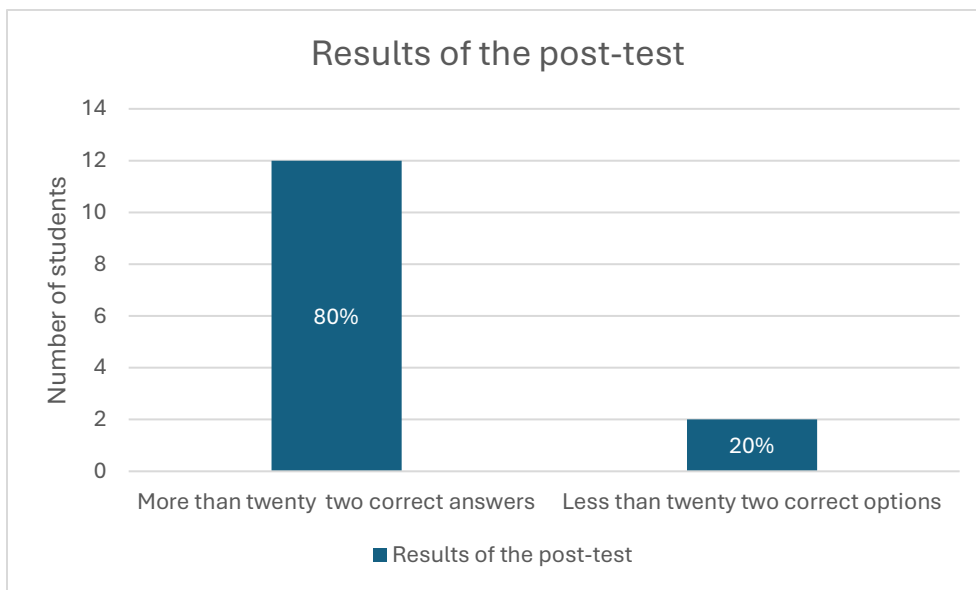


Figure 3. Results of the post test.

The post-test survey is valuable for collecting information and measuring changes over time. Furthermore, this approach effectively measures the impact, progress, or effectiveness of the Plickers application on student learning, making it a valuable tool in education, research, and various fields. On the other hand, in this research, the setting is natural treasures since the research group is fourth-grade primary school students; twenty-five questions are asked for the post-test, in which twelve of the fourteen students obtained more than twenty-two correct answers, and only two students got less than twenty-two correct answers, to be exact twenty questions correct.

The progress that the students make through the activities is amazing. Not only did they meet the evaluation rubrics, which improved the class's development, but they also improved

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their vocabulary. With these results, we realize that developing activities with the Plickers app helps improve students' vocabulary through a more flexible and developed understanding of the advantages they have contributed to this improvement. The eighty percent in the graph refers to the total number of correct questions that the students obtain, and the twenty percent refers to the three incorrect answers that some students present.

Figure 4

4. Results of the impact of the Plickers app on fourth-grade students.

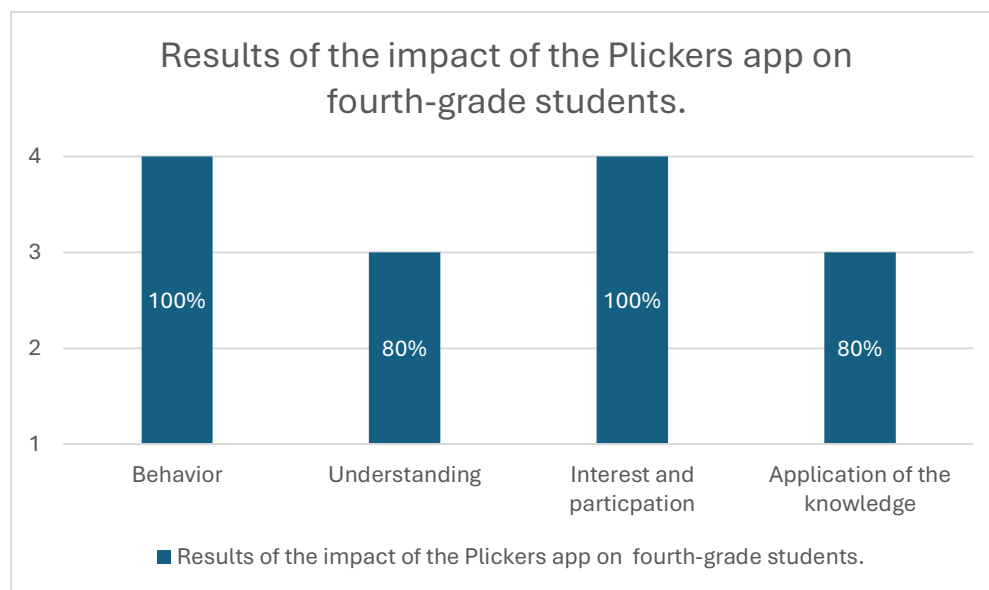


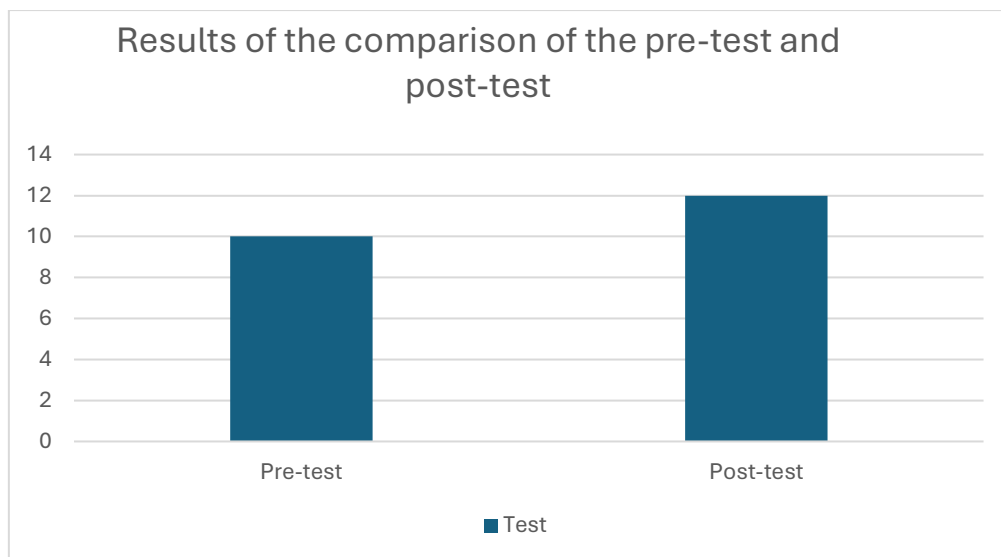
Figure 4 Results of the impact of the Plickers app on fourth-grade students.

This graph shares the general results of the evaluation rubric given to students during classes. According to Clavijo, G. (2022), "Understanding the evaluation of learning as communication is vital to understand why its results do not depend only on the characteristics of the "object" that is evaluated, but also on the peculiarities of the person(s) carrying out the evaluation and the links that they establish among themselves." An important characteristic of learning evaluation is the interrelationship established between the subjects of action because this creates opportunities for students to become actively involved in the teaching-learning process. Graphs 1-4 levels consist of four parameters, four being outstanding, two being Good work, three being better, and one needing to improve because it refers, as mentioned at the beginning of the announcement, to the evaluation rubric (appendix 9).

In other words, the behavior of each of the students during the development of the activities is excellent, which is why they have a four as a grade since they follow the instructions given to them by the researcher and are always on task throughout the activity. Second, understanding is rated with a three because although the majority completed the activities easily and presented great knowledge, other students present difficulties that are covered at the moment but continue to affect the group's performance. Then, interest and participation are rated a four because students show interest during the explanations and participate continuously during the development of the activity. Finally, applying knowledge presents three advantages because it applies relevant information to arrive at a satisfactory result. However, the percentages shown in each column in this table refer to a scale of one to one hundred since, since different aspects are evaluated in students, it is important to rate them separately.

Figure 5

5. Results of the comparison of the pre-test and post-test

*Figure 5. Results of the comparison of the pre-test and post-test*

The pretest-posttest allows the generation of data that can be used to build learning curves. Both techniques are considered innovative evaluative instruments that can be very helpful in building knowledge due to their feedback nature. This technique is applied to quantify the effectiveness of different teaching techniques in learning specific concepts and skills.

On the other hand, the results presented here show that this strategy can obtain moderately satisfactory results. The post-test indicates that, in most cases, the students improved their knowledge. Of four students who presented difficulties in the pre-test, two could advance, and the other two continued to present difficulty in obtaining vocabulary. However, it can be improved over time and with other methods. It is important to remember that in the pre-test of the fourteen students, only four showed less knowledge of the survey topic, which shows an important difference in progress between the pre-test and the post-test.

Chapter V

Conclusions and Recommendations

5.1 Purpose of the Conclusion

The purpose of this chapter is to show each of the results obtained at the time of carrying out the research by applying the different activities such as the pre-test, Plickers, and the post-test to the fourth-grade students of the José Navarro Araya school with the purpose to analyze at the beginning what level of vocabulary the students present, as well as to implement the application through an educational activity to know how it adapts to education, in addition to evaluating the impact that this app had on the students at the same time learning the vocabulary retention what are they presenting. Also, it explained what the results obtained in the post-test were since it shows if the students acquire knowledge through the Plickers app.

On the other hand, the reformulation of the research question is carried out to know whether the theory works or not according to the knowledge that is acquired through the research and the activities showing the results. In addition, knowing how the use of this application improves students' vocabulary learning based on each of the data analyzed. Additionally, different recommendations are explained that must be taken into account when using the Plickers application to develop any activity within the class, as well as teaching vocabulary through this means.

5.2 Conclusions

Based on the findings and the discussion of the research, it is concluded that the Plickers application can be used as a tool in English to improve students' vocabulary because when

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carrying out certain activities we are allowed to know the level of vocabulary presented in each of the students in a specific topic, reinforce what they have seen as well as learn something new, in addition to identifying how students respond when using technology in a class activity. In essence, educational technology aims to take advantage of technological advances that occur every day to improve educational outcomes and increase learning and teaching engagement, including fostering personalized learning experiences.

Because of the potential to address the educational inequalities that some students present and reduce the digital divide for the same reason by providing equal access to quality educational resources and opportunities, you can empower students of all backgrounds to pursue their learning goals and unleash their full potential, which is why an application as innovative as Plickers is implemented for students in fourth grade. When the app is implemented, it is noted that it allows students to progress and learn at their own pace as well as the way they choose the learning path. Also, when they receive real-time feedback from the app, they are motivated to improve in the app next round just as they evaluate themselves when analyzing their choices in the activity. Overall, implementing Plickers creates an immersive experience for students which makes learning more enjoyable and memorable.

Learning vocabulary is a relevant element to be able to carry out linguistic functions in students, but this must be accompanied by the meaning or meanings and the pronunciation of the words because it seems that many children with difficulties in language development usually have problems learning words implicitly and, in addition, they need many more exposures to acquire vocabulary. This is why, through the app, every detail must be guided and analyzed as many times as necessary for the student. Furthermore, in the design of teaching units, the

teacher must consider the vocabulary of the content and that required for the development of activities in class, preventing it from being largely unknown to the students.

5.2.1 To identify specific vocabulary comprehension and usage problems among fourth-grade students.

In this way, the vocabulary used, which was provided by the group's teacher, is the scenario of natural treasures, which presents different themes, but the one indicated is A trip to a national park. For this objective, the pre-test (appendix 1) is applied, which is used to identify any problems that students present in comprehension and the level of vocabulary they present in the topic. Although, when analyzing the results provided in the pre-test we can identify there is a problem in understanding certain options provided in the survey, this is because they did not fully present knowledge of the vocabulary selected in the survey, despite this The students tried to guess or give ideas to find the correct word.

Furthermore, as shown in the figure number one in the fourth chapter, fourteen students presented issues due to lack of vocabulary. due to lack of vocabulary knowledge since they were guided in the incorrect options by the words they recognized, as well as the words animal, garbage, nature, among others. However, an intermediate level is shown in terms of vocabulary knowledge in this area because more than half of the students obtained a score greater than seven.

In summary, when carrying out a pre-test to apply this objective we can realize that from the first moment; the majority of students present good knowledge of vocabulary in the natural treasures scenario as you can see in the figure number one in the fourth chapter this explains that ten of fourteen students have seven correct questions, however, others do present difficulty in recognizing the words, since they do not have practice in the language. In addition, the

understanding of the language that they present is basic, with tips they are able to decipher what they do not understand. Nevertheless, the main problem identified is the lack of knowledge in vocabulary and this is linked to understanding; For this, you can see the information collected in Figure 1, which refers to the results obtained in the pre-test.

5.2.2 To implement the Plickers app as a tool for vocabulary improvement in fourth-grade classrooms.

This application is implemented through a dynamic, innovative, distinctive, and creative activity that is reflected on the classroom screen in which each student raises their codes with the answer they chose to be scanned by the teacher. As a result of this app, the students show great enthusiasm in wanting to participate in this activity because, according to them, it is something new that they have never done or that they have not used in English classes as shown in the figure number two in the fourth chapter. With great attention and participation, the students responded each time. One of the questions, they showed the knowledge acquired and some remembered the vocabulary they saw in the pre-test which was very helpful to them (appendix 3).

When implementing Plickers in the classroom, students have a card associated with a special code that the program itself generates. Depending on the option they want to answer (A, B, C, and D), they turn the card in a specific position. This code can be performed repetitively with different activities. At the time this app is implemented with fourth-grade students, it is shown that students cannot know what the others are answering by just looking at them since due to the individual and distinctive code they do not know what answer they are giving, since it does not appear in on the large card an A, B, C or D but only different lines of codes.

Evidently, Plickers is a very dynamic application that allows you to include different things so that each question draws more attention from the students, besides allowing a better understanding of the developed vocabulary. For the results, the activity of twenty-five questions is provided in the app, which can be found in Appendix 3, because it is important to take into account how the questions were developed to obtain satisfactory results. On the other hand, the result of each of the responses was surprising because as Plickers is applied in real-time activity where we can observe and analyze the strategies, reactions, and analysis that the students take, which is important for a teacher in teaching their students. When Plickers is used, the classroom intersects with the method and practice of teaching (pedagogical knowledge) in order to present and guarantee learning from the material taught to students; In addition to the relationship between these three areas, different results are produced, such as the difference in the dynamic classroom than in traditional instruction, and from this, effective teaching is achieved with technology.

5.2.3 To evaluate the impact of the Plickers app on vocabulary retention, student engagement, and overall academic performance in fourth-grade students.

When presenting the Plickers activity to the students, they showed great enthusiasm because they were curious to know how to use the application. They also showed considerable vocabulary retention compared to the beginning since they did not fail in the same answers as in the previous. On the other hand, all the students participated happily in the activity since They found how the activity was developed very entertaining, they found the way in which the activity is developed very entertaining, were excited and interested in continuing with the activity. On the other hand, how was explained in the evaluation part on chapter four, all of this reactions and others are evaluated because is important to know the impact that this had in the students. In

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addition, the academic performance of the group was good, the students were evaluated with the evaluation rubric that was applied to them; everyone showed good behavior, as mentioned above because it was possible to obtain the necessary attention from the students in the activities.

Regarding the behavior of the students during the activity, it was most pleasant because of the emotion they presented, they followed the rules and rather showed competitiveness even though the instructions indicated that it was for practice.

On the other hand, the understanding that is evaluated according to the rubric (appendix 9) is notable since they manage to make connections and use previous learning to support their response, in addition to associating media such as images, gifs, audio, and videos with the possible correct answer. Consequently, the results obtained at this point are positive since the students do not have the problem understanding the vocabulary as in the first activity because they have good vocabulary retention; This is because Plickers is a very dynamic application that allows you to include different things so that each question obtains greater attention from the students, in order to better understand the developed vocabulary.

In particular, to evaluate the impact that Plickers had on the fourth-grade students of the José Navarro Araya school, it is not only analyzed through the implementation of the activity with this app but also a post-test is applied with a time difference to the application of the app. Furthermore, the post-test consists of a survey with around twenty-five questions which are a mixture of questions asked in the pre-test and Plickers. The purpose of applying a post-test to the students was to analyze how much knowledge they acquired by using this app, in addition to showing different aspects that are evaluated during the development of the class.

Then, the results obtained are good as shown in the figure four in the fourth chapter which show the comparison before to implement the app and the after to apply this. This consist

of an improvement in vocabulary acquisition in each of the students as well as in the reaction obtained by the students in each of the activities, which consist of behavior showing interest in the activity and participating, among other aspects. Finally, great retention is obtained since students absorb learning in different ways, some visually through media included which makes them associate with the vocabulary seen, and others remember most of the words that were found in previous activities.

5.3 Restatement of the Research Question

Firstly, it is important to remember that the research question at the beginning is How using an app like Plickers can improve students' vocabulary? This section explains why using Plickers in educational lessons can improve students' vocabulary because it is an innovative app in which images, videos, and sounds that are attractive to the mind can be used. of children, it also helps them engage better with this type of content than with books or blackboards, and it also promotes critical reasoning. The research explains how the use of the Plickers app improves the students' vocabulary, as well as how it is applied so that it works in the development of the class.

As a result of this, the Plickers application improves the students' vocabulary through involvement at the moment the activity is developed with this application since this app makes the students remain interested throughout the development of the activity because they find that the evaluation activity is fun, different from usual, more dynamic and they use something different to learn. At the same time, as in this app, you can include different things such as images, videos, sounds, gifs, and not just letters, this makes students relate the answers with what

they see in the pictures or with what they hear, making them remember the vocabulary in different ways.

On the other hand, implementing this app is a worry-free way for both the students and the teacher since when the students participate they answer the questions anonymously, only the teacher knows what each student's code is. Furthermore, teachers get immediate feedback to inform their instruction at the exact moment the activity should be applied or continued, making student learning more fluid and uninterrupted. Additionally, Plickers is not only a fun online assessment tool for students, but it is also fun and easy to use for teachers. Plickers allows you to check students' understanding, acquired knowledge, skills, and attitudes with data collected in real-time.

Students remain interested as they watch to see if their card was scanned, and their classmates', and their answer is displayed on the screen. The students in the group find Plickers fun and easy to use, as well as entertaining and eager to use it again. Furthermore, there are two views to view the data collected in the activities, Student mode and Graph mode. Student modes show all student cards and names, and whether they have responded or not. Then, the graphical view shows how students responded according to the options present in each question. That is, in both views, you have the option of sharing the correct answer and with this, real-time feedback is achieved.

Plickers encourage collaboration and peer teaching in group activities. Although it is used as an individual activity, the students show great camaraderie when waiting for others to choose their answers or turn the code; they also discuss their answers forward-looking and explain

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themselves to each other. Consequently, this not only encourages teamwork but also improves students' communication and critical thinking skills because it is essential in their learning.

In addition, this method provides data collection which refers to the students' prior knowledge or what they have learned during class. Still, it is a fantastic way to evaluate learning progress and identify areas that need further clarification. Also, Plickers helps improve student success, increase attention as they are more motivated, and provide the teacher with a snapshot of student performance. At the same time, it improves the autonomy of students and exploits their skills such as creativity and critical thinking.

5.4 Recommendations

As it is a new learning method, some recommendations should be considered when using an application in the classroom. First, in contexts where class hours are limited, this facilitates quick and easy setup, allows for easy employability with small and large classes, and can do so in a way where the focus remains on the class content. As a second recommendation, good group management should be presented, because while the students' codes are being scanned, others can easily be distracted or interrupt other classmates, which would affect the lesson. Another recommendation is that, since the application allows you to add images, videos, gifs, and sounds, do not use just one as it can become monotonous, and students would not show interest, so you can include several combined to do the activity fascinating for students, that is, include videos and sounds, not just images.

In addition, it is recommended to provide feedback or explanation of each question and option included in the application activity, as this will help students improve through the knowledge, they acquire to know why they failed or know the meaning of all the options so that

Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

they are clear about the vocabulary. Overall, the app is pedagogically adaptable to a variety of formative assessment types, classroom surveys, and review tasks, while proving worthwhile as an exit ticket for lessons. Also, implementing Plickers helps students easily and quickly understand what they learned from what they were taught, while simultaneously providing instructors with snapshots of student understanding from which they can identify student needs and knowledge gaps that can then be acted upon in real-time during follow-up lessons, which is why the instructions and each question to be developed must be clear and concise for students.

On the other hand, the following must be taken into account when applying an app like Plickers in classes. Promote participation in class by connecting the content with everyday life as well as providing options, encouraging gamification and autonomy in addition to implementing collaborative learning. Another is prioritizing connection, which refers to creating interactive and meaningful experiences between teachers and students and connecting students with each other. Also, it is better to go slowly but surely because the integration of technology in the classroom is a change that requires time, will, and a lot of patience. Therefore, it is recommended not to be drastic and opt for a progressive integration that facilitates familiarization with the app.

Another recommendation is about the Plickers codes, since as mentioned above these can be reused in different activities which, through a mini workshop, students can decorate and plasticize so that they are more attractive to them at the time that they use them. However, you just have to be careful that the decoration is not on top of the code, you must take into account that what can be decorated is around the code. But what is the purpose of doing this, well, the purpose is not to give them a simple piece of paper that they would not enjoy using continuously since the second or third time they may get bored of seeing the same paper.

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Finally, the last recommendation is that when teaching vocabulary with this app, students must be very motivated, which is why you can start with simple words and then increase the level of vocabulary difficulty in order to engage students more. You can even set a goal and reward students to help them acquire more knowledge differently. That is, you can also include different activities within the same Plickers activity. Remember that the most important thing is that students learn vocabulary using this app and that several activities are carried out at the same time; For example: have students read the question aloud and guess the answer or relate the images included in the activity with descriptions of themselves to arrive at the answer.

Appendices

Appendix 1

Pre-test



Natural Treasure- A Trip to a National Park

Name: _____ Score: _____

Instructions:

- This is a Fourth-grade survey about Natural treasure vocabulary.
 - Mark the correct answer for each question with an x.
1. Which animals you can see in Manuel Antonio Park?
 Monkeys and birds
 Bulls and Sloths
 Lions and Crocodiles

 2. Which of these people can you notice working in the parks when you visit them?
 Dancers
 Scientist
 Park Rangers

 3. What can you do at Rincón de la Vieja National Park?
 hike to a waterfall
 destroy infrastructure
 steal plants

 4. Which of these things can you find in a National Park?
 Mountains and streams
 Buildings and fire station
 Jail and School

 5. What should people do when they go to a National Park?
 Visitors' should throw garbage on the paths.

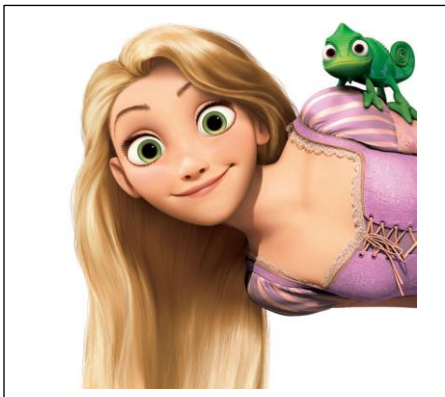
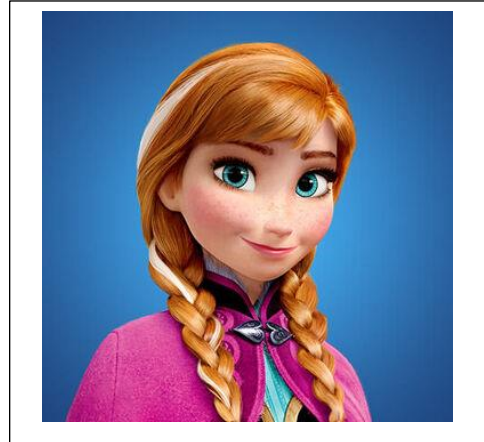
Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

- People should follow the rules of the park.
 - We should feed animals there.
6. How can we preserve/protect our parks?
- Throwing trash
 - Killing the animals
 - Preserve nature
7. Are national parks for you?
- Beautiful
 - Unpleseant
 - Neither pretty nor ugly
8. Which things can you listen in the national park?
- Birds
 - Sirens
 - Doorbell
9. What can you visit in the Santa Rosa National Park?
- The walk on the trails.
 - The supermarket
 - The school
10. Are the national parks?
- Clean and peaceful
 - Disorganized and bad
 - Smelly and small

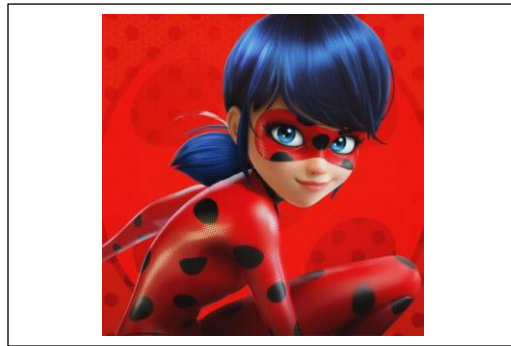
Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

Appendix 2

Ice breaker: Guess the character



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Appendix 3

Plickers activity

1. What should people do when they go to a national park?



- | | |
|--|---|
| <input checked="" type="checkbox"/> A Observation of birds, fauna and flora. | <input type="checkbox"/> B Visitors' should throw garbage on the paths. |
| <input type="checkbox"/> C We should feed animals there | <input type="checkbox"/> D Anything |

2. Which animals you can see in Manuel Antonio Park?



- | | |
|-----------------------------------|---|
| <input type="checkbox"/> A Sloths | <input checked="" type="checkbox"/> B Monkeys |
| <input type="checkbox"/> C Bulls | <input type="checkbox"/> D Lions |

3. Which of these people can you notice working in the parks when you visit them?



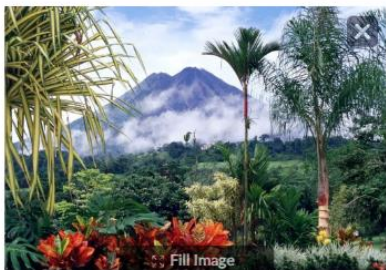
- | | |
|--------------------------------------|--|
| <input type="checkbox"/> A Dancers | <input type="checkbox"/> B Singers |
| <input type="checkbox"/> C Scientist | <input checked="" type="checkbox"/> D Park rangers |

4. How can we preserve/protect our parks?



- | | |
|--|---|
| <input type="radio"/> A Destroy green areas | <input type="radio"/> B Throwing trash |
| <input checked="" type="radio"/> C Preserve nature | <input type="radio"/> D Killing animals |

5. Are the national parks?



- | | |
|---|--------------------------------------|
| <input checked="" type="radio"/> A Peaceful | <input type="radio"/> B Smelly |
| <input type="radio"/> C Bad | <input type="radio"/> D Desorganized |

6. Which of these animals are part of the wildlife in the park?



- | | |
|--|--------------------------------|
| <input checked="" type="radio"/> A Parrots | <input type="radio"/> B Camels |
| <input type="radio"/> C Eagles | <input type="radio"/> D Zebra |

Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

10. Which of these things can you find in a national park?



A Jail

B Buildings

C Church

D Mountains

11. This is a:



A Banner

B Warning sign

C Informational Sign

D Monument sign

12. Which animal is this?



A Giraffe

B Shark

C Lion

D Cocodrive

Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

13. Where can I find this animal?



- A In the fire station B In the mountain
 C In the school D In the beach

14. Which of these is a wild animal?



- A Cat B Sheep
 C Squirrel D Dog

15. Which historical museum is this?



- A National Museum B La Casona Santa Rosa
 C Jade D Children`s museum

Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

16. What do Monkeys eat?



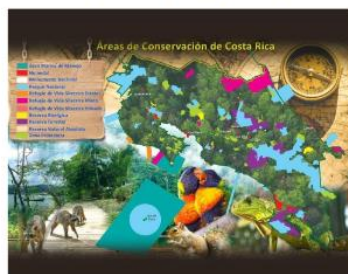
- A Bananas B Apples
 C Watermelons D Leaves

17. How many National parks does Costa Rica have?



- A 26 B 15
 C 30 D 18

18. What is the most recently created national park?



- A Miravalles National Park B Jun Castro Blanco National Park
 C Santa Rosa National Park D Chirripó National Park

Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

19. What is the most visited natural park in Costa Rica?



- A Tortuguero National Park B Santa Rosa National Park
 C Rincon de la Vieja National Park D Manuel Antonio National Park

20. What was the first national park to be created?



- A Irazú volcano B Guayabo National Monument
 C Cahuita National Park D Manuel Antonio National Park

21. What is the main function of national parks?



- A To eliminate the environment B To destroy the environment
 C To protect the environment D To change the environment

Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

22. Jaguars, tapirs and nesting turtles are part of the wildlife of



- A the city B the road
 C Houses D National Parks

23. Where is located Manuel Antonio National park?



- A Siquirres B Jacó
 C Guanacaste D Quepos

24. If we destroy the forests, what happens?



- A We are not losing anything B Anything
 C More free space D We also destroy the habitat of its wildlife.

Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

25. Which of these things do you consider a natural treasure?



A A station

B A street

C A building

D A waterfall

Appendix 4

Post-test

Natural Treasure- A Trip to a National Park

Name: _____ Score: _____

Instructions:

- This is a Fourth-grade survey about Natural treasure vocabulary.
 - Mark the correct answer for each question with an x.
1. Which of these things do you consider a natural treasure?
 - () A station
 - () A street
 - () A waterfall
 2. Which animals you can see in Manuel Antonio Park?
 - () Monkeys and birds
 - () Bulls and Sloths
 - () Lions and Crocodiles
 3. What is the main function of national parks?
 - () To destroy the environment
 - () To protect the environment
 - () To change the environment
 4. Which of these people can you notice working in the parks when you visit them?
 - () Dancers
 - () Scientist
 - () Park Rangers
 5. What do Monkeys eat?
 - () watermelons
 - () bananas
 - () leaves
 6. What can you do at Rincón de la Vieja National Park?
 - () hike to a waterfall
 - () destroy infrastructure
 - () steal plants



7. Which of these things can you find in a National Park?
 - () Mountains and streams
 - () Buildings and fire station
 - () Jail and School

8. Which of these is a wild animal?
 - () Squirrel
 - () Dog
 - () Cat

9. What should people do when they go to a National Park?
 - () Visitors' should throw garbage on the paths.
 - () People should follow the rules of the park.
 - () We should feed animals there.

10. Where can I find crabs?
 - () in the beach
 - () in the school
 - () in the mountain

11. How can we preserve/protect our parks?
 - () Throwing trash
 - () Killing the animals
 - () Preserve nature

12. If we destroy the forests, what happens?
 - () More free space
 - () We are not losing anything
 - () We also destroy the habitat of its wildlife.

13. Are national parks for you?
 - () Beautiful
 - () Unpleseant
 - () Neither pretty nor ugly

14. Which historical museum is located in Guanacaste?
 - () La Casona Santa Rosa
 - () National Museum
 - () Children`s museum

15. Which things can you listen in the national park?
 Birds
 Sirens
 Doorbell
16. What can you visit in the Santa Rosa National Park?
 The walk on the trails.
 The supermarket
 The school
17. What signs are used to prevent in national parks?
 Warning signs
 Informational signs
 Monument signs
18. How many National parks does Costa Rica have?
 26
 15
 18
19. What is the most recently created national park?
 Miravalles National Park
 Santa Rosa National Park
 Juan Castro Blanco National Park
20. What is the most visited natural park in Costa Rica?
 Tortuguero National Park
 Santa Rosa National Park
 Manuel Antonio National Park
21. What was the first national park to be created?
 Irazu Volcano
 Cahuita National Park
 Guayabo National Monument
22. Jaguars, tapirs and nesting turtles are part of the wildlife of
 National Parks
 The cities
 The roads

23. Where is located Manuel Antonio National Park?

- Quepos
- Guanacaste
- Siquirres

24. What is the most important thing about National Parks?

- to provide environmental education
- to destroy the nature there
- Pulling out, cutting or damaging vegetation

25. Are the national parks?

- Clean and peaceful
- Disorganized and bad
- Smelly and small

Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

Appendix 5

LESSON PLAN.

Institution: Jose Navarro Araya school

Teacher: William Badilla Padilla

Topic: Scenario- Natural treasure, theme: A Trip to a National Park Time: 28 minutes

Grade / Level: Fourth grade

Objectives	Activities	Procedures	Materials	Time	Evaluation
<ul style="list-style-type: none"> To identify specific vocabulary comprehension and usage problems among fourth-grade students. To analyze the knowledge in vocabulary that students present with the Natural Treasure scenario. 	<p>Icebreaker: My name.... I like.....</p> <p>Survey to know the knowledge they present on the topic the scenario Nature treasure – a trip to a National Park.</p>	<p>In the icebreaker the students need to say their name and what they like</p> <p>Students must individually complete a survey with 10 questions about the vocabulary related to the scenario. At the end, the teacher student ask orally for the vocabulary meaning that is on the survey.</p>	Worksheets with the surveys	<p>Icebreaker: 8 minutes.</p> <p>First survey: 20 minutes</p>	<p>Understanding of each word included in the vocabulary.</p> <p>Participation in the activities.</p> <p>Following instructions.</p> <p>Knowledge acquired in each of the activities.</p>

Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

Appendix 6

LESSON PLAN.

Institution: Jose Navarro Araya school

Teacher: William Badilla Padilla

Topic: Scenario- Natural treasure, theme: A Trip to a National Park Time: 1 hour and 10 minutes

Grade / Level: Fourth grade

Objectives	Activities	Procedures	Materials	Time	Evaluation
<ul style="list-style-type: none"> To implement the Plickers app as a tool for vocabulary improvement in fourth-grade classrooms. Apply the plickers application in an activity to know how much knowledge students have acquired about the vocabulary. 	<p>Icebreaker: guess the character .</p> <p>Plickers activity with the codes.</p>	<p>In the icebreaker the students need to say t the character that the teacher show them.</p> <p>Questions about vocabulary are shown on the screen and in order to answer, students must use the code sheets to present their answer and these will be scanned by the teacher to know who got it right and who got</p>	<p>Worksheets, code sheets, characters' cards.</p>	<p>Icebreaker: 9 minutes.</p> <p>Plickers activity: 1 hour and 10 minutes minutes</p>	<p>Understanding of each word included in the vocabulary.</p> <p>Participation in the activities.</p> <p>Following instructions.</p> <p>Knowledge acquired in each of the activities.</p>

Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

		it wrong. The student teacher realizes feedback in each question to check the correct answer and the meaning of the other options.			
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Use of Plickers as an English tool to improve vocabulary of fourth grade students at Jose Navarro Araya school, during 2024.

Appendix 7

LESSON PLAN.

Institution: Jose Navarro Araya school

Teacher: William Badilla Padilla

Topic: Scenario- Natural treasure, theme: A Trip to a National Park Time: 35 minutes

Grade / Level: Fourth grade

Objectives	Activities	Procedures	Materials	Time	Evaluation
<ul style="list-style-type: none"> To evaluate the impact of the Plickers app on vocabulary retention, student engagement, and overall academic performance in fourth-grade students. To measure the knowledge acquired with the vocabulary 	<p>Icebreaker: share your favorite movie and describe it.</p> <p>Survey to measure all the knowledge acquired</p>	<p>In the icebreaker the students need to favorite movie and describe it, but they cannot repeat the movie.</p> <p>Students must individually complete a survey with 10 questions about the vocabulary learned on the last activities.</p>	<p>Worksheets with the survey.</p>	<p>Icebreaker: 5 minutes.</p> <p>Survey: 35 minutes</p>	<p>Understanding of each word included in the vocabulary.</p> <p>Participation in the activities.</p> <p>Following instructions.</p> <p>Knowledge acquired in each of the activities.</p>

Appendix 8

Questionnaire.

1. What techniques use for the class?

2. What method do you prefer to use with your students?

3. Which types of activities do you use for the students can learn?

4. What technology do you use in your classes?

5. How do you teach vocabulary to your students?

6. What applications do you use in your classes?

Appendix 9**Evaluation Rubric**

Student name: _____ Date: _____

Criteria	4 Outstanding!	3 Good Work!	2 Could be better	1 Need to improve
Behavior	Student was always on task throughout the activity.	Student was sometimes on task throughout the activity.	Student was usually on task throughout the activity.	Student was rarely on task throughout the activity.
Understanding	Demonstrates a complete understanding of the information required to complete the assignment. They can make connections and use prior learning to support their answer.	Demonstrates a sufficient understanding of the information required to complete the assignment. They can make connections and use prior learning to support their answer.	Demonstrates a some understanding of the information required to complete the assignment. They can make connections and use prior learning to support their answer.	Demonstrates a little bit of understanding of the information required to complete the assignment. They can make connections and use prior learning to support their answer.
Interest and participation	Show interest during the explanations and participate continuously during the development of the activity.	Show plenty interest during the explanations and participate sometimes during the development of the activity.	Show severely during the explanations and participate usually during the development of the activity.	Show barely interest during the explanations and participate rarely during the development of the activity.
Application of knowledge	Applied relevant information to arrive at strong result.	Applied relevant information to arrive at satisfactory result.	Applied relevant information but failed to arrive at good result.	Failed applying relevant information to arrive at good result.

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Observation:

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