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Analysis of the effectiveness of the virtual platform used in the  
Escuela San Felipe, 2021

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## **Dedication**

As the years go by I have realized that the people closest to me would never let go of my hand even for a second and without thinking too much I dedicate this achievement that is both mine and theirs for accompanying me throughout my college years and undoubtedly throughout my life. Thanks to my mom and my grandmother because without them I would never have become the person I am today nor would I have gotten as far as I have, they have supported me, helped me, loved me and have given everything possible for me to move forward in life without stopping for a moment.

Thank you to my aunt and uncle for always supporting me, advising me and striving to give me the best, I could not find a better role model in the world than you nor more loving and dedicated godparents. Thank you all because without you I am sure I would never have achieved any of this.

## **Chapter I**

### **Introductory Framework**

Education in Costa Rica began 200 years ago when the Casa de Enseñanza de Santo Tomás was opened, where they put all young people in a classroom regardless of age or gender and gave them primary and secondary lessons. (Delgado, 2014). Since then Costa Rica has advanced rapidly in terms of education, thanks to advances in technology, it has been possible to adopt new techniques and means to teach classes to young Costa Ricans.

The year 2020 had a great impact on education around the world, most countries had to adapt to new means of communication to teach their lessons, some were already using various virtual platforms such as Google Drive or there were even institutions that already had their platform. Not only did their means of communication change, but all educational centers also had to rethink their forms of evaluation and adapt the contents so that students could learn successfully. (Montero, 2020)

In this research, a detailed analysis of the virtual platform used in the Liceo de Alajuelita during the school year 2021 will be conducted. Three different objectives will be developed in which the effectiveness of this platform will be identified; at the same time, the advantages and disadvantages of the program will be determined, and finally, some complementary means to improve the virtual teaching process will be presented.

## **1.1 Problem Statement.**

After analyzing the topic, the problem is posed based on the question: What is the effectiveness of the virtual platform used in the San Felipe School during the 2021 school year?

Throughout the years, Costa Rica has been characterized by using the face-to-face education method in most of its educational centers; however, with the appearance of Covid-19, the country's educational system was forced to leave its traditional methods and face the crisis by changing to the virtual education method in all the institutions of the territory.

It is important to know if virtuality gains in comfort, but loses ineffectiveness and at the same time to define if the San Felipe School is using its platform 100%; on the other hand, to identify if it can be complemented with other virtual means to improve the quality of teaching to the students of the institution.

The face-to-face method of education was the most used around the world and Costa Rica was no exception, with such an abrupt change in the methodology of education, teachers and students have had to learn on the fly and adapt to a new and different modality.

The purpose of this research is to clarify whether by changing from one medium to another, the educational quality will remain at the same level or a higher or lower level; at the same time to know if the institution uses the platforms taking full advantage of them. And as a result, it is expected to find some recommendation applications to complement and improve their learning pathways.

## **1.2 Objectives of the Investigation**

### **1.2.1 General Objectives.**

- To analyze the effectiveness of the virtual platform used at San Felipe School during the 2021 school year.

### **1.2.2 Specific Objectives.**

- To identify the level of effectiveness of the virtual platform.
- To determine the main advantages and disadvantages of the virtual platform used by the institution.
- To expose some applications or platforms that can be used to complement virtual teaching.

### **1.3 Justification**

Face-to-face education has long been the most practical and widespread way to teach in most educational centers around the world, teachers have become accustomed to this method and have developed excellent techniques for teaching lessons, as well as students have also become accustomed to the day to day routine in the classroom.

During the year 2020, the COVID-19 pandemic occurred, which had a strong impact on all people around the world, giving way to a series of social and economic problems, therefore, the general population was forced to completely change their way of life.

The student population was forced to completely change the presential method for the virtual method thanks to the aforementioned pandemic but unfortunately, the educational sector in Costa Rica was not adequately prepared to assume such a radical change in such a short time so superhuman work was done to implement virtual platforms.

This research is given to know how efficient is the platform used and implemented during the school year 2021, it is of vital importance to identify the strengths and weaknesses that the platform has, as well as to determine if students and teachers are getting the most out of it and if somehow it can be improved or complemented with other websites, applications or online programs.

The work developed throughout this research could greatly benefit both teachers as they would have more knowledge about the platform they use for their classes, as well as more variety of options to plan their lessons more dynamically. On the other hand, students would also benefit as they would receive classes in which learning is more meaningful.

For most students, virtual classes are boring, they lose interest and concentration very easily and therefore it is more difficult for them to retain and understand the information, this is perhaps the biggest problem that arises when using the virtual method and although this is not a drawback of the platforms used, it could be solved by using and complementing other platforms that would work to improve the quality of teaching.

## **1.4 Antecedents**

The first article consulted is by Marciniak & Gairín (2018), with the title: Quality assessment dimensions in virtual education: a review of reference models, for the Autonomous University of Barcelona, Spain, published in the Revista Iberoamericana de Educación a Distancia.

Its general objective is to make a comparative analysis of some evaluations on the quality of virtual education and thus evaluate which aspects are important or frequent according to the selected evaluations. In this article, several aspects of virtual education are analyzed, such as the expectations of some students who demand high quality in virtual methods so that their learning is of excellence; it is from there where answers are obtained as to some pros and cons of this.

The second article asked is written by Escudero, Tobón, Tobón & Veytia-Bucheli (2018), with the title: Towards a new concept: Socio Formative Virtual Platforms (VSP), published for the Revista Espacios.

As a general objective of this article is to work with virtual education from a socio formative point of view, that is, to observe in depth how is the management of virtual applications used in teaching and how these make both teachers and students have a better experience and results with these methods.

The third thesis consulted is done by Odio (2018), with the title: Virtuality and inclusion: barriers to learning and participation of students, teachers, and technical equipment in the virtual educational environments of the University of Costa Rica, for the Universidad

Estatad a Distancia Vicerrectoría Académica Escuela de Ciencias de la Educación, holding the degree: magister in psychopedagogy.

Its general objective is: to analyze the barriers to learning and participation faced by students, teachers, and technical support teams in the virtual educational environments of the University of Costa Rica. And its main specific objectives are: to characterize the teaching population using the virtual mediation platform, in terms of the use of the virtual mediation platform by teachers at the University of Costa Rica, to analyze the barriers perceived by teachers about learning and student participation in the virtual educational environments used, to analyze the experience of students in terms of the barriers faced to learning and participation through the use of information technologies, to summarize the barriers to learning and participation encountered by each of the participants interviewed.

This research serves as a source of information on aspects such as the use of the educational platform "virtual mediation" and its experience for both students and teachers; as well as the quality and defects of studying through a virtual application, and finally different opinions of students and educators about studying in this way.

## **1.5 Scope**

Once this analysis is completed, the researcher expects to obtain the following results:

1. To know the level of effectiveness of the platform used at San Felipe School to teach online lessons.
2. To identify the main advantages and disadvantages of this platform.
3. Determine which applications can work as complements to provide both students with a better learning experience and teachers with new tools to give more dynamic lessons and capture the attention of students.

## **Chapter II**

### **Theoretical framework**

In the following chapter you will find the relevant information for the development of this research, in the first part there is a summary of the history of education, then virtual education is addressed (characteristics, pros, cons, teaching methods) to get an idea and a context of how it is working under this modality and then, to talk about the platforms that are used to teach virtual lessons, their pros and cons, as well as applications or websites that can function as complements when teaching classes.

#### **2.1 Literature Review**

##### **2.1.1 Education**

According to Salas, 2012 "the history of ancient education usually concentrates on Egyptian education" (p. 26, para. 5) this is because many of the Greek customs are still preserved and serve to understand many current behaviors; likewise, the author explains how education in ancient times was a privilege, this means that only the "upper class" had it.

Education has been present since the beginning of human history, which has changed throughout history. Current education is based on information obtained from antiquity, for example: "ancient documents, literary works, official records, newspapers, monuments." (Salas, 2012) (pg-6, para.3)

Early civilizations used it when learning new survival techniques and how to live together in society and it was based on word of mouth technique, as they learned from one generation to another. And as Lorenzo (1959) mentions, education changed depending on the culture and the time in which it was found, there are different types of education: primitive

education, in Indo-American peoples, Oriental, Chinese, Indian, Egyptian, Hebrew, Greek, Heroic or chivalrous.

From the above, it can be understood that since many years ago, education changes depending on the culture and geographical location, nowadays the same thing can be noticed, with the way people live, behave and relate to each other within the society. While it is known that historical data is very similar in all parts of the world; however, due to all the cultural differences, it is possible that in all places it is interpreted differently.

It is important to recognize that education has changed over time, from the methods to what is taught, as seen above, in the early days it taught survival techniques and how to live together in society; nowadays it is a "(...) hope for social liberation, which prepares for society, for adult life, for work and promises to free man from the limitations of his origin (...)". (Rodriguez, 2007) (p.2, para.2).

## **2.2 Virtual Education**

Virtual education may vary depending on the country where it is being used, due to several factors such as the country's culture or the tools available at the time of teaching. For example, virtual education in a first-world country will be more efficient due to all the tools and platforms that facilitate the process; on the other hand, in an underdeveloped country, it will be more difficult due to the lack of resources and the customs of the society.

According to Solar (2011), virtual education is measured in the following way "The student in virtual education learns more effectively because he/she not only receives instruction from the teacher but learns through the search for information, self-reflection and the various activities that he/she performs individually and collaboratively." (p.2, para.2)

From the above explanation it is understood that, by using virtual education, students become more self-taught, since by using the teacher only as a support resource they seek an alternative way to find answers on their own. When using this method, students learn to obtain information from different sources, which helps them to recognize important and not so relevant information; on the other hand, virtual classes are given by digital means such as pre-recorded videos, live online classes, or sending materials by means such as e-mail or blogs on the Internet.

Sangrá (2006) says that "virtual models will not be successful if they are based on trying to replicate face-to-face models. The master class is a face-to-face class, and assuming it is a good resource, which it sometimes is, it cannot be "copied" in another medium. An adaptation will be necessary, that takes advantage of the best that this means offers and that, in this way, reaches the same formative objectives that a face-to-face action would have. This is where distance education and its different didactic approaches can make an important contribution". (p.10, para.3)

As can be understood from the previous text, virtual education has specific characteristics and the methods and techniques used differ completely from those that can be seen in a face-to-face class, which is why it is of vital importance to make the most of the tools used to teach classes virtually.

Vásquez (2020) explains that the purpose of virtual education is to respond to all the social and cultural changes that are taking place, "(...) it is a field open to reflection and research, especially as an open, dynamic and flexible technological teaching-learning resource (...)" (p. 8). (p. 8. Para.2).

As the author explains, education must adapt to all the changes that a society has, as can be seen, today, when students are assigned a task they used to look for information in books, now it is more common and easier to look for it on the web; this is why it is said that education adapts, it must always change. Education must be well adapted to be functional for students.

### **2.2.1 Advantages of virtual education**

Virtual education has several advantages such as: having easy access to a greater amount of information, being able to study from the comfort of home without the need to travel to any institution, flexible schedules for people who work or live far from any university or educational center. This means of education offers the possibility of studying just by having access to the Internet and a computer, something that is quite common nowadays; however, institutions and teachers should always keep in mind that there may be students without this facility.

According to the work of Vásquez (2020), the advantages of virtual education are the following:

- ) It is flexible, you can study at any time, you only need to be connected to the Internet.
- ) It allows access to the content 24 hours a day, adapting the study to the time available.
- ) Making good use of didactic and audiovisual aids increases the quality of learning.
- ) Saves time and money, since no travel is required.
- ) Extends the range of coverage, eliminating the barriers of place and time, making it possible to study in another city, even another country.

- ) Provides more opportunities to analyze the information being received or repeat lessons if necessary.
- ) It facilitates collaborative work, access to chats, debates, and practices on platforms that enrich the knowledge. (p.9, para.2)

Virtual education has many advantages as the author mentions in his work, the main and most important is the flexibility of schedules, students can find the schedule that best suits their other tasks, the ease with which you can find the necessary information, there are endless sources to collect information thanks to the internet, however, students should be clear that they must seek reliable sources and also print media. The internet allows users to be part of forums, debates, chats, and other online tools that serve to reinforce knowledge and interact with other participants of the pages.

### **2.2.2 Disadvantages of virtual education**

Regarding virtual education and its disadvantages, we can take into account the poor internet connection, not everyone has the same access to the internet or tools such as a computer or camera, the lack of seriousness with which this method is taken, this depends on quite a lot on the age and thoughts of the person. Also, the failures that can occur in the equipment needed such as a microphone that does not work and the little preparation that teachers have to implement this method for their lessons since, in most cases, schools do not invest in good training for preparation.

According to Vásquez (2020) the disadvantages that predominate in virtual education are:

- ) The passivity with which this method of study can be faced since it can be perceived as easier.
- ) Lack of a complete pedagogical structure with cognitive processes and learning techniques.
- ) It creates a gap in the student-teacher relationship, breaking the human bonds that can be generated.
- ) For people who appreciate the personal contact and who benefit from affective relationships, it can be disconcerting.
- ) The discipline and perseverance required in distance learning are greater.
- ) A poor internet connection, equipment failure, or work material can lead to delays and interruptions.
- ) Without a programmed study routine, you can get out of control of your schedule for other activities.

From the disadvantages detailed above by the author, it is understood that students may not take online courses with the respective seriousness due to the fact of not having a teacher in front, teachers should be trained more to give a class with good foundations and knowledge, also a relationship of more trust should be created between the two parties. When virtual classes are given or received, there must be greater discipline since it requires more commitment and effort, and also control class schedules so that the person's ordinary day is not disorganized.

### **2.2.3 Virtual teaching methods**

For the methodology of virtual classes, it is necessary to be very sure about which method to use to teach, since not all students learn in the same way and adapt to different media. There are several quite effective methods for these cases, for example, the synchronous method that is based on being in a live call with the teacher and thus can evacuate doubts immediately, the asynchronous that is when the two parties should not be tuned at the same time and the B-learning that is a combination of the above. Each student must know which method works best for him/her to learn; however, b-learning is the most efficient since it covers the topics in two different ways.

Silva (2017) conveys in his research that "Transitioning from teaching that encourages passive students exposed to expository methodologies, to student-centered learning, which favors their activity and protagonism. These active methodologies allow us to better respond to the learning styles presented by students when facing educational tasks." (p.5, para.1)

The author allows us to understand that the methodologies that should be used in virtual classes are those that are active, which means that they should be methods where the student is allowed to investigate on his own and explore new learning areas. This will make the students develop independence towards the teacher and become a little more self-taught.

#### **2.2.3.1 Synchronous method**

The synchronous method refers to those online classes where both the student and the teacher are connected at the same time. During this method, the teacher or guide must be available throughout the lesson and attentive to the student's doubts and general behavior, so that the student feels that he/she has quality support throughout the learning time.

Hiram (n.d) explains in his article that "The Synchronous Method is one in which the sender and receiver of the message in the communication process operate in the same time frame, i.e., to transmit the message the two people must be present at the same time." (p.1, para.13)

It is understood from the above that this method is based on the real-time interaction of the teacher and his students. All participants must be present at the meeting so that they can interact all together at the same time, evacuating doubts and solving practices put in class to measure the students' knowledge. Both must be attentive to any adversity that happens during the lesson.

#### **2.2.3.2 Asynchronous method**

The asynchronous method is when the two people should not be connected at the same time, in most cases, only the student is connected while the teacher has prepared the class previously and has left in a platform of preference all the material to help the student. In this case, the student is responsible for seeing all the material left by the teacher and if there are any doubts, he/she can ask the teacher by any effective means.

In the article "Virtual Classroom", Hiram (s.f) defines this method as "transmitting messages without the need for the sender and receiver to coincide in instantaneous interaction. It necessarily requires a physical and logical place (such as a server, for example) where the data that make up the message will be stored and will also have access to it. It is more valuable for its use in the distance education modality, since the access in a deferred form in the time of the information becomes absolutely necessary due to the special characteristics that the students present (...)". (p.1, para.14).

It is understandable that in the asynchronous method the two parties must be available, but not in real-time, that is, not both at the same time. This method is used when there is a "physical and logical" medium, as defined by the author. This medium must always be available to both parties with the material that is needed and requested. It is one of the most used in virtual education as it works very well for students with time constraints or travel difficulties, and is given through web platforms such as email, web forums, blogs, videos, or presentations.

### **2.2.3.3 Method B. learning**

This is a mixture of the previously mentioned methods, both complement each other to create a simpler and more self-taught way for the students. They have two elements which are real-time classes where both the students and the teacher are inside the lesson in the classroom, and there is a web platform where documents can be left that the student must do by himself, researching information using preference, which means that the student becomes self-taught. It is the most effective method since it can correctly connect with students in various ways.

Bartolomé (2004) defines the B. learning methodology as "The simplest and also the most accurate definition describes it as that mode of learning that combines face-to-face teaching with non-face-to-face technology (...). A key idea is that of selecting the appropriate media for each educational need." (p.7, para.1,2)

From the above explanation, it can be understood that the b. learning method consists of an adaptation of different means and resources to adapt and provide the best education to students since not everyone learns in the same way. It is important to remember that the role

of the teacher is to provide important information, the student must identify the method that works best for him/her to learn.

### **2.3.1 Virtual platforms**

Due to all the changes that education had during the years 2020 and 2021, virtual platforms have taken a very important role in all educational centers, they have become the primary basis for all subjects. According to Cavero, L (2019) these platforms are software that helps the good development of online classes; as Cacciavillani, M (2020) comments in his article they facilitate exercises such as dictations, forums for discussion, or academic tests.

Cavero, L (2019) does not make understand that different types of platforms can be used, among them LMS (Learning Management System), e-learning platforms, and LCMS (Learning Content Management System), each of these with a slightly different approach. Each one will be explained a little more in detail below as explained by Cavero, L (2019):

LMS (Learning Management System): these are systems that follow the standards of the IEEE Learning Technology Standards Committee (LTSC), which is an entity that gives some recommendations about practices and guidelines for virtual education. Their standards were created some time ago but are still effective to implement in LMS software.

E-learning platforms are applications focused precisely on virtual education and most of the time they are more innovative than LMS. E-learning platforms do not always follow the aspects recommended by LTSC; however, they are still one of the most used forms. Within this software what is known as microlearning and social learning can be implemented.

In the article *Microlearning*, the author explains that this method is based on several points:

Dividing the subject matter into subgroups.

Time: the time is extended to only 15 minutes since this is the time the student needs to learn with this method.

Distribution of the content: the content must be easily accessible, which means making the material flexible for consumption.

At the same time, Cavero refers to another learning theory called Social Learning. This holds that people learn by observation, for example how children copy the attitudes and behaviors of older children. An example of this method is the use of videos in classes, which are interactive media that make students more interested in learning about the subject.

As for the platform called LCMS (Learning Content Management System), it could be said that it is a combination of all those mentioned above since it is similar to the LMS but with other advantages. LCMS offers its users other advantages such as videoconferencing, links to videos, PDFs, links, audios, and teacher-student follow-up.

With all the aforementioned software you can get quite varied functions, for example: create online courses, order the material, make exams, create workgroups, project scheduling, conversational forums, video calls...

Berrocal and Megías (2015) comment in their blog about some of the most used virtual platforms, among these, are Schoology, Google Classroom, Canvas, Microsoft teams, Moodle, among others. According to their research, they determine through a survey of 460 teachers the following results:

Moodle (23%)

Educativa (16%)

Google Classroom (15%)

Microsoft Teams (14%)

Canvas (14%)

Chamilo (13%)

Schoology (5%).

Also in the same blog, it is said that some of these platforms need less time to be mastered by their users than others, this would increase both the use and the learning time of the students who use them.

The authors attach the following table for comparison: platform, level of mastery, time of use, and average evaluation.

| PLATAFORMA        | NIVEL DE DOMINIO | TIEMPO DE USO | MEDIA DE EVALUACIÓN |
|-------------------|------------------|---------------|---------------------|
| CANVAS            | 3.38             | 3.08          | 4.49                |
| CHAMILO           | 3.28             | 3.28          | 4.04                |
| EDUCATIVA         | 3.14             | 2.79          | 4.35                |
| GOOGLE CLASSROOMS | 2.93             | 1.51          | 4.01                |
| MICROSOFT TEAMS   | 2.76             | 1.43          | 3.94                |
| MOODLE            | 3.30             | 3.28          | 4.3                 |
| SCHOOLGY          | 3.07             | 3.57          | 4.43                |

Based on the articles analyzed, it is understood that all educational virtual platforms have different characteristics and different utilities, some of them will be explained below:

Google Classroom: according to Cacciavillani, M (2020), this is a free application used by a large part of the educational centers; this does not fall into the LMS category but it is very well seen for its user-friendly interface and ease of use.

Some of its advantages are that it can be linked with other applications that make the process more enjoyable and interactive; also this platform allows to create meetings with audio and video, debates, test development, allows to pass attendance and share opinions with other members.

Schoology: This is one of the applications with the best platform and is quite interactive for its users. It focuses on the creation of content and evaluation of students during the course. It allows audiovisual content to be played at the same time as the class is being taught, reports to be shown, content to be created for the courses and many other tools.

As main advantages it can be mentioned that it has its app for iOS and Android which creates enough accessibility for all students or teachers; its main disadvantage is that it only provides support and information in English, which limits its use only to people who know the English language.

Canvas LMS: Cacciavillani, M (2020) mentions Canvas among the 6 best virtual educational platforms, and as its main advantage he explains that it has a very attractive interface for the user and is one of the most modern at present. This application facilitates teacher-student interaction; at the same time it makes evaluations on both sides, i.e. the teacher and the student, you can send audios, group messages, competition-type activities, and a very important point in the growth of students, group work is assigned.

Microsoft Teams: this is a platform that works to facilitate communication and collaboration between teachers and students and also serves to store files and integrate applications.

### **2.3.2 Pros and cons of Microsoft Teams**

This application is of utmost importance since it is the main platform used by the Ministry of Public Education in Costa Rica. Ousmanova, K (2019) talks about some pros and cons of this application, among them:

Pro 1: Increased concentration at work.

Having a conversation through Microsoft Teams eliminates having to establish communication through emails which helps the mind to be focused on the task at hand.

Having the ability to create different channels also helps concentration as you can organize messages, tasks, and information depending on their level of importance.

In addition, teams offer a more professional interface which makes students and teachers less likely to get carried away with messages that have little or nothing to do with the activities at hand.

Pro 2: Group productivity increases

The fact of not having to waste time looking for or waiting for a document increases productivity since the time that was used for that is saved by having everything at the click of a button when it is needed.

On the other hand, all applications used to complement the classes can be added to teams thanks to its interface.

### Pro 3: Easy implementation

The ease with which people can adapt to use this application is a pro since it takes practically no time at all to learn how to use it.

### Con 1: Confusing file structures

Most online platforms have an extremely easy-to-use file search system but in the case of Teams, the files are stored in a somewhat confusing way. This works as follows: each channel has a root folder where all files uploaded to the conversation are stored, unfortunately, links from the Teams conversation to the archive can break as folders in this root archive are moved and organized. This is an issue that needs an urgent fix because if it is not fixed, users will have to give up organizing all their documents into categories and completely change the way they organize each of their files.

### Con 2: Different experiences in online meetings

Group calls or meetings in Teams are less intuitive than in other applications that are used by users and this is why people tend not to adopt the use of this platform so easily.

However, Teams offers other great capabilities for online meetings, such as taking notes in OneNote during a group call.

### Con 3: Limited flexibility

Every time you create a new group in Teams, you start a new structure from scratch. Unfortunately, Teams does not offer much flexibility in terms of replicating changes that have previously been made in other groups.

For example, you cannot move a channel or replicate changes previously made, everything must be done from scratch and manually which can be counterproductive, or a waste of time.

In addition, although one of the aforementioned advantages of Teams is that it simplifies the exchange of information, it is sometimes complicated to change permission settings and this is another reason why the platform may lack flexibility for certain users.

Everyone who belongs to the "x" group has full access to the files and channels of this group, but if you want to keep the changes for a different group, it is not possible.

The professionalism of the platform, it is commented how this feature makes the people who use it more productive and more focused on their work. Another positive and important point about Teams is that it adapts easily to any classroom equipment, it is very easy to use and since it stores all the information in the cloud you have access to it practically all the time.

On the other hand, in this blog, Ousmanova, K (2019) mentions some cons of the medium, such as poor distribution or storage of files.

### **2.3.3 Apps to complement virtual classes**

Since we have already talked a little about which applications are the most used to teach virtual lessons and some of their advantages and disadvantages, some platforms that are very useful for teachers to take a more active class and interact more with their students are mentioned.

According to the website Canva.com (N.D), there is a wide variety of applications that work to complement classes and make learning by students more effective, which is why the most relevant ones are mentioned here.

### Kahoot

This is a tool with which teachers can turn tedious quizzes into a game where students can compete for first, second, and third place. To make a Kahoot you must log in to the website, create an account and then just choose the type of Kahoot, the questions, and the answers. The interface of this application is in English, but the questions and answers can be formulated in the language of your choice.

### Trivinet

This website is used to answer and create trivia like the previous application, is completely free, and has a wide variety of questions which are divided by topic or you can create your questionnaires, this page also offers the ability to create groups and in turn, provides statistics of those who have answered and whether or not they have put the correct answer.

### Quiver

This application makes it easier for students to keep their attention to the class and they can also learn to use augmented reality, for this they must have printed a drawing which they must also paint, once this is done, the student will only have to point the camera at the drawing and it will appear in its augmented reality version.

## Classcraft

It is obtained when a classroom management system (LMS) is combined with a role-playing game (RPG). Lessons are transformed into a game where students can become wizards, knights, healers, warriors, etc.

Players must achieve the goals proposed by the teacher, which are the objectives of the class.

## Cerebriti

This is a website that provides the option to create your multiple-choice games as well as the option to work with interactive maps which is very helpful when teaching geography or characteristics of different parts of the world.

When the students finish the game each one will get their grade instantly.

## Socrative

This is a web tool that provides the option to create quizzes, exams, or homework and in turn, allows you to download the results in an excel format which makes it a great application that every teacher should take into account.

## Edmodo

The following application facilitates how you leave assignments, send comments or maintain communication with students and parents. The first thing is to create an account and the class the students are going to be in (each one will have a code), then it's just a matter of posting assignments and other things the teacher needs.

## EdPuzzle

We propose the following teaching strategy called "inverted classroom" in which the teacher leaves videos in the application explaining the subject and when the students arrive in the classroom what they do is to perform practical and clear doubts. This application was created to help teachers who use the above-mentioned technique to teach their lessons, also the platform offers the possibility to use existing videos from youtube.

## ClassDojo

Any teacher can use this application to send feedback to their students, communicate with parents, and create digital portfolios in addition to having the option to create work teams randomly, choose a student at random, measure the noise that students are doing, etc.

## Explain Everything

The last platform helps the teacher to explain everything in every possible way, with drawings, photographs, audio (since it allows to record the explanation), and own videos or youtube videos.

## **Chapter III**

### **Methodological Framework**

In this chapter, we will present the instruments used to collect the data that will later be analyzed in-depth to obtain the conclusions of this research and thus be able to know if the platform used in the educational center "Escuela San Felipe" is effective or not and also to know which applications or web pages are good complements to improve the quality of the learning process.

#### **3.1 Research approach**

For this research, the qualitative approach will be used, which according to Hernández, Fernández, and Baptista (2014) define as: "the collection and analysis of data to refine research questions or reveal new questions in the process of interpretation". (Page 7, par.1)

The qualitative approach relies on data collection to answer unknowns and research questions as the study progresses; new questions may even arise during and after data collection. In concluding, it takes into account the facts and the interpretation that researchers give to the results they have obtained in the studies. Therefore, in this qualitative approach, the interpretation that the researchers give to the results and the facts they observed during the study plays an important role in arriving at a conclusion that answers the research question.

The information gathered through the research process allows the researcher to analyze the results obtained from the subjects under study, which are the fourth-grade students of the San Felipe school and the teacher in charge of the English subject. This

approach will show how the participants react to the use of the "Teams" platform and will analyze their response to the different applications that will be used to complement the process of teaching and learning English. The data collected will be the main resource to obtain relevant conclusions.

### **3.2 Research design**

The research design of this investigation is phenomenological which is defined as: “conceptualized the interior of the individual’s awareness. Phenomenology is an approach to explore people's everyday life experiences. It is used when the study is about the life experiences of a concept or phenomenon experienced by one or more individuals. A phenomenological researcher investigates subjective phenomena” (Creswell J., 2009)

This research design is of vital importance achieving the desired results since the researcher will be able to see the experience of both the students when receiving English classes through the "Teams" platform, as well as the teachers who have been forced to adapt their classes and teach their lessons using the aforementioned platform. By observing how the teachers give the lessons and how the students react, it will be possible to study more realistically the functioning of the platform within the Costa Rican educational system.

The important discoveries derived from phenomenology are thanks to the experience gathered through the eyes of people who live the experience and share it.

Concerning the above mentioned, this research will study the experience of fourth-grade students to receive their virtual lessons through the "Teams" platform, how the lessons are taught, the activities that are performed, the response from students, and how the teacher performs in his work when teaching, From here it will be possible to determine if it is

necessary to make a change by implementing other platforms that enrich the teaching and learning process or otherwise, to recognize that the platform is efficient when teaching a second language such as English and for this, it is necessary to observe the before, during and after applying the activities proposed by the researcher.

### **3.3 Sources of information**

The subjects that will be used to collect data for this research are the fourth-grade students and the teacher who teaches English to this group that belongs to the "San Felipe School". The students will perform 3 activities that will be designed on platforms other than "Microsoft Teams" and then answer a questionnaire. On the other hand, the teacher will be interviewed to know his personal opinion about the functioning of the platform that is subject to study, as well as the applications that can be used to complement his classes.

#### **3.3.1 Description of the institution**

The institution is called Escuela San Felipe. This is a public elementary school managed by the MEP (Ministry of Public Education), located in San Felipe, Alajuelita, San José. Inside the school, there is a playground with a cement court to practice various sports including soccer, basketball, or other recreational activities, has a dining room, separate bathrooms for men and women, to ensure the safety of students has a guard at the entrance and as part of the facilities, there is a kindergarten.

The institution has two entrances, one located at the front and the other at the side. Each classroom has a capacity for approximately thirty students, but at the moment the groups are between ten and fifteen students.

This school only gives lessons during the day shift, divided into two schedules: the first from 7 a.m. to 12 p.m. and the second from 12:10 p.m. to 4:10 p.m. Due to the COVID-19 situation, the center will teach its classes virtually and face-to-face. To avoid overcrowding, the groups have been divided into 3 or 4 parts and so that all students can receive the classes they are rotating so that only one group goes face-to-face per week, which means that each subgroup will receive classes at the school every three or four weeks.

### **3.3.2 Description of the community**

The majority of the students who attend this educational center live in Alajuelita and its surroundings, which are mostly marginal or problematic areas because in these areas there is a lot of delinquency, drug problems, and violence. This is why the school plays a very important role in this community since it educates the children and keeps them away from being involved in risky situations such as those mentioned above.

According to the school's director, Luis Soto Sanabria, the educational community, which is made up of the school's staff, parents, and students, are committed and respectful people who are always willing to look out for the welfare of all those who are part of the school, and he affirms that most of the families are lower middle class.

### **3.3.3 Description of the Population and Participants**

The population to be studied are the fourth-grade students of the San Felipe school, specifically the students of classes 4-1. These students are between 9 and 10 years old and the group is made up of 15 students of which 9 are male and 6 are female. The children are very participative, respectful, and follow instructions in a good way, even though their level of English is low since they are part of a public institution, they are willing to learn.

On the other hand, the teacher in charge of the group has 16 years of experience working with children of all levels, from first to sixth grade. The teacher is a role model for her colleagues and students and is highly qualified when it comes to teaching English as a second language. Therefore, her opinion regarding the use of the platform is of vital importance as she knows the strengths and weaknesses of the platform when teaching her lessons.

### **3.4 Analysis Categories**

Analyzing the effectiveness of the "Teams" platform when teaching virtual classes is the main objective of this research and thus justifying that this application is feasible in the teaching and learning process of students. Understanding whether this platform is getting the most out of it when it comes to providing quality education will help to conclude whether it is a good option for second language teaching.

An important term to explain is didactic materials, according to (Padrón, Doderó, Díaz, & Aedo, 2005) "didactic materials are any type of aid that assists and helps to achieve the objectives throughout the learning process". In this case, the didactic material is the platform used to teach the classes.

This didactic material will be tested to check its effectiveness and also to analyze if it is by itself effective to teach a second language or if on the contrary, it needs other applications that complement it to improve the quality of the lessons.

### **3.5 Data Collection Instruments**

The researcher opted to use questionnaires and interviews to collect the necessary data to reach the correct conclusions.

### **3.5.1 Questionnaires**

With the questionnaire, the researcher can ask the subjects more directly the information he/she needs to collect and the subjects can give the answers they consider most accurate.

The use of questionnaires is used in quantitative research, but it is flexible enough to also be used in qualitative research since the researcher can take the liberty to interpret the data obtained. This instrument was chosen because it can be used to ask students about the effectiveness of the platform used by the teacher, whether they are satisfied or if they consider that it should be improved.

3 types of questionnaires can be applied: closed questionnaires, where the answers are limited to "yes" and "no" and the subject must choose the option he/she considers correct. On the other hand, there are open questionnaires, where the subject can express himself more sincerely and give his point of view regarding what he is being asked, and finally, there is the mixed questionnaire which is a combination of the two questionnaires mentioned above.

The researcher chose to make a mixed questionnaire which will consist of five closed questions, five semi-open questions, and five open questions so that students can give their opinion and also the researcher can collect specific information on how effective the platform is.

### **3.5.2 Interview**

As a second instrument to be used we have the interview, this works as a more personal way of collecting information, besides the person being interviewed can elaborate more with the researcher about what is being investigated.

Interviews, like questionnaires, are divided into three types: first, there is the structured interview, which is based on the fact that the researcher prepares the questions to be asked during the conversation and will limit himself to asking only what he has already prepared. Then there are semi-structured interviews in which the researcher prepares the questions in advance, but also has the freedom to ask new questions while the conversation with the interviewee is taking place. And finally, there is the unstructured interview in which the researcher knows the content of the interview, but simply lets the conversation flow and allows it to develop naturally.

In this case, the researcher chose to conduct a structured interview which will consist of a series of eight questions to guide the conversation and collect the data needed.

The interview was chosen because it provides first-hand information from the group's teacher about his opinion regarding the effectiveness of the "Teams" platform as a tool for teaching his classes.

### **3.6 Data collection process and data analysis**

For the data collection process, the questionnaire and interview instruments will be used as mentioned above to answer the research question and reach a satisfactory conclusion for the research work.

First, a class will be taught using only the platform assigned by the MEP to teach this course, to observe how students respond in a class in which only "Microsoft Teams" is used, to see the dynamics of the class and in turn how the teacher takes advantage of the same platform.

With this, it will be possible to see firsthand the learning and the reaction of the students to receive the class using "Teams" to then be able to make a contrast of before and after the use of this.

Then, a second class will be taught in which the "Teams" platform will continue to be the main platform used, but this time three additional platforms will be used to complement the teaching, make the class more dynamic, keep the students' attention and try to make the students internalize better or more easily the knowledge taught during the lesson.

The platforms chosen for the realization of this class are Kahoot, in which students will play a trivia where all questions are related to previously studied topics, then it will be the turn of the Quiver platform, which is an application that converts specific images through the camera of a cell phone so that it can be observed in augmented reality and finally the Socrative platform in which another trivia will be performed with different questions to the first, this to observe which interface is more friendly for the use of students.

After the students have received the two classes the researcher will proceed to apply the questionnaires, those in charge of answering them will be the fifteen students of 4-1 of the San Felipe school, these questionnaires will have a total of fifteen questions separated into three segments of five questions each, the questions will be about the effectiveness of the "Teams" platform, the quality of teaching when using this platform and the use of alternative platforms that function as complements to provide higher quality classes, all this to measure how much the platform is being used and how effective it is in education.

Finally, the researcher will apply the interview to the teacher in charge of this group to know his opinion about the platform that has been used throughout the year and the

platforms or applications that have been proposed by the researcher during the second class, and the effect that he could observe in his students during the teaching process.

This is intended to obtain first-hand information from the students and the teacher regarding all the platforms used and if they think that these should continue to be used to improve the quality of the classes and the performance of the students and their reasons for this or if on the other hand, they think that "Teams" is enough to provide quality education and that both the students and the teacher are satisfied with the classes given and received.

### **3.7 Changes in the data collection process**

Due to the COVID-19 pandemic that commenced to have repercussions in Costa Rican instructional facilities because the start of 2020 and which have been maintained till today, in 2021, the manner of receiving and coaching lessons has been modified extensively for the reason that the Ministry of Public Education (MEP) followed a greater self-sufficient technique for college kids to research and hold with their instructional method.

The technique utilized by the instructional facilities had been courses organized through the teacher in charge with the material defined and reinforcement practices of the subjects seen, which adopted the name of Autonomous Work Guide (GTA) and in flip instructors gave digital training to college students to deepen the subject.

At the start of 2021, the MEP made a new concept in which the scholars might be capable of going back to face-to-face classes taking all of the precautionary measures to prevent the virus from being transmitted however without leaving apart the virtual education because so as for the colleges not to receive so many students, it was proposed that while

some received classes from their homes, others might go to school and every week the groups might rotate so that everybody could go to their corresponding instructional centers.

Due to the growth of COVID-19 cases in the course of the month of May, the MEP determined to drop on-site and virtual classes aside from leaving the GTAs to the scholars for his or her realization. A recess withinside the college year changed into made beginning May 24, 2021, and classes will resume once more on July 12 of the same year. As an outcome of this brief closure of the institutions, which stays in the closing date to perform the studies and fieldwork, the director of the career Leslie Elizondo Mora provided the students an opportunity to keep with the information collection process withinside the maximum viable manner considering the scenario the country goes through.

This opportunity is composed withinside the elaboration of a GTA, which will guide the scholars on a way to perform the independent study of the subjects corresponding to the problem and it is going to be composed in such a manner that it will illustrate to the scholars what they ought to study and a way to learn it in a great manner. For this purpose, precise equipment could be furnished considering the sources that scholars can use which include computers, tablets, tv, or revealed fabric.

With this GTA the researcher could be capable of gathering the necessary records to finish his work and for this reason, attain a satisfactory end because the outcomes may be analyzed without difficulty and quickly.

## **Chapter IV**

### **Data Analysis**

This chapter is where the researcher will compile all the information obtained thanks to the instruments used, to conclude. The main purpose of this chapter is that the person in charge of the research can analyze in detail the information collected to answer each of the objectives established for this research work.

On the other hand, all the information collected will be found in this section in an organized and as clear as possible so that it can be presented and explained without problems.

#### **4.1 Analysis and Interpretation of the Results**

This section concentrates on the analysis of the results obtained after having applied the instruments to the students and their corresponding teacher and which focus on the effectiveness of the virtual platform used at the San Felipe School, as well as the response of the students to using it and whether or not it should be complemented with other platforms that enrich education.

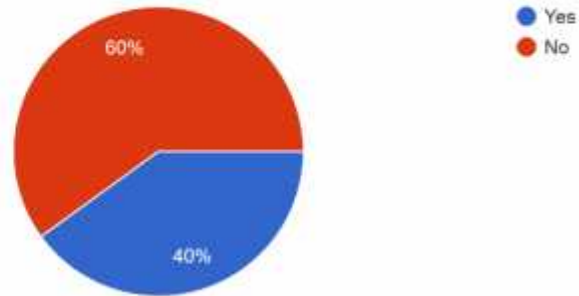
##### **4.1.1 Questionnaires**

The questionnaire was applied to fifteen fourth-grade students, it is composed of three sections of five questions each and was sent and answered via Google Forms. This instrument was designed to find out how effective the platform used by the Ministry of Public Education is.

#### 4.1.1.1 Questionnaire for Fourth Graders at Escuela San Felipe (Closed Questions)

Chart #1

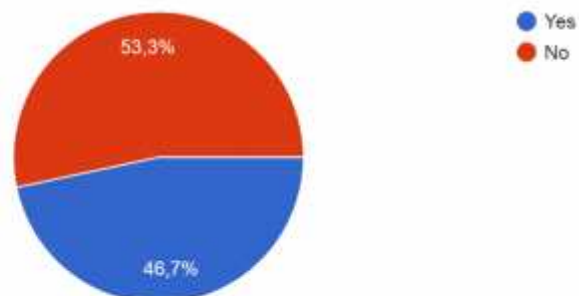
Do you consider that the platform used by the MEP is being used to its full potential?  
15 respuestas



From chart #1 it can be seen that most of the respondents think that the platform is not being used to its fullest potential; the percentage of those who believe that it is being used to its fullest potential is lower.

Chart #2

2. Do you think that the educational center provides quality education through the use of its virtual platforms?  
15 respuestas



From chart #2 it can be deduced that the majority of the respondents do not think that the educational center is offering them quality education through the virtual platform, while the minority do think that they are being offered a good education virtually.

Chart #3

3. Do you think that the tools used by your teacher make the class more fun and dynamic?

15 respuestas

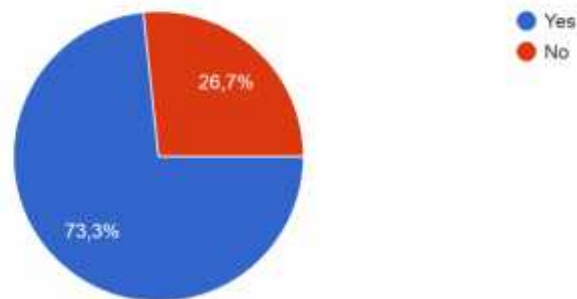
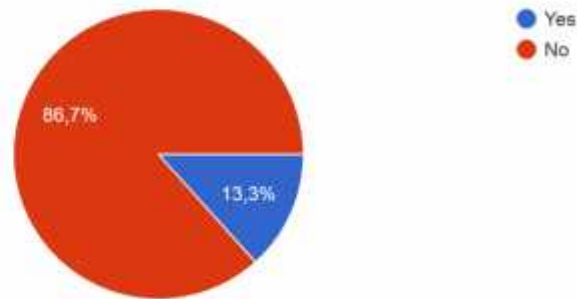


Chart #3 shows that the majority of respondents think that the tools used by the teacher to teach their classes make the class more fun and dynamic, while the minority thinks that the tools do not enrich or add anything to the class.

Chart #4

4. Do you think there is a variety of activities during the virtual class?  
15 respuestas



From chart #4 it can be seen that the vast majority of respondents believe that there is no variety of activities during English classes, while the minority believe that the activities are varied.

Chart#5

5. After having solved the activities proposed by the researcher, do you think they enriched the teaching and learning process?  
15 respuestas

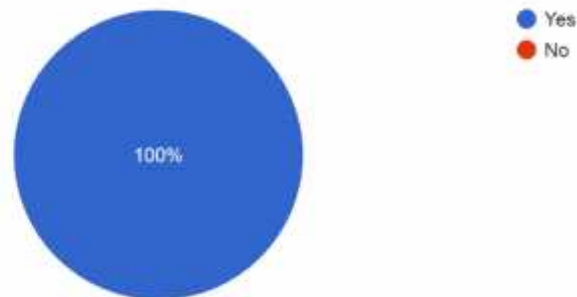


Chart #5 shows that 100% of the surveyed population believes that the activities carried out on the platforms suggested being used as a complement to Teams enriched the teaching and learning process.

#### 4.1.1.2 Questionnaire for Fourth Graders at Escuela San Felipe (semi-open questions)

Chart#6

1. After having received the virtual classes through the platforms assigned by the MEP, do you prefer to return to the face-to-face classes?

15 respuestas

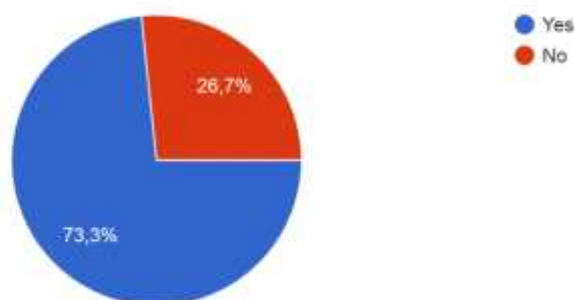


Chart #6 shows that most of the respondents prefer to return to face-to-face classes instead of continuing to receive virtual classes through the platform assigned by the MEP and the main reasons for this response were that they do not learn anything and the virtual classes seem boring to them. On the other hand, the minority of students do want to continue receiving virtual classes because they like them better than face-to-face classes.

Chart #7

2. Would you make any change in the platform used during this academic period?  
15 respuestas

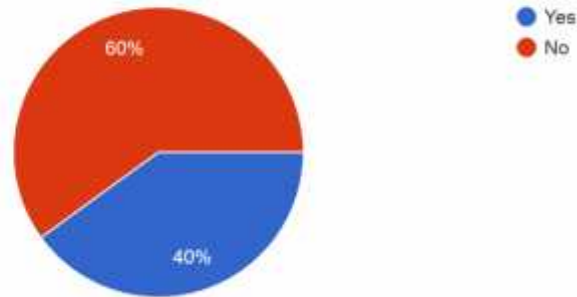


Chart #7 shows that the majority of respondents would not make any changes to the platform used during this academic year since it is easy to use and is fine the way it is, while the minority would make changes since they consider it is boring and unattractive when it comes to attracting attention.

Chart #8

3. Would you prefer to have more activities in the classes using different platforms that complement the one already used?  
15 respuestas



Chart #8 clearly shows how 100% of the respondents would prefer the Teams platform to be complemented with other platforms since the class would be more fun, they would have the possibility to learn while playing and in general the experience of receiving classes would be more entertaining.

Chart #9

4. Do you enjoy the virtual classes given through the "Teams" platform?  
15 respuestas

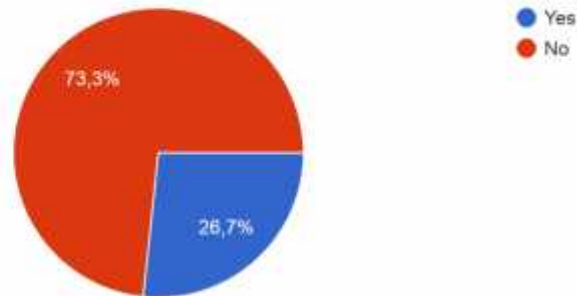


Chart #9 shows that the majority of respondents do not enjoy the virtual classes that are given via "Teams" because they find them very boring, while the minority do enjoy these classes because the platform is easy to use.

Chart #10

5. After performing the activities proposed by the researcher, would you make any changes to them?

15 respuestas

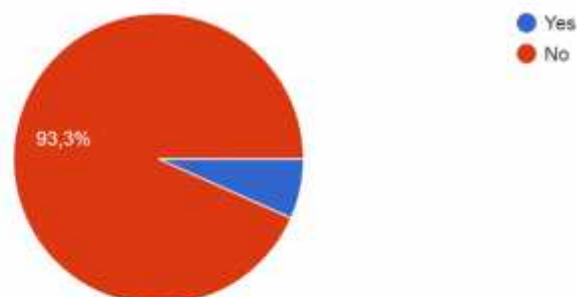


Chart #10 shows that the vast majority of respondents would not make any changes to the activities proposed by the researcher because they were entertaining, while the minority of respondents would do so because the second activity was not to their liking and they would eliminate it.

#### 4.1.1.2 Questionnaire for Fourth Graders at Escuela San Felipe (opened questions)

1. What do you consider to be the main advantages of the "Teams" platform?

For most of the students surveyed the main advantages of the "Microsoft Teams" platform are the ease of use, how simple it is, and how easy it is to communicate among themselves or with the teacher.

2. What do you consider to be the main disadvantage of the "Teams" platform?

Most respondents felt that this platform has no notable disadvantage, but a smaller number of students said it was boring because there was nothing to do but talk.

3. Of the platforms used for the activities proposed by the researcher, which one would you like your teacher to implement in his/her classes and why?

The platform most preferred by the students was Kahoot since they said it is very fun and they love to play, second place could be given to Quiver since they love coloring and they were attracted by the augmented reality.

4. Of the platforms used for the activities proposed by the researcher, which one would you NOT like your teacher to implement in their classes and why?

Most of the respondents said that they liked all the activities and platforms and did not dislike any of them, while a small minority said that Quiver would be the one they would eliminate because they found it boring.

#### **4.1.2 Interview**

This interview is composed of eight questions and will be applied to the teacher in charge of groups 4-1 who teaches English classes to know his opinion about the effectiveness of the "Microsoft Teams" platform when teaching classes during this academic year. In addition, we seek to know the advantages and disadvantages that the interviewee finds to this platform, as well as his point of view on complementing his classes with other applications.

#### **4.1.2.1 Interview applied to the teacher**

1. As a teacher, do you think you are getting the most out of the platforms used by the MEP?

The teacher answered that he has taken advantage of the platform, that it has helped him to carry out activities that might be more difficult to do in person because sometimes he did not have access to a projector and had no way to carry them out.

2. As a teacher, would you make any changes to the platform used during this teaching period?

The teacher here said that he would not really change anything to the platform and that it successfully fulfills its objective, that what sometimes hurts the teaching process is that some students do not have access to good internet or to a cell phone or a computer to be able to receive the classes efficiently.

3. As a teacher, do you think you could incorporate any platform or application to your classes to complement them and make them more dynamic?

The interviewee affirmed that yes, he could indeed incorporate extra platforms into his classes so that the students would be more entertained and enjoy the time the lessons last. He also mentioned that it would be very useful to use games as this would enrich the students' understanding of the second language.

4. Do you think that if there is a variety of activities through the use of other platforms, students would be more interested in the classes?

According to the teacher, the answer is yes, that students can be more entertained since the class would not be so monotonous just sitting in front of a monitor watching what the teacher is showing and listening to the explanation of the topics. With these platforms, students will feel that they are receiving more interactive classes.

5. Do you consider as a teacher that the platform used by the MEP is adequate?

According to the teacher, the "Teams" platform has fulfilled its function and has managed to maintain education in these difficult times of crisis during the COVID-19 pandemic last year and this year, in which face-to-face education has not been able to be provided or maintained regularly.

6. Have you used any extra application or platform in your classes? If the answer is yes, how have your students reacted?

The teacher answered yes, that he has used platforms such as Youtube to play videos and songs depending on the topics they are studying and that he has also used Kahoot but very few times since he does not have enough time to set up the quizzes on the platform.

7. What do you consider to be the main advantage offered by the platform used by the MEP?

For the teacher the main advantage is, as I mentioned before, that the platform has taken care of maintaining education, he also thinks that the ease of use and acquisition are great pluses and that the strongest point it has is to facilitate the communication between the teacher and the students.

8. What do you consider to be the main disadvantage of it?

Finally, the interviewee says that if the platform has a negative point or disadvantage it is being too simple since you can not do much more than talk and share screen to show the necessary content for the class to be carried out but that in itself, "Teams" works relatively well and has no other negative point.

## **Chapter V**

### **Conclusions and Recommendations**

#### **5.1 Purpose of the conclusion**

According to the research, it is understood that virtual platforms are of great importance today in education, mainly for learning a new language, helping students to have different media, platforms, and activities to develop their learning process. As the teacher interviewed commented, the virtual platforms allow some activities to be easier to carry out since they have materials that could not be used before in face-to-face classes due to lack of resources.

Thanks to the results obtained in the questionnaire applied to fourth-grade students of the San Felipe school, it is affirmed that the MEP is not using the full potential of its virtual platform Teams, students say that they perform few activities; however, the researcher is inclined to interpret that although the platform is basic, it fulfills its purpose and therefore the culprit of boring and monotonous classes for students is not "Teams" but the lack of experience and training of teachers who have not been able to get the most out of it and make students lose interest in the class.

Likewise, they think that classes could be more dynamic if they use platforms that complement those already used such as youtube videos, songs, and games.

The main objective of this research was to analyze the effectiveness of the platform used by the MEP, Microsoft Teams; from the results, it can be commented that the platform fulfills its functions as long as complementary applications are used to make classes more dynamic and entertaining, especially when dealing with elementary school students.

Virtual classes seem to be boring for fourth graders, most of them want to go back to face-to-face classes; even when they did the activities proposed by the researcher (Kahoot, Quever Socrative) they were very enthusiastic and commented that they would like their teacher to implement them in their classes, mainly Kahoot because it is a game where they compete with each other.

## **5.2 Conclusions**

According to the specific objectives set out in the work, the following conclusions can be drawn:

- To identify the level of effectiveness of the virtual platform.

In this work the virtual platform Microsoft Teams and its effectiveness were analyzed, thanks to the results obtained with the questionnaire and the teacher interview it was possible to conclude that the Teams platform meets the basic teaching needs such as sharing audio, video and the didactic material to be used in the class; and with these simple characteristics and with the use of applications to complement the lessons you are able to give a good class, then, it can be said that it is the untrained teachers who do not know how to take advantage of the potential of virtuality and make the students get bored and do not want virtual classes, but rather, preential classes.

However, the students assure that the virtual classes are less interactive and more resources could be used to learn more.

It is concluded that when using this platform there is an educational inequality since not all students have all the necessary resources to make it a quality one, for example, computer, quality internet, printer, video camera, or audio outputs.

The teacher interviewed shows that, although the application is quite basic, it has some advantages such as being able to communicate more easily, since sometimes schools do not have materials such as projectors or electronic whiteboards, which makes the process more difficult. Although the teacher affirms that the platform is efficient, he mentions that if the MEP implements other platforms, students will be more interested in learning and attending classes.

- To determine the main advantages and disadvantages of the virtual platform used by the institution.

The analyzed results show the great inequality that exists among students, many times there are students who do not have access to the internet, a computer, or a cell phone, which is one of the main disadvantages. A public education entity such as the MEP should provide equal education to all its students, giving access to all the teaching platforms.

At the same time, it can be seen that students do not find virtual education effective, as classes become monotonous, boring, and lacking in activities but as mentioned before, this is more due to the fact that teachers do not plan a dynamic class and do not take advantage of the tools provided by the platform.

Most students expect to return to face-to-face classes so that class activities have more interaction with their classmates and even teachers; however, virtuality could become an advantage of online education because, if new tools such as those proposed by the researcher are implemented, it is possible to achieve a class with a variety of educational practices and keep the student's attention for a longer period.

The interviewee states that the application is too simple as one cannot do more than share the screen, talk, and see the students through the screen, but still, the platform fulfills its basic function to teach. This affirms the fact that the lack of teacher training for virtual classes is the main problem because although there are thousands of platforms, add-ons, websites and applications that can help, but in some cases teachers do not even know of their existence.

It can also be said that Teams has enabled elementary students, and indeed globally, to have a continuing education due to the Covid-19 pandemic.

The advantage that stands out the most among the responses is that the application is very easy to use, students can easily navigate and accomplish everything requested. This medium fulfills the basic and necessary functions of a virtual classroom.

- To expose some applications or platforms that can be used to complement virtual teaching.

During the present study, 3 different applications were presented that serve as a complement to the main platform Teams, which are: Kahoot, Quever, and Socrative. The aforementioned are applications with more functions and that allow the class to have more participation from the students since they excite them and inspire them to want to learn more in a more fun way.

The platforms were used by the students and it was observed that they were quite efficient at the time of teaching the lessons; likewise, by asking the children it was concluded that they all liked this new teaching method. Most of them preferred the Kahoot application

because it gave them a sense of competition and they commented that it was more like a game, something that is notably more appealing to a fourth grader.

As for the other 2 options, the students said that the other one that caught their attention the most was Quiver, as they love coloring and it is something that is not normally done within an English class. At the same time, the students liked to see something different like virtual reality, which this application offers. Socratic was not of great interest since it is very similar to Kahoot and its design is not as striking as Kahoot.

From the above, it is understood that for students, using platforms such as games makes them more interested in learning the topics presented and encourages them to pay more attention and want to win. This is an aspect of great importance since it would achieve the educational objective, which ultimately is that students have a good level of knowledge and management of the subject.

### **5.3 Recommendations**

As the main recommendation, educational institutions must begin to make their classes more interactive, by implementing other platforms to those currently used.

It is recommended to use the platforms presented by the researcher, Kahoot, Quiver, and Socratic, since they are attractive and simple for students. These make the learning process more appealing to them and they feel more eager to know the necessary vocabulary.

It is important to encourage teachers to make their classes dynamic. Currently, due to virtuality, it is more complicated for children to concentrate and simply listen to their teacher talking, if they want to have a good learning process, it is recommended that teachers use

other platforms or tools to integrate their students more, such as YouTube videos, songs, games, virtual cards, drawings, among others.

The researcher recommends using at least two complementary applications per class, this generates that students are eager to know new tools they will use to learn.

In addition to the platforms mentioned above that can be used to complement virtual classes, the researcher also recommends the use of the following websites: Games to learn English, ESL Games+ and British Council.

## Bibliography and references

- Bartolome, A. (2004). Blended learning. Conceptos básicos. Researchgate.  
[https://www.researchgate.net/publication/277262026\\_Blended\\_learning\\_Conceptos\\_basico\\_s](https://www.researchgate.net/publication/277262026_Blended_learning_Conceptos_basico_s)
- Berrocal, & Mejias. (2015). Cuáles son las plataformas de aprendizaje virtual más utilizadas. Educativa. <https://www.educativa.com/blog-articulos/cuales-son-las-plataformas-de-aprendizaje-virtual-mas-utilizadas-2/>
- Bit4learn. (n.d.). Microlearning. <https://bit4learn.com/es/lms/microlearning/>
- Bit4learn. (n.d.). Plataforma Educativa. <https://bit4learn.com/es/lms/plataforma-educativa/>
- Bit4learn. (n.d.). Social Learning. <https://bit4learn.com/es/lms/social-learning/>
- Buzón-García, O. (n.d.). La incorporación de plataformas virtuales a la enseñanza: una experiencia de formación on-line basada en competencias. Dialnet.  
<https://dialnet.unirioja.es/servlet/articulo?codigo=1303698>
- Cacciavillani, M. (2020). Las 6 Mejores Plataformas Educativas Virtuales en 2021. ComparaSoftware. <https://blog.comparasoftware.com/mejores-plataformas-educativas-virtuales/>
- Canva. (n.d.). Las 27 mejores apps para profesores. [https://www.canva.com/es\\_mx/aprende/apps-para-profesores/](https://www.canva.com/es_mx/aprende/apps-para-profesores/)
- Creswell, J. (2009). Research Design: Qualitative, Quantitative and Mixed Methods (3rd Ed.). Los Angeles: SAGE Publications.

Delgado, M. (2014, May 8). Hace 200 años, Costa Rica abrió la primera escuela pública de primeras letras. Teletica. [https://www.teletica.com/nacional/hace-200-anos-costa-rica-abrio-la-primera-escuela-publica-de-primeras-letras\\_52649](https://www.teletica.com/nacional/hace-200-anos-costa-rica-abrio-la-primera-escuela-publica-de-primeras-letras_52649)

ESL Games+. (n.d.). Games for Learning English. <https://www.eslgamesplus.com/>

Gairin, J. (2018). Quality assessment dimensions in virtual education: a review of reference models. DOAJ. <https://doaj.org/article/897bbac699064fa19f5abffad9a0b5ea>

Gairin, J. & Marciniak, R. (2018). Dimensiones de evaluación de calidad de educación virtual: revisión de modelos referentes. RIED. <http://revistas.uned.es/index.php/ried/article/view/16182>

Gonzalez, J. (n.d.). La Educación Virtual ¿Opción o Futuro Estándar? <https://revistas.pucp.edu.pe/index.php/strategia/article/view/18171/18415>

Gordon, Ortega, & Vaquez. (2020). Estrategias de aprendizaje en la modalidad presencial y no presencial a nivel superior. Calameo. <https://es.calameo.com/read/00614801183052b46c827>

Hernandez Rivera, P. (n.d.). Historic precedent of the Education in Costa Rica: From the colony to the beginning of the “School of Dentistry”, Universidad de Costa Rica. <http://www.fodo.ucr.ac.cr/sites/default/files/revista/Antecedentes%20hist%C3%B3ricos%20de%20la%20Educaci%C3%B3n%20en%20Costa%20Rica%20De%20la%20colonia%20a%20la%20apertura%20de%20la%20Facultad%20de%20Odontolog%C3%ADa%20UCR.pdf>

Hernández, R., Fernández, C., & Baptista, P. (2000). Metodología de la investigación (6th ed.). <https://www.uca.ac.cr/wp-content/uploads/2017/10/Investigacion.pdf>

LearningApps. (2019). Simple Present Sentences. <https://learningapps.org/313033>

Luzurriaga, L. (n.d.). Historia de la educacion y de la pedagogia. [https://sociofilosofia.files.wordpress.com/2015/04/historia de la educacion y de la pedagogia i.pdf](https://sociofilosofia.files.wordpress.com/2015/04/historia-de-la-educacion-y-de-la-pedagogia-i.pdf)

Martinez Gutierrez, B. (n.d.). CRONOLOGÍA DE LA EDUCACIÓN COSTARRICENSE. [https://www.imprentanacional.go.cr/editorialdigital/libros/historiaygeografia/cronologia de la educacion costarricense edincr.pdf](https://www.imprentanacional.go.cr/editorialdigital/libros/historiaygeografia/cronologia-de-la-educacion-costarricense-edincr.pdf)

Microsoft Teams. (n.d.). The Pros and Cons of Microsoft Teams. Vacation Traker. <https://vacationtracker.io/blog/the-pros-and-cons-of-microsoft-teams>

Montero, F. (2020, September 22). Educación virtual: el nuevo reto de las universidades latinoamericanas. Hoy en el TEC. <https://www.tec.ac.cr/hoyeneltec/2020/09/22/educacion-virtual-nuevo-reto-universidades-latinoamericanas>

Odio, D. (2017). Virtualidad e inclusión: Barreras para el aprendizaje y la participación de estudiantes, docentes y equipo técnico en los entornos virtuales educativos de la Universidad de Costa Rica. ReUNED. <https://repositorio.uned.ac.cr/reuned/handle/120809/1591>

Online ESL Games. (n.d.). Games to Learning English. <https://www.gamestolearnenglish.com/>

Osuna Acedo, S. (2009). DIDÁCTICA Y ESPEJISMOS DE LAS PLATAFORMAS VIRTUALES. REVISTA EDUCAÇÃO E CULTURA CONTEMPOR NEA, VOL. 6, NO 13. <http://periodicos.estacio.br/index.php/reeduc/article/viewArticle/7994>

Ousmanova, K. (2019). The Pros and Cons of Microsoft Teams. Vacation Tracker. <https://vacationtracker.io/blog/the-pros-and-cons-of-microsoft-teams>

Padrón, C., Doderó, J., Díaz, P., & Aedo, I. (2005, December). The collaborative development of didactic materials. Retrieved from Research Gate: [https://www.researchgate.net/publication/215525018\\_The\\_collaborative\\_development\\_of\\_didactic\\_materials](https://www.researchgate.net/publication/215525018_The_collaborative_development_of_didactic_materials)

Present Simple. (n.d.). English Exercises. <https://www.englishexercises.org/makeagame/viewgame.asp?id=24>

Quesada Pacheco, A. (2018, January 26). Perspectiva de profesores y estudiantes sobre entornos virtuales de aprendizaje en la educación superior. Universidad de Costa Rica. <https://revistas.ucr.ac.cr/index.php/rlm/article/view/32148>

Rodriguez, J. (2007). Ayer y hoy de la educacion. Reflexiones para el profesorado. [file:///C:/Users/jean paul/Downloads/Dialnet-Ayer Hoy DeLaEducacion-2498345.pdf](file:///C:/Users/jean%20paul/Downloads/Dialnet-Ayer%20Hoy%20DeLaEducacion-2498345.pdf)

Salas, J. (2012). Historia General de la Educacion. [http://www.aliat.org.mx/BibliotecasDigitales/economico\\_administrativo/Historia\\_general\\_de\\_la\\_educacion.pdf](http://www.aliat.org.mx/BibliotecasDigitales/economico_administrativo/Historia_general_de_la_educacion.pdf)

Sangra, A. (2006, January). Educación a distancia, educación presencial y usos de la tecnología: una tríada para el progreso educativo. Researchgate.  
[https://www.researchgate.net/publication/28058863\\_Educacion\\_a\\_distancia\\_educacion\\_presencial\\_y\\_usos\\_de\\_la\\_tecnologia\\_una\\_triada\\_para\\_el\\_progreso\\_educativo](https://www.researchgate.net/publication/28058863_Educacion_a_distancia_educacion_presencial_y_usos_de_la_tecnologia_una_triada_para_el_progreso_educativo)

Silva, J. (2017, March). Un modelo pedagógico virtual centrado en las E-actividades.  
<https://www.um.es/ead/red/53/silva.pdf>

Solar, A. (2011, November). La efectividad de la enseñanza virtual. SildeShare.  
<https://es.slideshare.net/adrianasolar/la-efectividad-de-la-enseanza-virtual>

Tobon, Tobon, Veytia – Bucheli & Escudero. (2018). Hacia un nuevo concepto:  
Plataformas Virtuales Socioformativas.  
<http://www.revistaespacios.com/cited2017/cited2017-27.pdf>

Vasquez, A. (2020). EDUCACIÓN PRESENCIAL Y NO PRESENCIAL. Calameo.  
<https://es.calameo.com/books/00614801183052b46c827>

Velasteguí, P. (2017). Plataformas virtuales y su impacto en la Educación Superior.  
Explorador Digital.  
<https://cienciadigital.org/revistacienciadigital2/index.php/exploradordigital/article/view/318>

## Annexes

### Annex #1 Student Questionnaire

Figure 11

Sección 1 de 3

Questionnaire about the effectiveness of the virtual platform used by the MEP at San Felipe school.

Descripción del formulario

Do you consider that the platform used by the MEP is being used to its full potential? \*

Yes

No

2. Do you think that the educational center provides quality education through the use of its virtual platforms? \*

Yes

No

Figure 12

3. Do you think that the tools used by your teacher make the class more fun and dynamic?

Yes

No

4. Do you think there is a variety of activities during the virtual class? \*

Yes

No

5. After having solved the activities proposed by the researcher, do you think they enriched the teaching and learning process? \*

Yes

No

The interface includes a vertical toolbar on the right with icons for navigation and editing.

Figure 13

Sección 2 de 3

Título de la sección (opcional)

Descripción (opcional)

1. After having received the virtual classes through the platforms assigned by the MEP, do you prefer to return to the face-to-face classes? \*

Yes

No

Justify your answer \*

Texto de respuesta corta

The interface includes a vertical toolbar on the right with icons for navigation and editing.

Figure 14

2. Would you make any change in the platform used during this academic period? \*

Yes

No

Justify your answer: \*

Texto de respuesta corta

3. Would you prefer to have more activities in the classes using different platforms that complement the one already used? \*

Yes

No

Justify your answer: \*

Texto de respuesta corta

The image shows a digital survey form with a light gray background. It contains two questions, each followed by a justification box. On the right side, there is a vertical toolbar with icons for back, forward, home, and other navigation functions. The text in the justification boxes is a placeholder: 'Texto de respuesta corta'.

Figure 15

4. Do you enjoy the virtual classes given through the "Teams" platform? \*

Yes

No

Justify your answer \*

Texto de respuesta larga

5. After performing the activities proposed by the researcher, would you make any changes to them? \*

Yes

No

Justify your answer \*

Texto de respuesta corta

The image shows a digital survey interface. It contains two questions, each with a radio button for 'Yes' and 'No', followed by a 'Justify your answer' section with a text input field. A vertical toolbar on the right side of the form contains icons for back, forward, home, search, and refresh.

Figure 16

Sección 3 de 3

**Título de la sección (opcional)**

Descripción (opcional)

1. What do you consider to be the main advantages of the "Teams" platform? \*

Texto de respuesta corta

2. What do you consider to be the main disadvantage of the "Teams" platform? \*

Texto de respuesta corta

3. Of the platforms used for the activities proposed by the researcher, which one would you like your teacher to implement in his/her classes and why? \*

Texto de respuesta corta

Figure 17

3. Of the platforms used for the activities proposed by the researcher, which one would you like your teacher to implement in his/her classes and why? \*

Texto de respuesta corta

4. Of the platforms used for the activities proposed by the researcher, which one would you NOT like your teacher to implement in their classes and why? \*

Texto de respuesta corta

5. Could you mention a suggestion to improve the classes you receive through the platform used by the MEP? \*

Texto de respuesta corta

## Annex #2 Teacher Questionnaire

Figure 18

The screenshot shows a digital form titled "Teacher interview". At the top, there is a header box with the title and a sub-label "Descripción del formulario". Below this, there are three question boxes, each containing a question and a text input field labeled "Texto de respuesta corta".

1. As a teacher, do you think you are getting the most out of the platforms used by the MEP?  
Texto de respuesta corta

2. As a teacher, would you make any changes to the platform used during this teaching period?  
Texto de respuesta corta

3. As a teacher, do you think you could incorporate any platform or application to your classes to complement them and make them more dynamic?  
Texto de respuesta corta

On the right side of the form, there is a vertical toolbar with icons for zooming in (+), zooming out (-), erasing, undo, redo, and deleting.

Figure 19

The screenshot shows a digital form with four question boxes, each containing a question and a text input field labeled "Texto de respuesta corta".

4. Do you think that if there is variety of activities through the use of other platforms, students would be more interested in the classes?  
Texto de respuesta corta

5. Do you consider as a teacher that the platform used by the MEP is adequate?  
Texto de respuesta corta

6. Have you used any extra application or platform in your classes? If the answer is yes, how have your students reacted?  
Texto de respuesta corta

7. What do you consider to be the main advantage offered by the platform used by the MEP?  
Texto de respuesta corta

On the right side of the form, there is a vertical toolbar with icons for zooming in (+), zooming out (-), erasing, undo, redo, and deleting.

Figure 20

8. What do you consider to be the main disadvantage of it?

Texto de respuesta corta

---

### Anexe #3 Kahoot Activity

Figure 21

Why ..... you happy?

16

Kahoot!

13 Answers

|        |       |
|--------|-------|
| ▲ Is   | ◆ Do  |
| ● Does | ■ Are |

Exit preview < 1 of 20 >

Figure 22

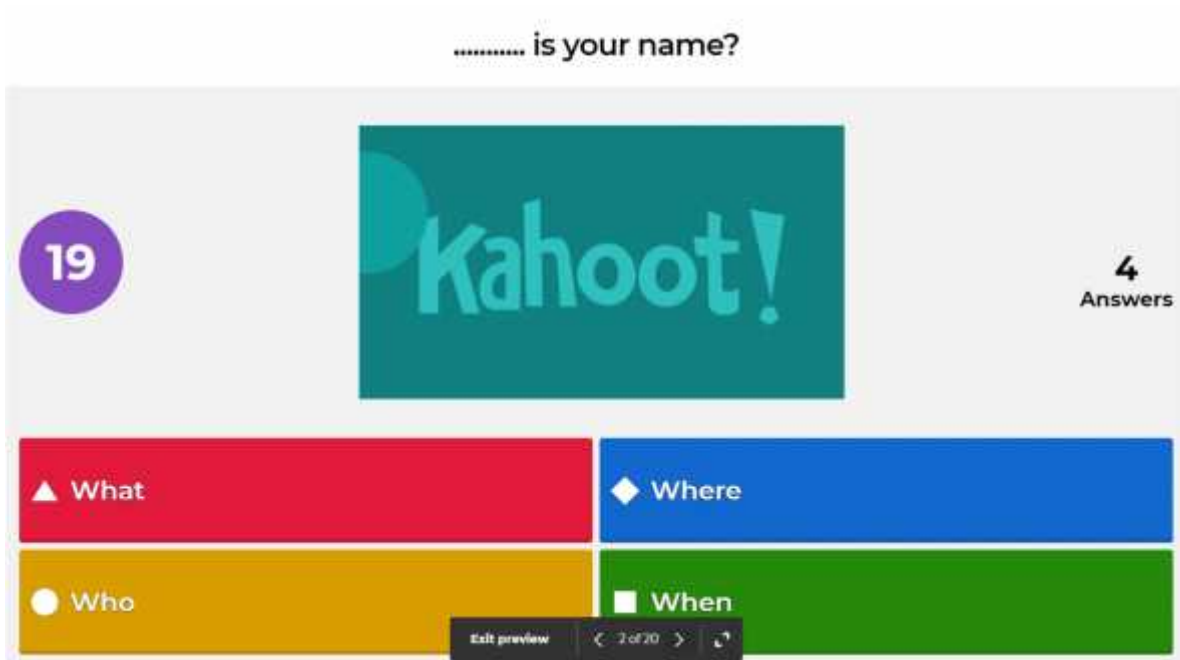


Figure 23



Figure 24



Figure 25



Figure 26

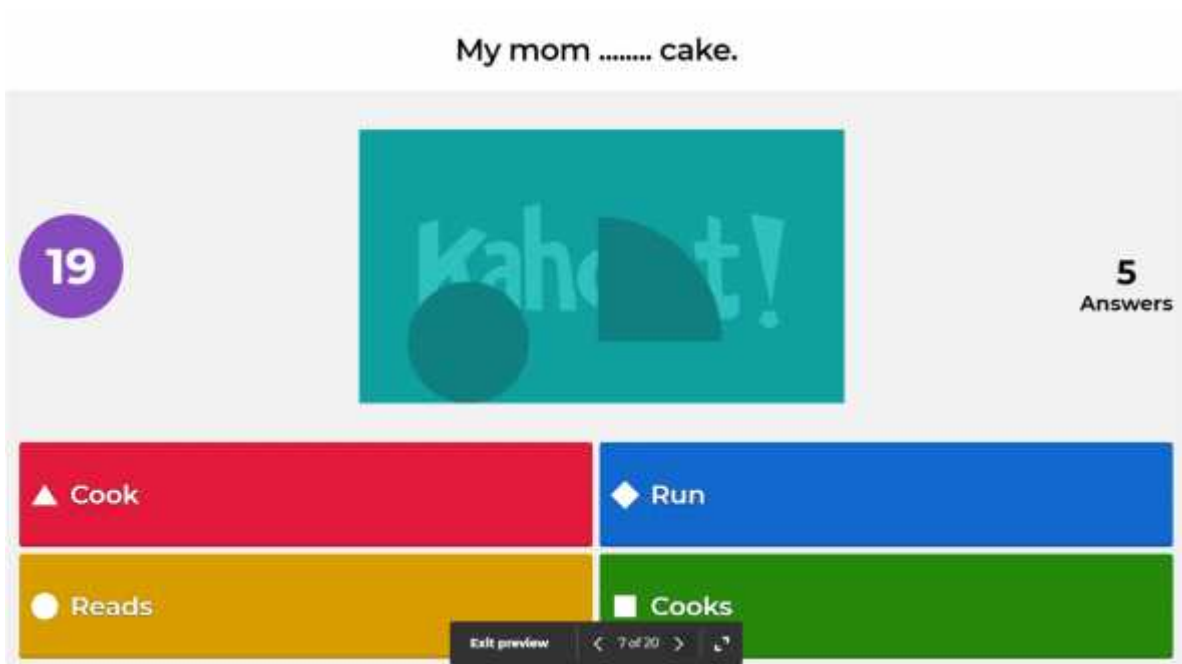


Figure 27



Figure 28

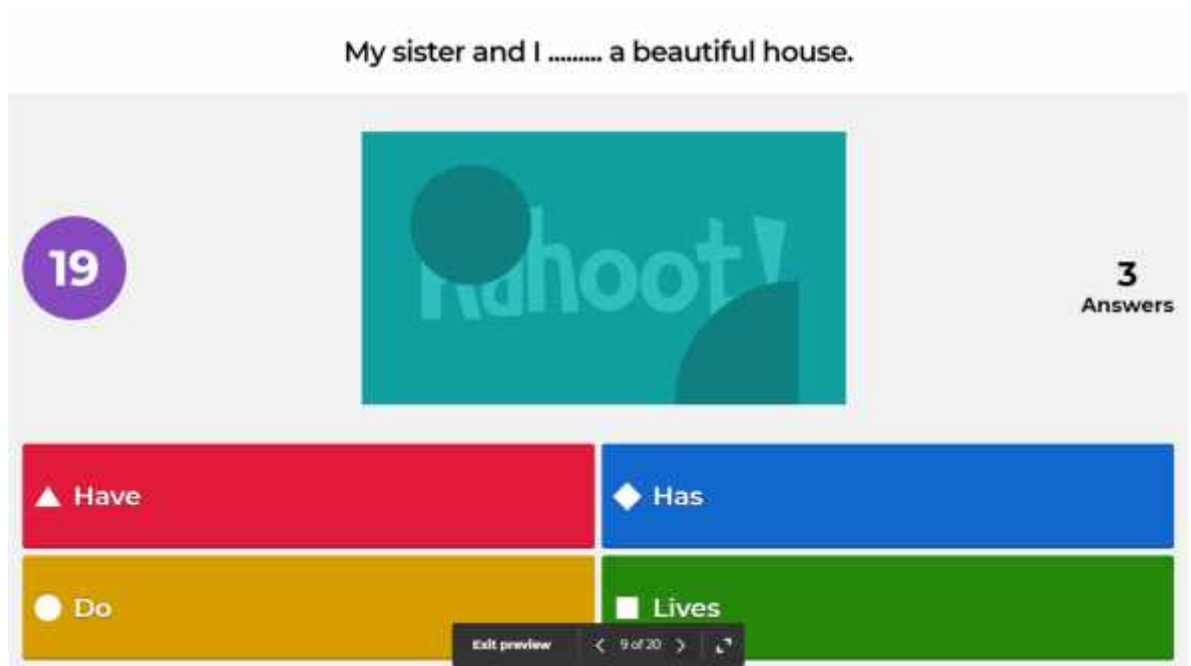


Figure 29



Figure 30

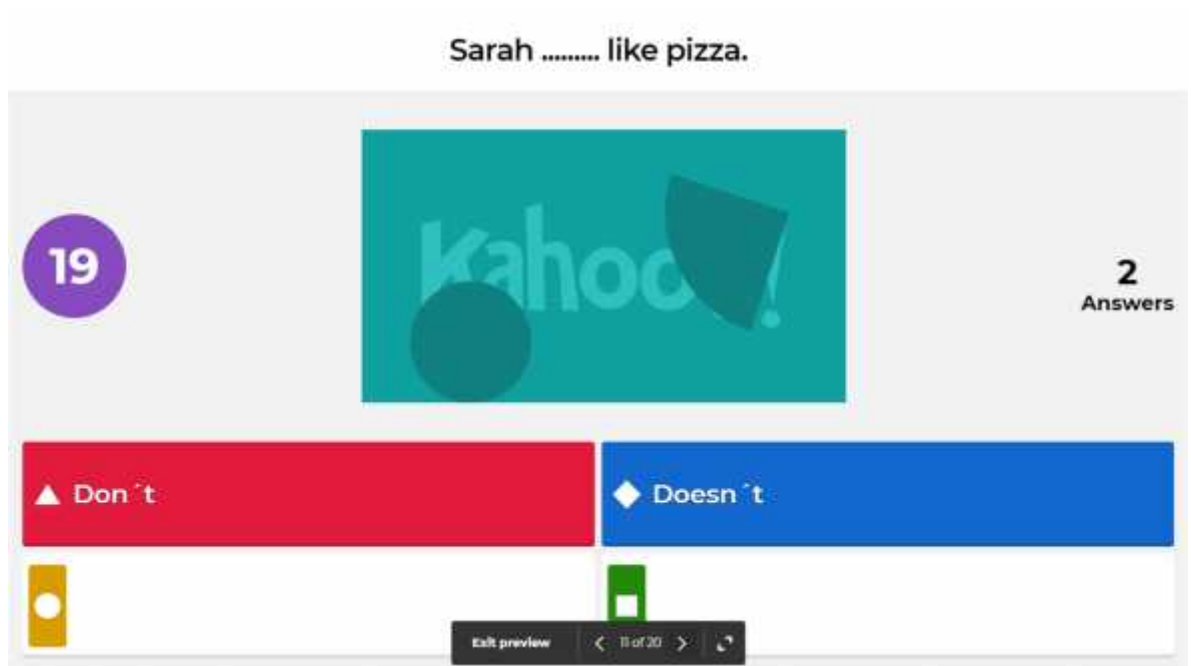


Figure 31

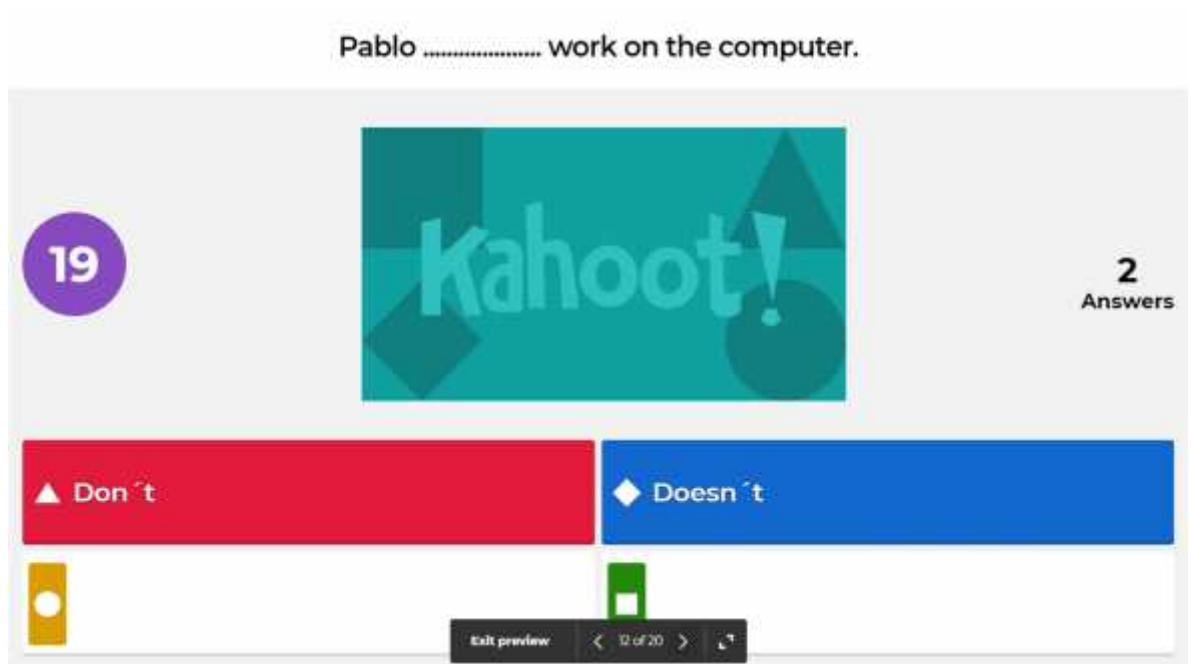


Figure 31

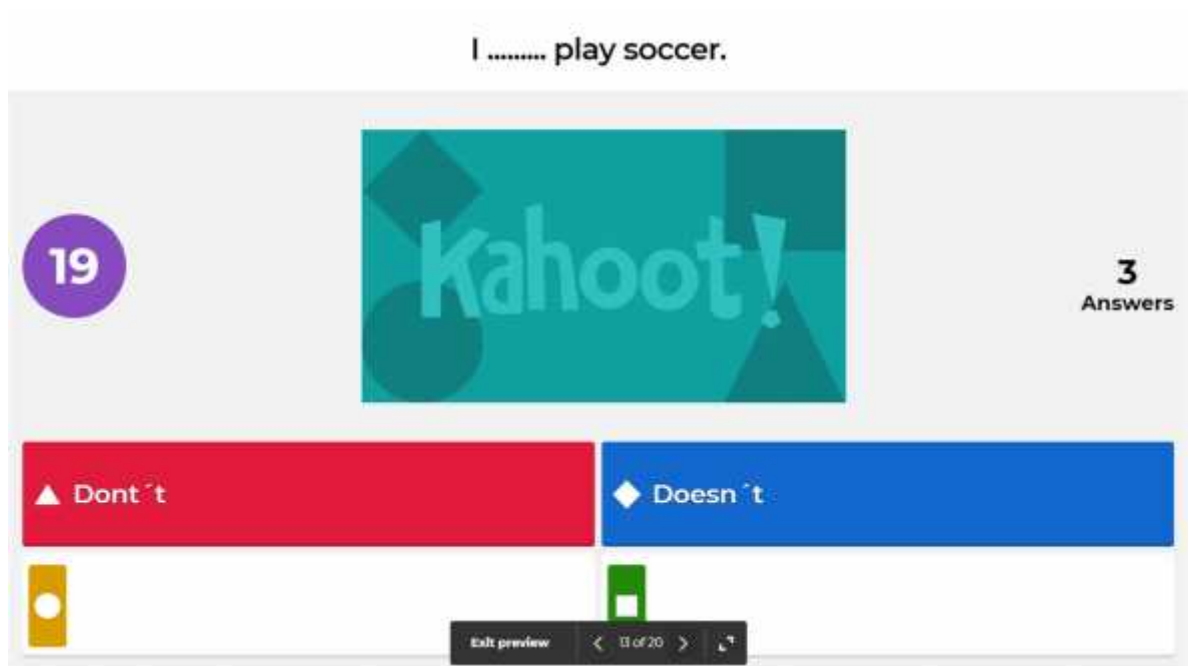


Figure 32

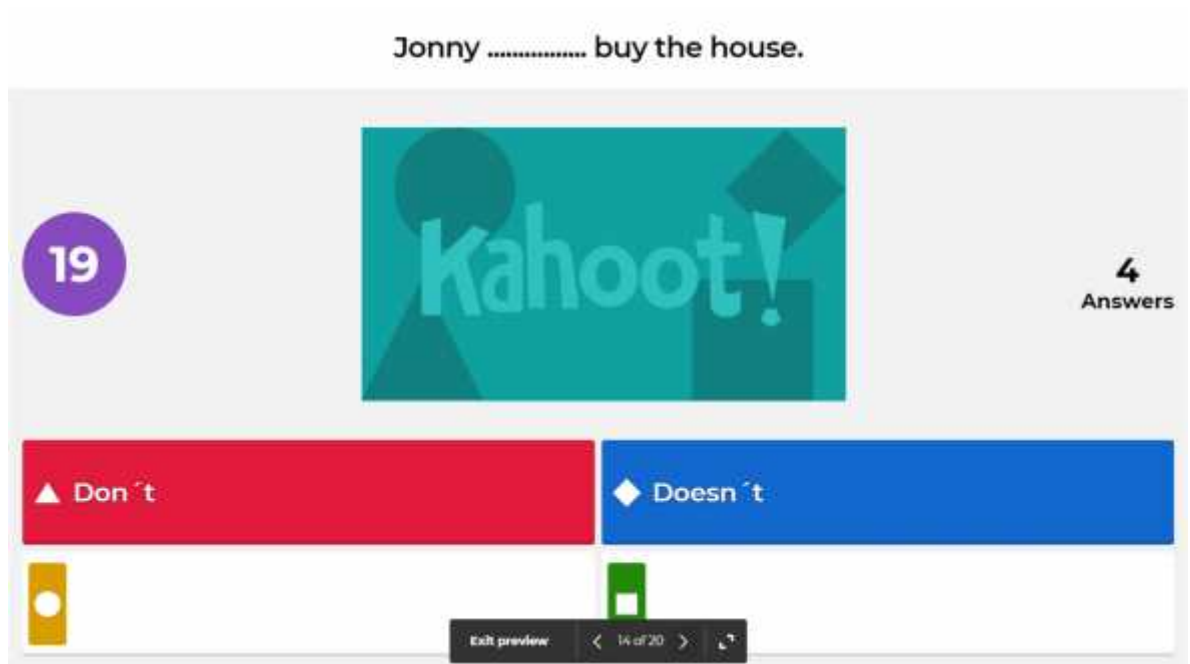


Figure 33

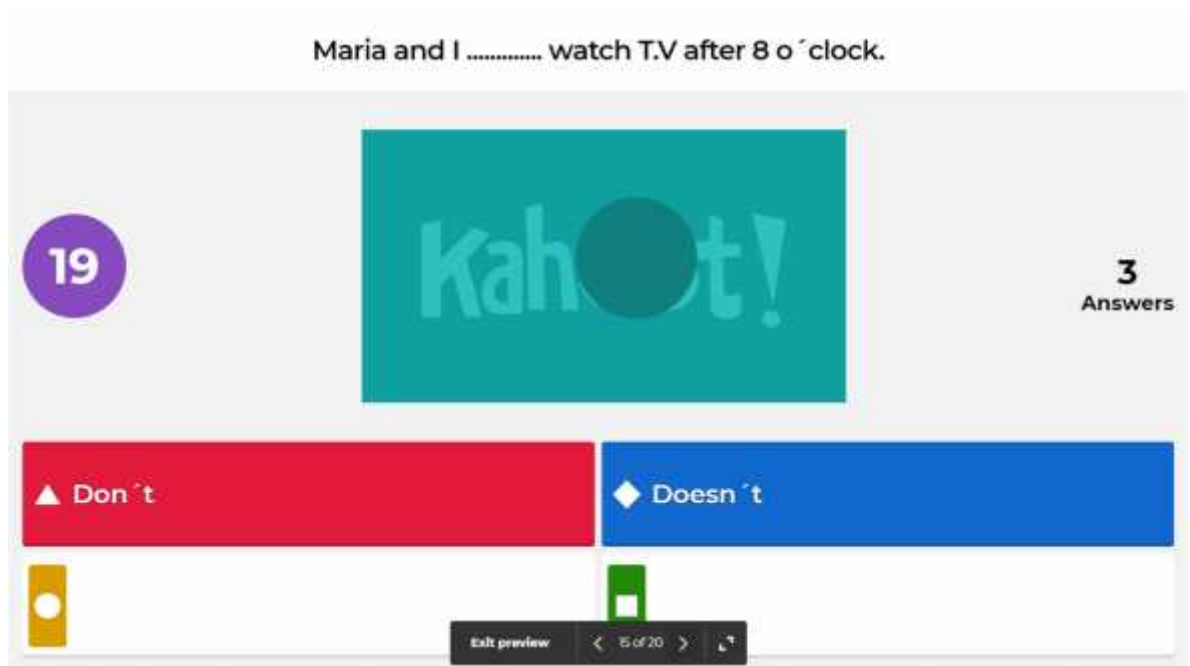


Figure 34

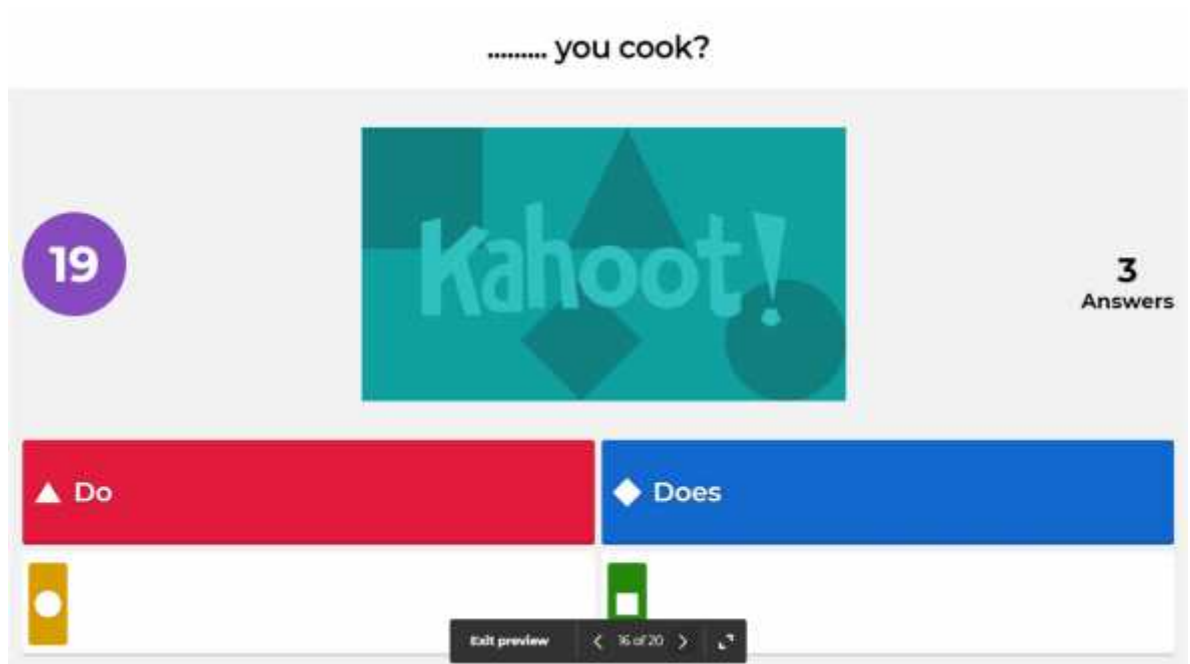


Figure 35



Figure 36



Figure 37

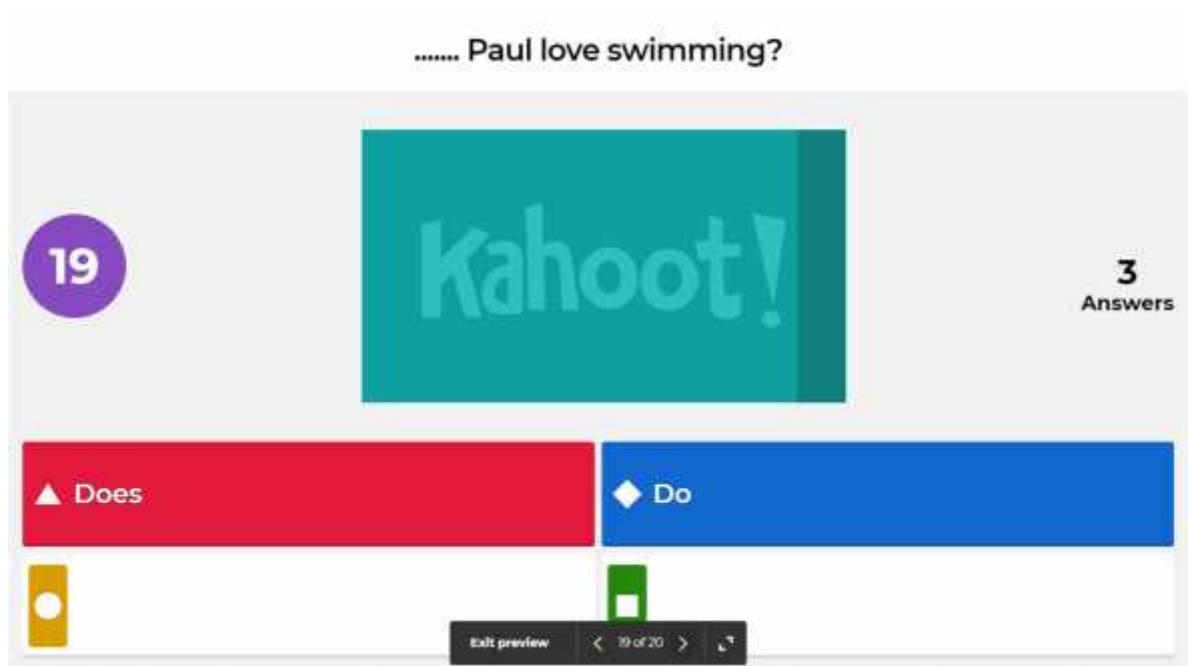
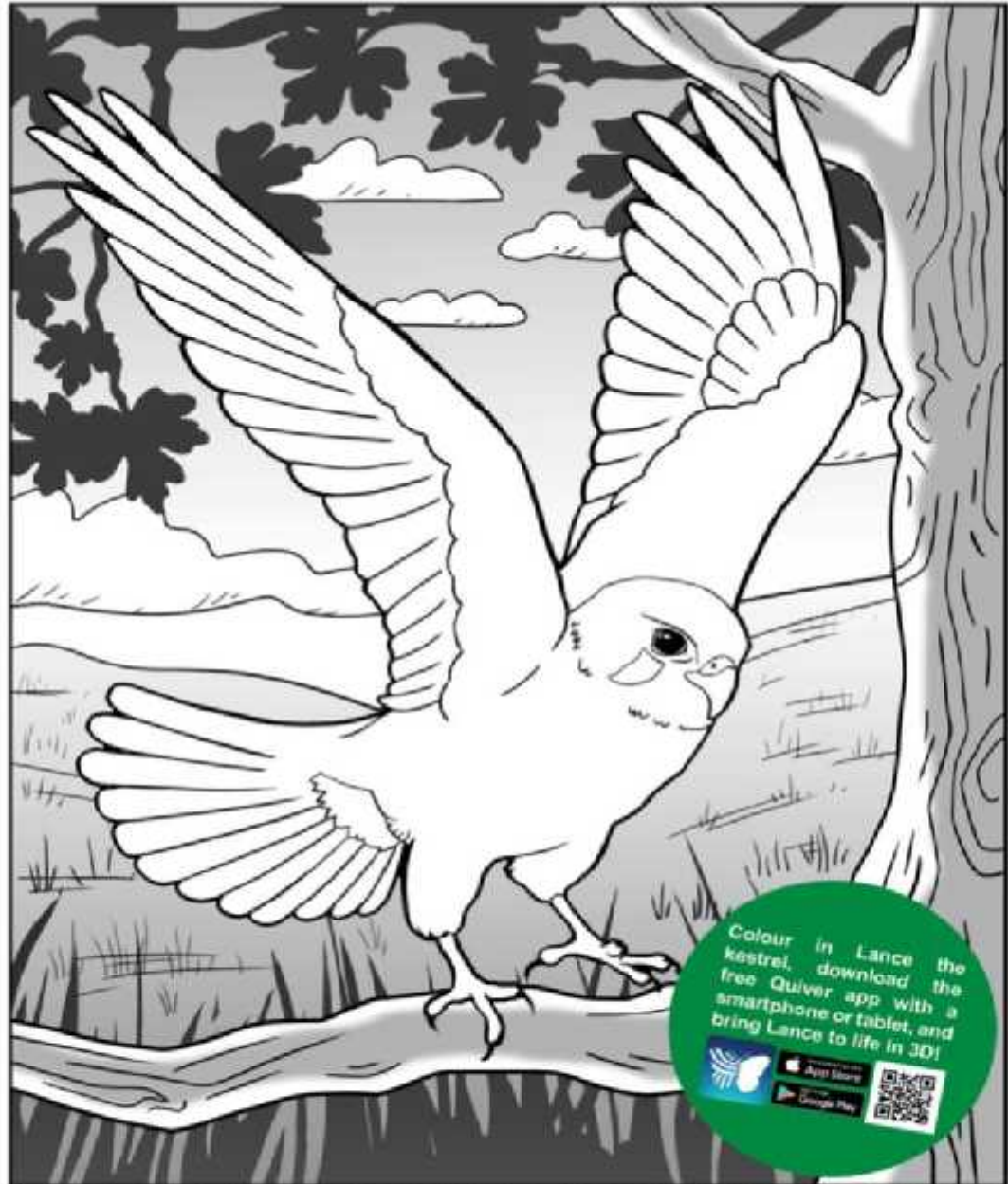


Figure 38



## Annex #4 Quiver Activity

Figure 39



Quiver is a third party application, by downloading the app you will be accepting the terms of use from your Apple or Google store as well as the app providers. Woodland Trust accepts no responsibility for any data provided to Quiver or for the functioning of this app. WT recommend that users familiarise themselves with the T&C's of the app.



Visit us at  
[woodlandtrust.org.uk](http://woodlandtrust.org.uk)  
[quivervision.com](http://quivervision.com)



## Anex #5 Socrative Activity

Figure 40

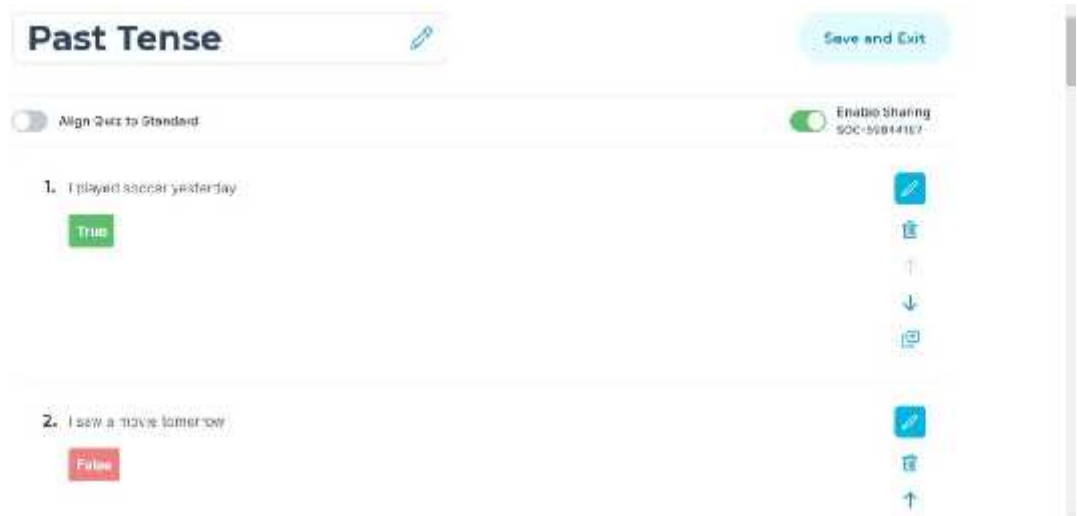


Figure 41

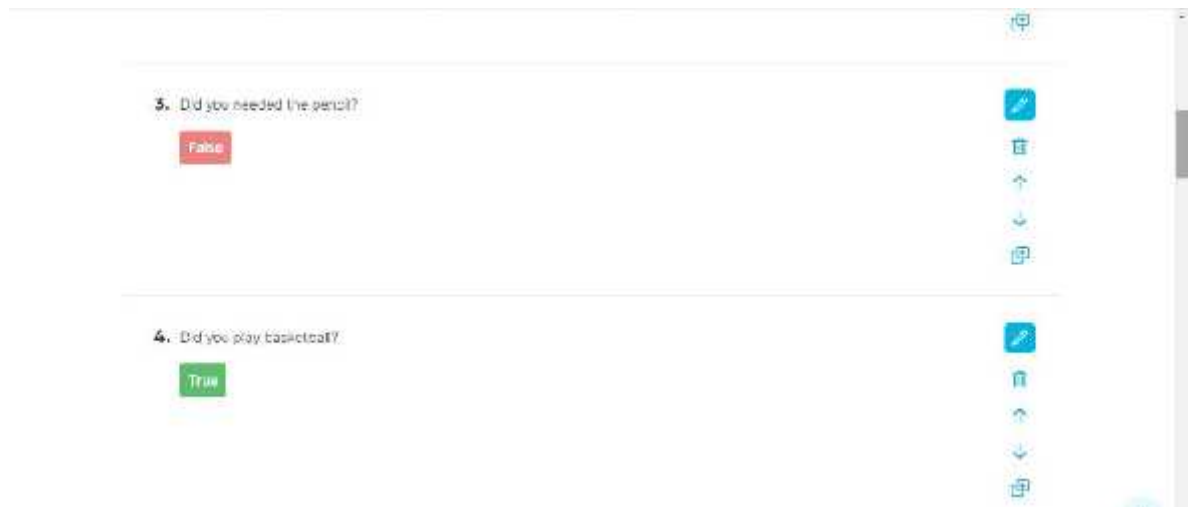


Figure 42

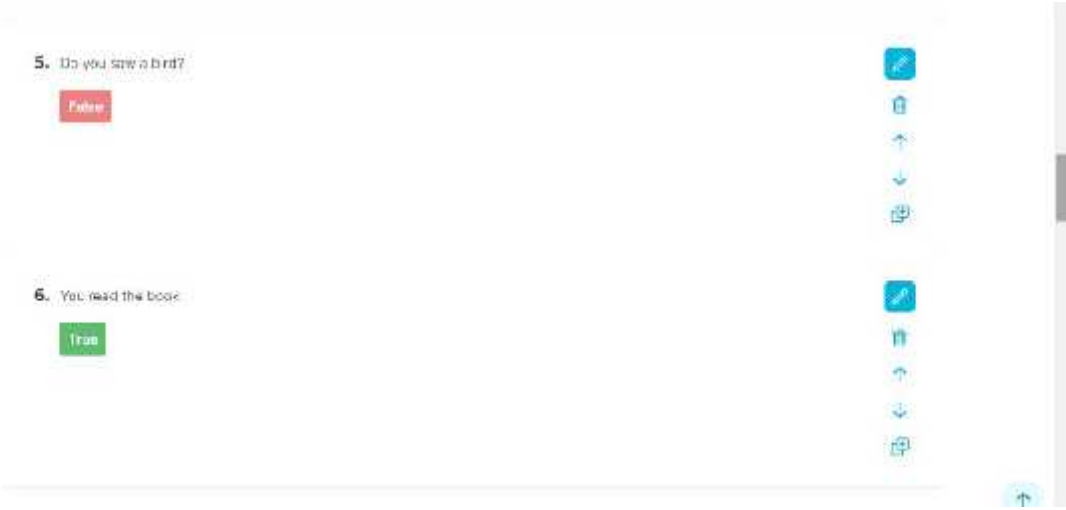


Figure 43

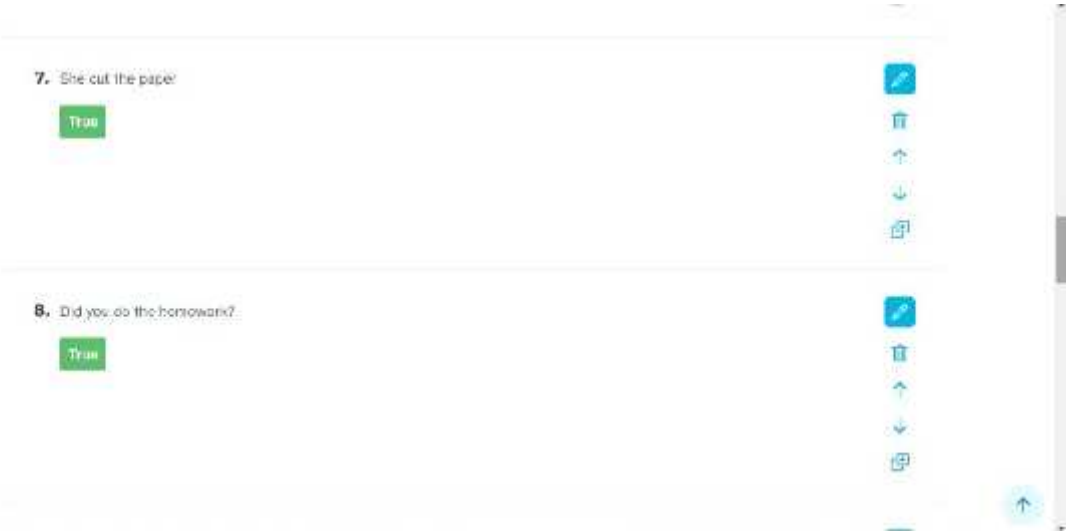


Figure 44

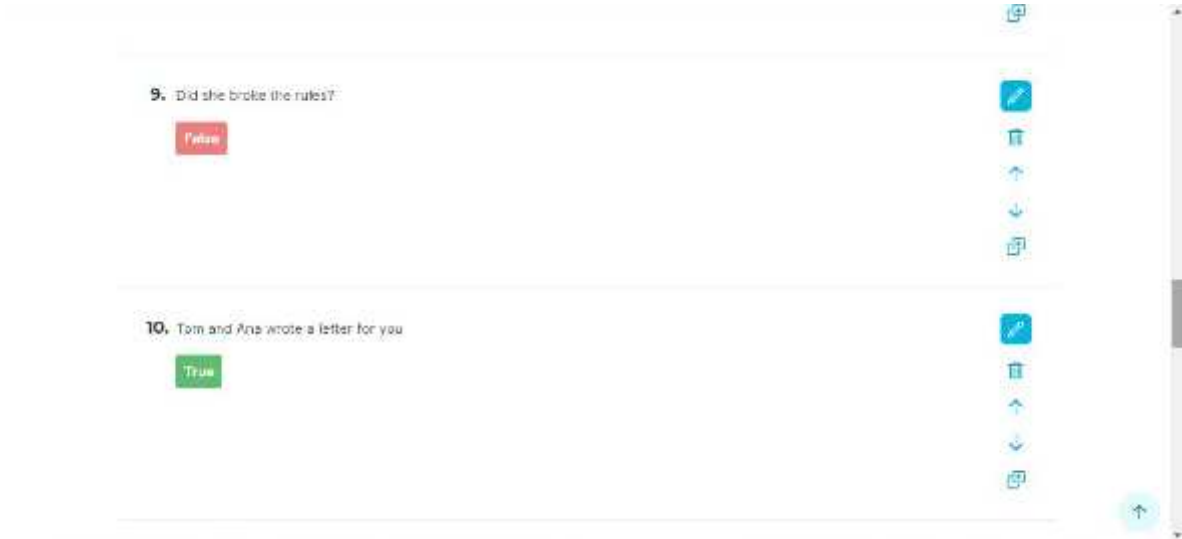


Figure 45

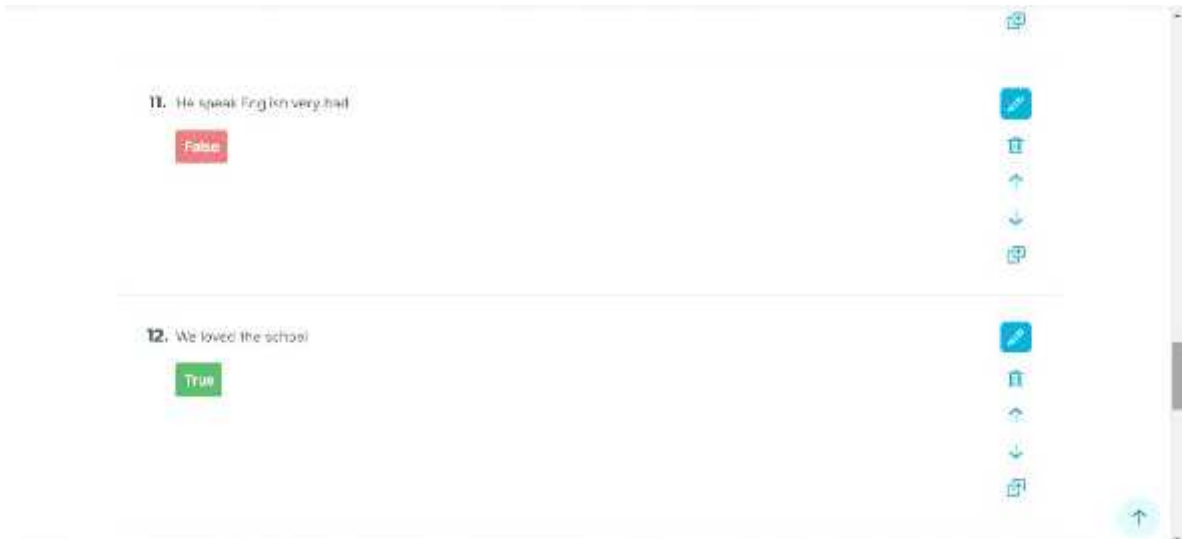


Figure 46

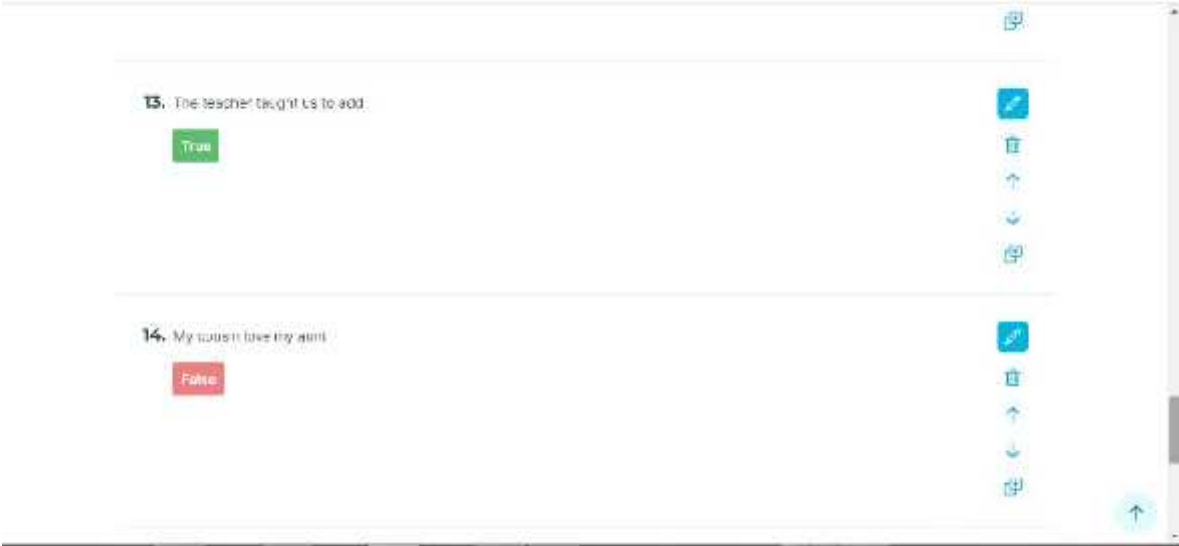


Figure 47

