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FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN

MAESTRÍA EN PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

TEMA: **"DIGITAL GAMES AND EFL VOCABULARY LEARNING"**

Trabajo de Investigación, previo a la obtención del Grado Académico de Magister en Pedagogía de los Idiomas Nacionales y Extranjeros

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THEME:

"DIGITAL GAMES AND EFL VOCABULARY LEARNING"

AUTHOR: Licenciada Yesenia Anabel Arequipa Tandalla

DIRECTED BY: Doctora Elsa Mayorie Chimbo Cáceres Magister

RESEARCH FIELD: Language learning

DATE: January 13th, 2022

ABSTRACT

The current research was carried out with the objective to analyze the effectiveness of applying digital games for EFL vocabulary learning of fifth-grade students of Unidad Educativa "Hermano Miguel". For the development of the research, the methodology approach used was quantitative, and a quasi-experimental design due to the participants were not randomized. Moreover, the methodology ADDIE which stands for Analyze, Design, Develop, Implement, and Evaluation was employed in the research to provide learning experiences through the development of an instructional program. Additionally, the Technological Acceptance Model (TAM) was executed with the main aim to determine whether users accept or reject a particular technology. The instruments that helped the researcher to collect and validate data were the following a web 3.0 survey to determine the use of web 3.0 tools in the educational field that was categorized into a Likert scale, and validated with a 0.846 Cronbach Alpha, a structured survey validated by pairs that aimed to determine the use of digital games in EFL vocabulary learning, and an adapted standardized pre and post-test based on Cambridge A1 Movers Test; the test considered the vocabulary parts of the listening sections 3 and 4 and reading sections 1 and 3. To verify the hypothesis of this research, the Group Statistics and Independent-Sample T-test were applied. The results of the pre-test showed that both the control and experimental groups had poor EFL vocabulary knowledge. That is why the use of digital games was proposed to improve

the students´ vocabulary level. Finally, the post-test results showed the following results. The control group had a little difference in the pre and post-test, while the experimental group after the application of digital games showed a meaningful difference in the improvement of EFL vocabulary. To conclude, the use of digital games has an impact on the development of EFL vocabulary learning.

Keywords: web 3.0, gamification, digital games, language learning, vocabulary knowledge, vocabulary learning.

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DIRECCIÓN DE POSGRADO

MAESTRÍA EN PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

TEMA:

"DIGITAL GAMES AND EFL VOCABULARY LEARNING"

AUTORA: Licenciada Yesenia Anabel Arequipa Tandalla

DIRECTORA: Doctora Elsa Mayorie Chimbo Cáceres Magister

LÍNEA DE INVESTIGACIÓN: Aprendizaje de idiomas

FECHA: 13 de enero de 2022

RESUMEN EJECUTIVO

La presente investigación se llevó a cabo con el objetivo de analizar la efectividad de la aplicación de juegos digitales para el aprendizaje de vocabulario de Inglés como lengua extranjera de los estudiantes de quinto grado de la Unidad Educativa "Hermano Miguel". Para el desarrollo de la investigación se utilizó un enfoque metodológico cuantitativo, y un diseño cuasiexperimental debido a que los participantes no furon aleatorizados. Además, la metodología ADDIE, que significa Analizar, Diseñar, Desarrollar, Implementar y Evaluar, se empleó en la investigación para proporcionar experiencias de aprendizaje a través del desarrollo de un programa de instrucción. Adicionalmente, se ejecutó el Modelo de Aceptación Tecnológica (TAM) para determinar si los usuarios aceptan o rechazan una determinada tecnología. Los instrumentos que ayudaron al investigador a recolectar y validar los datos fueron los siguientes: una encuesta web 3.0 para determinar el uso de las herramientas web 3.0 en el ámbito educativo que fue categorizada en una escala de Likert, y validada con un Alfa de Cronbach de 0.846, una encuesta estructurada validado por pares académicos que tuvo como objetivo determinar el uso de juegos digitales en el aprendizaje de vocabulario de Inglés como lengua extranjera, una prueba previa y posterior estandarizado y adaptado basado en el Cambridge A1 Movers Test; la prueba consideró las partes de vocabulario de las secciones de escucha 3 y 4 y las secciones de lectura 1 y 3. Para verificar la hipótesis de esta investigación, se aplicó la estadística de grupo y la prueba T de muestra independiente. Los resultados del pre test mostraron que tanto el grupo control como el experimental tenían un conocimiento deficiente del

vocabulario de Inglés como lengua extranjera. Es por ello que se propuso el uso de juegos digitales para mejorar el nivel de vocabulario de los estudiantes. Finalmente, los resultados del post test arrojaron los siguientes resultados. El grupo de control tuvo una pequeña diferencia en el pre test y post test, mientras que el grupo experimental después de la aplicación de juegos digitales mostró una diferencia significativa en la mejora del vocabulario de EFL. Para concluir, el uso de juegos digitales tiene un impacto en el desarrollo del aprendizaje de vocabulario EFL.

Descriptores: web 3.0, gamificación, juegos digitales, aprendizaje de idiomas, conocimiento de vocabulario, aprendizaje de vocabulario.

CHAPTER I
THE RESEARCH PROBLEM

1.1 Introduction

The current research work is entitled **"DIGITAL GAMES AND EFL VOCABULARY LEARNING"** with the main aim to analyze the effectiveness of applying digital games for EFL vocabulary learning, and the relationship between them. Currently, vocabulary is the basis of the communication of a foreign language for learners; it influences the development of other language skills which are listening, speaking, reading, and writing. Hence, teachers must support their teaching process based on technological resources, particularly digital games to encourage students' vocabulary growth and consolidation; a limited vocabulary limits language mastering.

This research was applied to fifth-grade primary students to improve their EFL vocabulary learning through the use of digital games. The digital games are useful and easy to use allowing students to engage in vocabulary learning and motivating them. Additionally, this research contributes to avoiding traditional strategies and having an overview of the new strategies that could be used in the teaching-learning process.

To analyze the effectiveness of applying digital games for EFL vocabulary learning of fifth-grade students of Unidad Educativa "Hermano Miguel", the study was divided as follows:

CHAPTER I: This chapter contains the justification, and general and specific objectives to be accomplished during this research work.

CHAPTER II: It includes the research background of the previous researchers related to the topic, and relevant information to fundament the theoretical framework of two variables.

CHAPTER III: It displays the methodology applied in the research project, the type of research method, material and equipment, the population, hypothesis, and data collection instruments.

CHAPTER IV: This section shows the analysis and discussion of the results divided into four parts. The first one is the analysis and discussion of the web 3.0 survey. Then, the analysis and discussion of the structured survey that was elaborated by the researcher. The third part is the analysis and discussion of the TAM questionnaire. Finally, the results of the pre and post-test, and hypotheses verification through the SPSS software.

CHAPTER V: In this chapter, the conclusions and recommendations are presented according to the research objectives.

1.2 Justification

Currently, English vocabulary has been an enormous challenge for learners because it requires managing a large range of vocabulary effectively to master a target language. Mirioglu (2020) supported that "vocabulary has become popular in the field of language learning since it provides the basis of communicative competence, comprehension, writing and reading skills" (p.32). However, there is a problem, and it is that many teachers use traditional strategies to teach vocabulary. As a result, the majority of students during the classes are bored and demotivated, the lack of interest is notable, and the learners do not participate in the classroom, and do not produce the language due to the poor vocabulary. Therefore, one of the major challenges for the teachers in the 21st century is to be updated, and implementing interactive online tools and techniques for the learners to break the monotony of learning should be the teacher´s priority.

Over the last few years, digital games have exploded in popularity, so teachers have implemented these tools to help students learn. Al-azawi et al. (2016) had stated that "games can help learners to be in an effective learning environment that is at ease and with stronger learning motivation" (p.134) That is why I propose the use of digital games in vocabulary learning due to they will greatly support teachers in

their online classes to improve and measure English vocabulary, and also to engage students´ attention.

On the other hand, this project leads a social relevance since how the tools that are pretended to implement, in this case, digital games can be used and applied by any English teacher. Moreover, this research project has a scientific relevance to the extent that will allow innovating pedagogical strategies in the teaching-learning process. Finally, an academic relevance due to the results will offer an alternative methodology to apply to improve English vocabulary and other skills.

In these instances, the digital games that are pretended to apply to overcome the problem by engaging learners and inciting active learning, motivation, and determine which type of digital games are especially relevant to improve English vocabulary in a group of children of fifth-grade EGB of Unidad Educativa "Hermano Miguel" using Kahoot, baamboozle, wordwall, Nearpod, and quizizz. All of the named digital games will afford learners to experiment using new experiences, and they allow learners to use online resources and play due to all of them are enjoyable. Finally, boring and unfun activities can become pleasurable and exciting if digital games are used correctly.

1.3. Objectives

1.3.1. General

- To analyze the effectiveness of applying digital games for EFL vocabulary learning of fifth-grade students of Unidad Educativa "Hermano Miguel".

1.3.2. Specific

- To identify how the learners react to the use of digital games in vocabulary learning.
- To determine which type of digital games are helpful to improve English vocabulary learning.
- To evaluate students´ vocabulary learning.

CHAPTER II
THEORETICAL FRAMEWORK

2.1 Research background

In order to carry out the study, the researcher looked into magazines, projects, and research theses, whose contents shared thematic similarities with the initiative in progress. It is critical to underline that the previously mentioned documents provide critical information on the current inquiry. Additionally, the researchers were taken from the following journals: Computer Assisted Language Learning Electronic Journal, Journal of Scientific Research in Education, Theory and Practice in Language Studies, International Journal of Emerging Technologies in Learning, and thesis research of the Institutional Repository of Universidad Técnica de Ambato. Moreover, various researches regarding the topic were carried out around the world, for instance, Thailand, Egypt, Malaysia, and Ecuador as well. Finally, the similarity between the researchers is that they were conducted in the last five years.

In this sense, Waluyo and Bakoko (2021) carried out research entitled "Vocabulary list learning supported by gamification: Classroom action research using Quizlet" whose main aim was to explore the extent to which Quizlet can promote learner vocabulary instruction outside of the classroom while also increasing learner autonomy. The population of the research consisted of thirty second-year learners aged between 18 to 20, and the students´ level was A1 and A2 regarding the Common European Framework of Reference for Languages (CEFR). The researchers employed a classroom-based action research design. A vocabulary test was applied weekly to assess the outcomes of learners´ vocabulary list learning, and a survey to collect concerning learners´ experience using Quizlet in vocabulary learning was administered. Lastly, the results of the research showed that effectively Quizlet had a positive influence on the development of students´ vocabulary learning.

In recent research, Waer (2021) published his findings in a paper titled “Using gamification in EFL vocabulary learning and learners’ attitudes toward gamification use” which aimed to explore how gamification affected Egyptian EFL learners' vocabulary knowledge and attitudes toward gamification. The methodology applied was a quasi-experimental research design. Moreover, the instrument that helped to collect data was a vocabulary pre and post-test based on APTIS, an attitude questionnaire, and follow-up interviews. The study comprised a total of 68 English students from New Valley University's Faculty of Education. The control group was trained using paper-based sheets while the experimental group used the digital game quizizz for seven weeks and post-tested. The result reflected that in the APTIS test, the experimental group had significantly higher vocabulary knowledge than the control group. Furthermore, the researcher concluded that gamification was found to be beneficial in improving EFL learners' vocabulary knowledge due to the incorporation of inspiring game components into traditional learning.

Moreover, Hasram et al. (2021) in their research work entitled “The effects of WordWall online games (WOW) on English language vocabulary learning among year 5 pupils”, aimed to determine the extent to which students' vocabulary has improved performance. The sample of the study comprised 121 Year 5 pupils from a national primary school in Negeri Sembilan. The methodology employed during the research was a quantitative research design that focuses on the perceptions of the students. Furthermore, a questionnaire was used as the collecting data instrument; it consisted of 30 questions divided into two parts which were based on the English Language Curriculum for Primary Schools (KSSR), the part A comprised demographic multiple-choice, and part B comprised items to identify the students´ perception regarding the use of WOW online games in the development of vocabulary learning. The questionnaire included five motivational components which are Attention, Relevance, Confidence, Satisfaction, and Volition. Lastly, the results of the study of a paired sample t-test showed that employing WordWall (WOW) as a vocabulary learning supplementary material improved the students' vocabulary scores significantly.

In another study entitled gamified learning: are Vietnamese EFL learners ready yet? carried out by Phuong (2020) aimed to examine how prepared Vietnamese English learners are for online gamified learning and their opinions toward it. The games applied during the interventions were Kahoot, Quizizz, and Quizlet. Additionally, the instrument applied to collect data was a survey questionnaire consisting of three parts with 25 questions in Likert scale items. The sample of the study comprised 147 students of the last semester of a 6-month English preparation course (EPC) at a private technology university in Hanoi. The results obtained from the study imply that gamification has begun to play a role in English learning both within and outside of classrooms. Students are technologically competent for online-based gamification and have a positive attitude toward the practice. Online gamification, on the other hand, is mostly used to aid vocabulary learning.

Another study entitled as gamifying English language learning: a quasi-experimental study examining middle school EFL learners' vocabulary learning motivation by Turan and Çimen (2018). The purpose of the present study was to investigate the impact of gamification on vocabulary learning motivation. A quasi-experimental research design was used in 61 middle-school learners; the control group comprised 33 learners while the experimental group comprised 28 learners in seventh grade in a school in Turkey. The experimental group was taught during four weeks treatment period using gamification tools like ClassDojo, Kahoot, and JeopardyLabs.com. Moreover, the instruments applied were a pre-test and a post-test questionnaire. The findings evidenced that using the gamification strategy in EFL classes can help students learn a foreign language by increasing their motivation.

In the same way, Borja (2018) in his research investigation "Duolingo language learning platform and the English vocabulary acquisition in students of the third year of bachillerato at Unidad Educativa Primero de Abril" conducted in Ambato, Ecuador, aimed to analyze how Duolingo learning platform increased English vocabulary acquisition in 120 learners from three distinct third-year bachillerato courses at the previously mentioned school located in Latacunga, Cotopaxi. The methodology used in the inquiry was descriptive and correlation-based. In addition, the instruments that made possible the research were a pre and post-test based on

Duolingo vocabulary knowledge. Conclusively, the results presented evidenced that students achieved intermediate levels of English after using the application, thereby, the researcher concluded that using the Duolingo language-learning platform to acquire linguistic abilities, particularly vocabulary, is successful.

Similar to the research highlighting the impact of digital games on vocabulary learning, Castillo-Cuesta (2020) conducted a research work entitled "Using digital games for enhancing EFL grammar and vocabulary in higher education". The main objective of the study was to analyze the effectiveness of using digital games to improve EFL grammar and vocabulary. Moreover, the population comprised 68 students of the English Major of Universidad Técnica Particular de Loja with a B1 English proficiency level according to the Common European Framework of Reference for Languages (CEFR). A mixed-method approach was selected as the most appropriate to collect data. A writing rubric, a pre questionnaire to diagnose learners´ experience in using digital games, and a post questionnaire to identify the students´ perception of the use of digital games in the improvement of grammar and vocabulary were also employed. The digital games namely crossword puzzles, cloze activities, unscramble sentences, and matching activities were designed using the Educaplay platform, they were implemented with students for 5 months. Finally, the findings showed that digital games were effective in improving students´ grammar, especially in topics related to the use of modals, gerunds, infinitives, and vocabulary knowledge, particularly in areas linked to jobs and education.

The previous research works serve as a strong foundation for this research because they all focus on how gamification tools, especially digital games improve vocabulary. It is clear that digital games aid learners in improving their vocabulary proficiency so that it contributes to enhancing students´ ability to communicate and encourage meaningful learning. Moreover, the student's motivation and interest during the classes were promoted, as well as vocabulary development. Finally, other language skills were improved based on vocabulary development; thereby, the ability to interact with others using a foreign language as well. That is why based on the previous research, the effectiveness of the technology in education, and their influence on the improvement of vocabulary proficiency, and motivation; the

present research was carried out at Unidad Educativa “Hermano Miguel” located in Cotopaxi, Ecuador.

2.2 Theoretical framework

Dependent variable: EFL vocabulary learning

2.2.1 Language

Language is considered a means of communication that allows people to express their ideas, feelings, and though. For that, Aprianto and Zaini (2019) mentioned that language is considered as a tool that humans use to convey or share thoughts, ideas, and emotions; it is more than a tool for communication; it is an avenue for creative expression. Consequently, a person who is good at speaking will almost certainly be good at reading, but a person who lacks the ability to articulate his own ideas, thoughts, and arguments may find it difficult to absorb written language.

According to Ahmadi (2018), language is one of the most important factors that influences international communication. For proficiency and communication, students use many components of the English language abilities such as listening, speaking, reading, and writing. Otherwise, Isanova and Ravshanova (2019) stated that “language is considered from the point of view of its social nature, communication with society on the one hand, and communication with personality on the other” (p. 133).

Wargadinata et al. (2020) have stated that every use of language is ideological, language is an arbitrary code system that is intimately linked to ideology. As a result, language plays a critical role in shaping human thinking patterns. Language is a weapon for influencing, changing, and dominating others so that those who receive and justify words, ideas, and thoughts believe and even follow them. When conversing, expressing ideas and opinions, and engaging in other social interactions, everyone requires the use of language.

2.2.2 Language learning

Learning a foreign language is a process that involves learners learning and understanding the rules of the language, are aware of them, and can communicate

using the language. The language is learned consciously and as formal learning. Additionally, the authors mentioned that learning a language is an organized process that starts from the particular or simple to the general parts of the language making the process easy to learn (Nor & Ab Rashid, 2018).

Basic principles of language learning

TESOL International Association (2017) stated that four language learning concerns are crucial to communicative language teaching (CLT) which are the following. The first one is considered the language as a tool for communication. For many students, English education consists primarily of memorization of vocabulary and rules in preparation for an exam, with little emphasis on utilizing English for communication. However, language learning is portrayed as a means of communicating with a new world.

The second concern of language learning is that it involves domaining of both skill and knowledge. It means that it is not sufficient for students to understand structure rules and word meanings; they must be able to use this knowledge rapidly, in order to express themselves fluently, read properly, and grasp spoken English. Practice the language is required to develop these talents; education alone will not enough (TESOL International Association, 2017).

Likewise, the third essential concern is related to feelings as crucial consideration to learn a language. The fundamental of a new language like vocabulary and grammar can be taught in a matter of months, nevertheless, learning the language takes much longer because it requires building effective skills, and students require a lot of practice. Students who have a strong desire to learn and who are pleased with their success are significantly more likely to persist in their efforts over time (TESOL International Association, 2017).

Finally, TESOL International Association (2017) stated that students vary considerably in their learning approach. It refers to students as if they were a more or less homogeneous population for whom a set of learning and teaching methods would be appropriate. Learners, on the other hand, differ greatly, and there is no

reason to suppose that they should all approach language learning in the same way. The learning styles need to be considered in the learning process.

2.2.3 Vocabulary knowledge

Vocabulary is the most meaningful part to master a target language because it allows people to communicate and express their ideas, feelings, and thoughts. Thus, it is crucial to have a clear definition of what vocabulary is. Dakhi and Fitria (2019) concluded in their research by saying that vocabulary is originated from the necessity to communicate with each other undoubtedly, therefore, that vocabulary represents the base of other language skills due to people can communicate in an oral form to express ideas involving listening and speaking skills, and they can communicate in a written form to identify words, sentences or ideas involving reading and writing skills.

Kiliç (2019) asserted that vocabulary knowledge is not a single competency, but rather a collection of discrete competencies mentioning the breadth and depth as a division of vocabulary knowledge. Breath vocabulary is related to the size or number of words known by an L2 learner, it also implies the quantity of knowledge; while the extent of one's understanding of each word is defined as the depth or quality of knowledge. Likewise, every person has an innate potential for vocabulary, which is referred to as innate capacity. It makes it easier for people to use and understand words in terms of their meaning and context. Someone has to improve their vocabulary as well as their communication skills (Zahiroh, 2021).

Kinds of vocabulary

Kiliç (2019) had established two types of vocabulary which are receptive and productive forms of vocabulary knowledge. Receptive vocabulary is closely related to reading and listening skills; it is the ability to understand and comprehend words (Kiliç, 2019). In the same vein, Susanto (2017) confirmed that words that learners recognize and comprehend when they are used in context but cannot produce are referred to as receptive vocabulary. Learners identify this type of terminology when they see or encounter it in a book, but they do not use it in speaking or writing.

On the other hand, productive vocabulary is associated with the ability to use vocabulary words in speaking or writing (Kiliç, 2019). Similarly, Susanto (2017) mentioned that the words that learners comprehend, can pronounce correctly, and use constructively in speaking and writing are referred to as productive vocabulary. It comprises receptive vocabulary requirements as well as the capacity to speak or write at the proper time.

Vocabulary knowledge and major language skills

It is much easier to encourage communicative competence and all language skills, such as listening, speaking, reading, writing, and grammar knowledge, when you have a magnificent level of vocabulary (Mirioglu, 2020).

Vocabulary knowledge and listening

A language user's understanding of words is required for successful listening comprehension due to a large vocabulary knowledge will contribute to understanding and comprehending what the student is listening to, and vocabulary also contributes to the development of learners' global language competency and English skills. For that, Matthews (2018) mentioned that

> Once words are recognized and associated with their literal meanings, larger semantic units can be built in the mind of the listener. Key to the listening comprehension process is the rapid and appropriate association of such semantic units (linguistic knowledge) with the listener's pre-existing schemata (non-linguistic knowledge) (p. 23).

Vocabulary knowledge and reading

The importance of integrating vocabulary development and enhancing reading skills was stressed by several authors and academics. For instance, Karakoç and Köse (2017) stated that there is a close relationship between reading and vocabulary considering two main effects. The first one is vocabulary knowledge's impact on reading comprehension, and the second is the impact of reading comprehension on vocabulary expansion. It can be assumed that learners will have some trouble comprehending texts with poor vocabulary knowledge; however, the learners will expand their vocabulary size through readings.

Vocabulary knowledge and writing

Taking into account that writing production necessitates a certain amount of vocabulary; it can be remarked that vocabulary is considered a fundamental part of writing by allowing active use of the language. Additionally, vocabulary knowledge and writing are interrelated because when the learners have a considerable size of vocabulary, they can develop their writing skills. At the same time, writing allows the learner to enrich their vocabulary knowledge (Karakoç & Köse, 2017).

Vocabulary knowledge and speaking

Speaking helps students to improve their vocabulary and grammar skills, which in turn helps them improve their writing ability. Students can express their feelings and ideas, tell stories, make requests, talk about them, and demonstrate the various functions of language. Thereby, the learners did not improve their speaking skills since they did not acquire the three components of speaking which are vocabulary, grammar, and pronunciation (Leong & Ahmadi, 2017).

2.2.4 EFL vocabulary learning

The learning of English vocabulary is necessary for successful foreign language use, so vocabulary plays a significant role in the development of the four language skills which are speaking, reading, writing, and listening, due to a language learner will not be able to employ a comprehensive communication if they do not have an accurate vocabulary. Susanto (2017) had realized that vocabulary learning is crucial for effective foreign language use and plays a key role in the production of entire spoken and written texts. Learning vocabulary items is important for all language abilities, including listening, speaking, reading, and writing since without a large vocabulary, the language learners will be unable to apply the structures and functions that they learned to communicate in an intelligible manner.

Learning vocabulary is not only memorizing new words but also understanding their functions and how they apply to various contexts and circumstances. In other words, it is a simultaneous and complicated process of extracting and building statements through the use of appropriate lexical combinations, at the appropriate time and place, which is required for language comprehension and production.

Learners must not just study the language as an abstract system of vocal signs, but also as a tool that helps them communicate suitably (Tovar, 2017).

The process of vocabulary learning

Learners of a target language mainly increase their vocabulary learning through two main ways which are incidental learning and intentional learning. Incidental learning is the process of learning something without intending to learn it; that is, learning one thing while intending to learn something else. Intentional learning refers to the use of word cards, mnemonics, keeping vocabulary notebooks, conducting vocabulary exercises, checking up dictionaries, and other methods and procedures are all examples of intentional vocabulary acquisition (Özlem Utku ; Emrah, 2018).

According to Karakoç and Köse (2017), incidental learning refers to any activity that involves committing lexical information to memory as a side effect of another activity that isn't specifically focused on vocabulary acquisition. While intentional learning is any action aimed at memorization of lexical information.

Independent variable: Digital games

2.2.5 Web 3.0

Because of the rapid expansion of Web technologies, there are a lot of data sources, applications, and tools to be integrated into the teaching-learning process. For that reason, Tavakoli and Wijesinghe (2019) stated that the goal of the third generation or web 3.0 was to improve software and increase the quality of services and processes, such as data mining, and artificially intelligent searching with recommendations, and tailored suggestions in searches.

Web 3.0 is a revamped version of Web 2.0 that includes intelligent collaborative filtering, cloud computing, linked data, big data, openness, and smart mobility, among other technologies and features. Indeed, Web 3.0 has entrenched the user in technology, allowing them to not only read and write, but also to read, write, and execute (Boulaid & Moubtassime, 2018). Moreover, Foroughi (2017) declared that Web 3.0 will focus on maximizing communication and interoperability between

and among Web sites and electronic devices, so that computers will be able to search for, organize, and connect disparate types of data on their own.

Horban et al. (2021) mentioned that from a static website page to a 2.0 website page to a web 3.0 page, also known as a semantic website, a new generation of technology concepts has emerged. Web 3.0 technologies aid online educators in the development of courses, student support, assessment, and record keeping. Personalized learning and knowledge development based on the Semantic Web will assist students who work online. Similarly, Bamigbola (2021) had attested that Web 3.0 is the next step in the evolution of the web. Web 3.0 is a web that conveys meanings, connects knowledge, and puts it to work in ways that allow individuals to have a more relevant, helpful, and joyful Internet experience. Web 3.0 is similar to a "read-write-execute" system. Web 3.0, in essence, takes Web 2.0 platforms and makes them smarter and more semantic.

2.2.6 Web 3.0 tools and education

In the current days, traditional teaching must be avoided, and teachers need to choose the most suitable tools to engage students. That is why Ebtesam (2020) had mentioned that the second phase of the Web's progression is Web 3.0. It has completely revolutionized the process by bringing machines closer to the producer and users in order to create and manage content in a more interactive, dynamic, and effective manner. The author concluded by mentioning that Web 3.0 tools can be operationally characterized as electronic tools that allow learners to be active participants in the learning process rather than passive recipients by engaging in virtual, collaborative settings and having access to knowledge at any time and from any location.

The semantic nature of Web 3.0 tools is a distinguishing feature. It means that machines can now read Web information and follow human directions in the same way that humans can. It also makes it faster and easier to exchange, retrieve, and combine data and information from various sources. Learners can construct avatars on the Web, engage with one another as if they were in a real classroom, and conduct class sessions, group work, meetings, seminars, presentations, digital

exhibitions, role-play, simulations, and 3D modeling with Web 3.0 (Bamigbola, 2021)

Ohei and Brink (2019) mentioned that “the successive incorporation of Web and Web 3.0 tools and applications in universities may serve as additional tools to support educational goals, offering students the affordability and assortments to educational choices and learning platforms” (p. 1841). On the other hand, Web 3.0 tools are also capable of deciphering the meaning of the data. In terms of education, it can assist teachers in developing a course, providing support to students, conducting assessments, and maintaining records. Students can customize their education and build their knowledge (Selena & Sanda, 2017).

2.2.7 Gamification in education

Gamification

One of the major challenges for teachers and students in the 21st century is learning a target language. Additionally, with the advancement of modern technology, the use of games in language teaching has increased, resulting in the development of innovative learning models and settings, one of which is gamification. It is a powerful tool to engage students to be motivated so that it allows to create of an active environment that helps students to be motivated and reduce boredom during the teaching-learning process. Additionally, gamification refers to a wide range of games that can be used in the classroom and is a recent trend in EFL courses.

Gamification's goal is to encourage and motivate users to complete a task by including them in activities, as well as to cultivate their interest in a topic that might help them learn more effectively (Silva et al., 2019). Gamification is described as the use of game mechanics to encourage enjoyment and engagement of problem-solving in non-game contexts. In the educational environment, the term refers to teaching practices that contain components like competition and reward that are essentially tied to games (Turan & Çimen, 2018).

Gamification in education

According to Kingsley and Grabner-Hagen (2018) educational gamification is defined as an instructional method in which learners use these tools to play activities

to learn and apply vocabulary learning to meet grade-level standards. For vocabulary, it offers learners the opportunity to get students motivated and excited about words, and it allows them to engage in wordplay to support vocabulary development. “Gamified environments are ideal for mastery learning, allowing students to repeatedly practice skills to meet learning outcomes” (Kingsley & Grabner-Hagen, 2018, p. 553)

Additionally, Ridwan and Mahliatussikah (2021) had stated that educational games or game apps are games that have educational value. The gaming application seeks to generate children's interest in learning stuff while they are having fun, with the main aim that they would be able to grasp the subject matter offered more readily. Additionally, the implementation of games into learning activities, also known as gamification, in the context of education refers to the usage of educational systems that are built with gaming designs but used in non-game situations, such as education (Tan Ai Lin et al., 2018).

Game design elements

The classroom is transformed into a realm, pupils are transformed into players, and teachings are transformed into missions. Students earn experience points either individually or as part of a team. Students work to progress or level up, to achieve the winning condition in an assessment or the activity assigned by the teacher, in the game (Kingsley & Grabner-Hagen, 2018). In the same way, Prathyusha (2020) mentioned that gamification is a unique concept that, when properly applied offers numerous game elements such as prizes, quests, graphs, avatars, social aspects, leader boards, and performance graphs. Each game aspect used improves the learner's language ability and confidence, ultimately assisting them in achieving their objective of learning the target language.

2.2.8 Digital games for enhancing and motivating EFL vocabulary learning

Wu et. al (2020) stated that “digital games are those designed and developed relying on the computer technology and implemented through digital equipment as a platform.” They also defined digital games as a type of educational game, and as those created with the main aim to enhance the teaching and learning process.

Thereby, the use of digital games in EFL learning is one of the changes brought about by technological advancements. To date, the digital game has evolved into more than just a source of entertainment for people; it has also evolved into a method of current learning (Mahayanti et al., 2020). There are various digital games for enhancing EFL vocabulary learning like Nearpod, Kahoot, quizizz, wordwall, and baamboozle that are described below.

Nearpod

Nearpod is a web-based educational technology that assists teachers in creating interactive learning environments in the classroom that can be installed on all devices easily. Matching pairs, memory exams, time to climb, polls, and other class activities are some of the activities that will be created by the teacher (Ridwan & Mahliatussikah, 2021). Moreover, Nearpod allows one to participate in life and is assigned as student-paced; the access to the game is easy for students with only a link. Time to climb is an attractive game that allows students to choose a character. It also allows students to check their progress because when a student answers correctly a question they continue climbing. In the end, the game presents a podium with the three winners. For the teacher, it provides a report of the game about the students´ development.

Kahoot

It is a digital game that enables teachers to generate quizzes, and surveys in an interactive way. The teacher can use movies, photos, and diagrams in the questions to increase student participation. It is a good technique to test students individually or in a group setting, such as a classroom. Before bringing the activity into the classroom, the teacher needs to prepare the activity. Once the activity is ready, players use their mobile or computer devices to answer the questions while the questions and options are displayed on a shared screen. Lastly, the game presents a podium where the top three students with the most points are displayed. Additionally, the mentioned digital game is free and easy to use for both students and teachers; with only a PIN the student can enter the game. In this vein, Tan Ai Lin et. al (2018) stated that “Kahoot! is a digital game-based student response system that allows teachers and learners in classroom settings to interact through

competitive knowledge games using existing infrastructure" (p. 566). The authors also mentioned that Kahoot is a free game-based learning platform that strives to make learning enjoyable, and it works with a variety of digital devices.

Quizizz

It is another free digital game that allows the teacher to engage their students by creating quizzes, and lessons; it offers the possibility to participate live or assign an activity as homework. It can be used on any device because to play a Quizizz, the students do not have to register, they only need to enter a code of the game given to them by the teacher. For the teachers, it provides the results in detail in an excel document with the students´ scores. At the end of the game, a podium is displayed with the first, second, and third places. According to Munawir and Hasbi (2021) "quizizz is a free online-based of formative assessment tool that allows the teacher to conduct both assessments in class and as homework" (p. 297).

Wordwall

It is a digital game that enables teachers to create their own teaching resources. It includes a variety of templates and themes that help create activities related to vocabulary such as match up, quiz, missing word, finds the match, matching pairs, wordsearch, and open the box. In addition, the games created are available to print. It is easy to access a game using a link provided by the teacher without the necessity to register. At the end of each activity, the game shows feedback about their answers and the points achieved in the activity. In addition, wordwall is an online game that supports and expands students´ experience in learning English vocabulary. It offers a diverse range of gaming styles that are both beneficial and interesting to the target audience, which in this case is elementary school students enhancing learners´ interest and motivating them (Hasram et al., 2021).

Baamboozle

Teachers can use this software to play a range of English teaching games. The class is divided into two or three groups, each of which competes for the title of winner. The game also includes a lot of visuals to help kids comprehend it and remember it for a long time. As a result, it saves teachers a lot of time when it comes to creating

an active learning environment for kids (Hieu, 2021)**.** Furthermore, it allows the creation of educational games to be played in teams. The teacher can insert gifs to be more attractive in the game. It is easy and accessible for all ages, and easy to enter with a link provided by the teacher.

CHAPTER III
RESEARCH METHODOLOGY

3.1. Location

This study was conducted in Unidad Educativa Hermano Miguel, a private school which is located in Cotopaxi province, specifically in Latacunga, Ecuador. It has nearby 1000 students, and learners have A1.2 English level according to the Common European Framework of Reference for Languages (CEFR).

3.2 Material and equipment

This research was supported by two resources. The first one was the human resource, namely the population of the study in this case the fifth-grade "A" and "C" students of Unidad Educativa Hermano Miguel, the principal of the school who facilitated the access to the institution, and with the information of the population, the tutor of the thesis who supported the researcher during the thesis development, and the researcher who carried out this study. The second resource was the technological resources such as the internet, teacher, learners´ computer, zoom tool, digital games tool, and Microsoft Institutional account. Finally, the material resources like a standardized pre and post-test based on Cambridge A1 Movers Test, a TAM questionnaire, a web 3.0 survey, and a structured survey based on digital games were used to carry out the research.

3.3. Research method

For this inquiry, the main aim was to analyze the effectiveness of using digital games in improving the EFL vocabulary learning of fifth-grade students of Unidad Educativa "Hermano Miguel". The research that was executed is a quasi-experimental design in which the participants were not randomized; hence, two groups of fifth-grade students were chosen and controlled simultaneously. The control group was 29 students of the fifth grade "A", and the experimental group was 29 learners of the fifth grade "C" to which digital games were applied to improve EFL vocabulary learning. In this vein, Gopalan et al. (2020) mentioned

that quasi-experimental research designs use non-experimental variation in the major independent variable of interest, imitating experimental conditions in which the subjects are not randomly exposed to treatment.

In addition, the quantitative approach was applied to identify the influence of digital games in the improvement of English vocabulary in learners. According to Goertzen (2017), the quantitative research method focuses on gathering and evaluating organized and numerically represented data, with the main goal to create accurate and reliable measurements that enable statistical analysis.

Moreover, the methodology ADDIE which stands for Analyze, Design, Develop, Implement, and Evaluation was employed in the research. It is an interactive educational model that aims to provide learning experiences through the development of an instructional program; in other words, it is a systematic approach that allows the researcher for creating educational resources to train and increase students' skills.

Furthermore, the Technological Acceptance Model (TAM) was executed. This model is based on the principles of the Theory of Reasoned Action and the Theory of Planned Behavior and it aims to determine whether users accept or reject a particular technology. It provides a foundation for evaluating the influence of factors such as the perception of utility and ease of use on technology adoption (Ramírez-Correa et al., 2019).

Perceived Utility refers to the degree to which a person believes that using a given system will guarantee the performance of their activities; and Perceived Ease of Use alludes to the degree to which a person considers that using a specific system is simple to use, requiring less effort to complete their tasks. These factors seek to determine whether users perceive that the implemented technology improves the performance of the activities in their environment and whether they believe it requires little effort to use (Hidalgo et al., 2019).

Finally, to triangulate the results two surveys were administered to both experimental and control groups. The first one was the use of web 3.0 tools in collaborative learning while the second survey was implemented with the main aim

to determine the use of digital games in EFL vocabulary learning in the students of fifth-grade of Unidad Educativa “Hermano Miguel”.

3.3.1 ADDIE methodology

ADDIE is an interactive educational methodology; it is aimed at providing learning experiences through the design of educational resources, thus training and enhancing the skills of students; ADDIE consists of 5 phases that are:

Analysis

The analysis was employed on fifth-grade students of the Unidad Educativa “Hermano Miguel” through the web 3.0 survey carried out in Microsoft Forms (see annex 5) to find out the current situation regarding the use of web 3.0 and gamification tools in virtual education, especially in the development of EFL vocabulary. It was applied to the control and experimental group. Additionally, a structured survey was applied to the control and experimental group to determine if students of fifth-grade use digital games in EFL vocabulary learning. Moreover, a pre-test (see annex 2) was applied at the beginning with both groups to identify the students´ vocabulary level in listening and reading.

Regarding the analysis before the development of digital games, the most appropriate tools to use in the classroom were analyzed. For this, it must be taken into consideration that the tool chosen for the design and development of the educational instrument must be suitable for the subject and topic to be discussed, and it must also include graphical, interactive, and participatory interfaces. On the other hand, with an excess of educational tools in the class, the student will not cause the same impact as when it is used for special topics. That is why the following tools or digital games were considered Nearpod, Kahoot, quizizz, baamboozle, and wordwall to apply to students in fifth-grade of Unidad Educativa “Hermano Miguel”

Currently, learners are used to using the same platforms in their virtual classes, for instance, zoom for online classes, PowerPoint or flashcard for the presentation of new vocabulary or different topics, Microsoft Teams to receive and send homework, and Microsoft Forms for evaluations, and SM´ book platform to

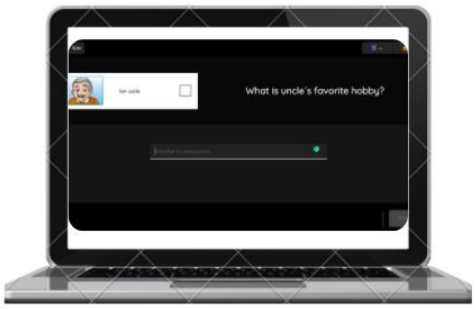
complete the books. Therefore, teachers use these tools to assist them with their daily online classes, making it easy for students to get bored over time and for classes to become monotonous, instead of using other tools to motivate students and create interactive classes.

Design

In the design phase, a sketch was made of the creation of the resources designed by the author based on web 3.0 gamification tools, particularly digital games like quizizz, wordwall, baamboozle, Nearpod, and Kahoot for virtual education. During the interventions, a list of web 3.0 tools and digital games focused on vocabulary development were employed.

Quizizz

It was employed at the end of the interventions using some questions related to the learned vocabulary. In Quizizz, an outline of the questions directed towards the formative evaluation for the closing of the class was prepared. There are two free and pro versions, for the design of the web 3.0 tool the free version was used, in this version questionnaires can be created depending on the topic to develop. It contains several multimedia resources such as images and videos to make their experience more enjoyable.



Graphic 1: Question 4 from Quizizz
Author: Arequipa (2021)

Kahoot

Kahoot was employed during the involvement to evaluate students´ using some questions related to some picture descriptions. It has the option of placing an infinity of questions without having a limit, but the most recommended option in education is not to exceed 10 questions, because it can be a bit tedious for students.

Additionally, it has a free and pro version, and pre-designed templates to place the question and the answers. While the answers are multiple-choice and the questions have geometric figure buttons to select the correct option, it also has a "next" button to advance to the next question. Finally, that web 3.0 tool is easy to use and accessible for both teachers and students.

Graphic 2: Question 1 from Kahoot
Author: Arequipa (2021)

Nearpod

It was employed in some parts of the treatment to present vocabulary funnily. In Nearpod, various interactive activities will be created, nevertheless, the most used during the treatment was climbing time which contains multiple-choice questions in which students need to answer each question correctly to climb. Furthermore, joining pairs were used to match vocabulary words and pictures. Those kinds of activities make the learning experience enjoyable because the students can use an avatar that they like to play.

Graphic 3: Question 1 climbing time game
Author: Arequipa (2021)

Wordwall

It's a digital game that allows teachers to make their own educational materials. It comes with several templates and themes that may be used to construct vocabulary-

related activities, however, the match-up, wordsearch, matching pairs, and random wheel were employed during the treatment in the presentation phase to teach vocabulary words related to different topics. Additionally, it was simple to use a URL provided by the teacher to access a game without having to register. Lastly, the game gives them feedback on their responses and the points they earned at the end of each action.

Graphic 4: Wordwall – matching pairs game
Author: Arequipa (2021)

Baamboozle

It is an interactive tool in which teachers can create educational games. The games could be assigned in class or assigned as homework. It was used during two interventions to teach new vocabulary related to animals´ characteristics and combined thematic vocabulary lists such as the body and face, clothes, the world around us, daily routines, and sports and leisure. This tool allowed the researcher to play online creating groups to promote collaborative work; the students worked cooperatively to guess the vocabulary words and gain points. Furthermore, the questions were created like a questionnaire and the answers were created using gifts that made the game more interactive.

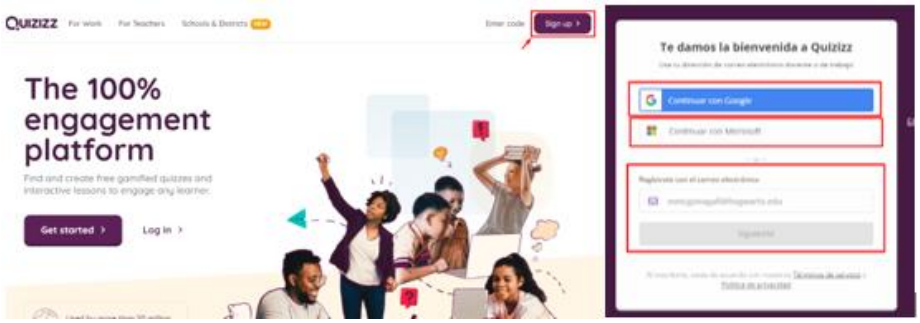
Graphic 5: Baamboozle – vocabulary related to animals´ characteristics
Author: Arequipa (2021)

Develop

In this phase, the creation of activities and tools used during the involvement with the experimental group are presented, and the activities are shown in the lesson plans (see annex 7), nevertheless, not all the tools are presented; it is focused on the digital games.

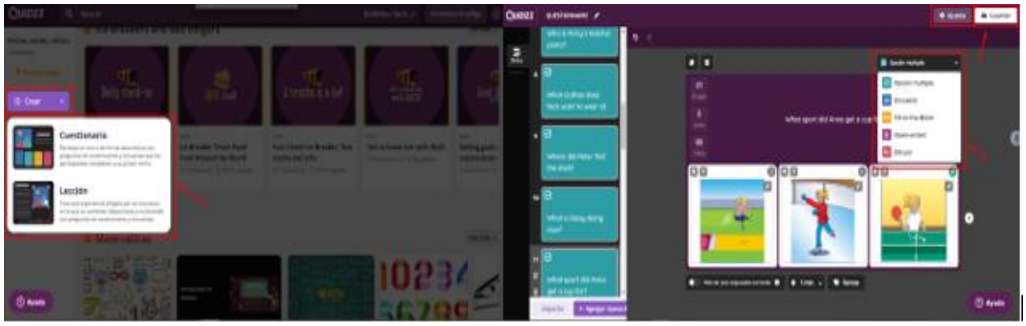
Quizizz

To develop the activities, teachers need to access to Quizizz page by searching in the browser https://quizizz.com/. In the main Quizizz window, the teacher must register by clicking the Sign-up button. After that, the teachers have 3 options for registering, using a google account, using a Microsoft account, or can register using an e-mail. The teacher must select the option I am a teacher to access and develop the activities.



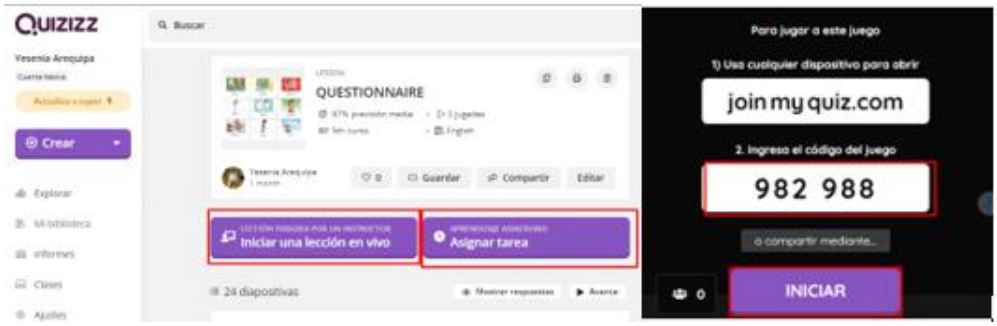
Graphic 6: Quizizz account registration
Author: Arequipa (2021)

Once the account is created and teachers will begin with the development of the educational resource, teachers must click on create and select the questionnaire or lesson option. To start developing the educational resource we must click on create questionnaire or lesson according to teachers' necessity, proceed to fill in the required fields, and click on next. Then, the teacher has various answer options to create the questionnaire like multiple-choice, fill-in blanks, open-ended, or drawing. When the questionnaire is ready, click on the save button and the teacher can use the resource with the students.



Graphic 7: Create a quizizz
Author: Arequipa (2021)

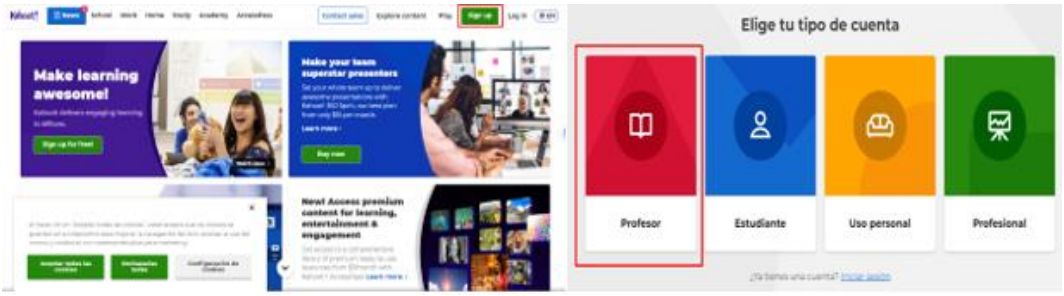
To start the game in class, click on start a live test and choose the instructor's pace, or assign it as homework. The teacher will see the page and the pin of the game. In the starting window, the students that are joining the game will appear. Finally, when all the students are present, click on the start button. Students will need to go to https://quizizz.com/join. Then, enter the game Pin and they should join.



Graphic 8: Start the game in Quizizz
Author: Arequipa (2021)

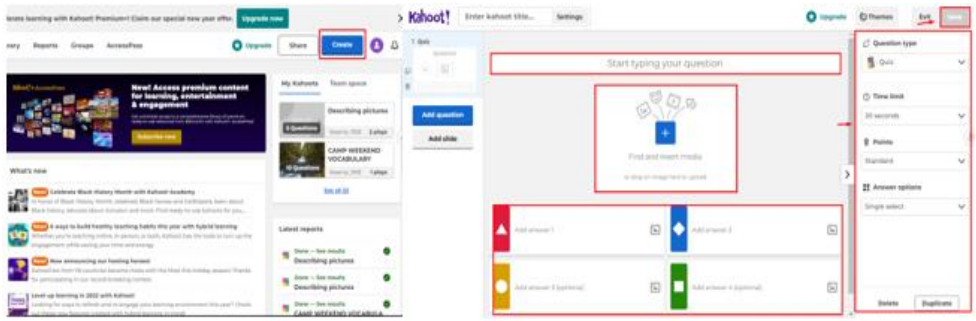
Kahoot

To develop the activities through Kahoot, the teacher must enter https://kahoot.com. Then, in the main window of Kahoot, the teacher must register by clicking on the Sign-Up button. The teacher must select the Teacher option to access the development of the activities. Then, the teacher must select the educational stage that is going to be used for the use of the tool, in this case, school. To create a Kahoot account you must click on the create option (Create) using an email or with the google account. Then, click on the Free Basic option (Continue for free).



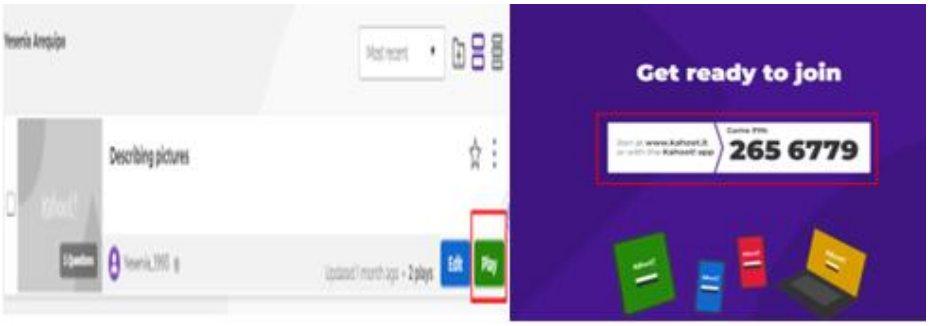
Graphic 9: Kahoot account registration
Author: Arequipa (2021)

To create a Kahoot, you must click on the Create option. To insert the question, the start typing your question option will appear at the top. To insert an image or video, click on the add media option. To configure the type of question, time limit, points, image editing, delete the question and duplicate the question, you must modify them on the right side of the page. Once the question and the answers have been written, to add a new question, you must click on add question and choose between the free options such as multiple-choice question (Quiz) or true and false (True or false). After having written all the questions, click on Save, a dialog will open where you must write the title and the description of the questions at the end, and click on continue.



Graphic 10: Create and configure Kahoot
Author: Arequipa (2021)

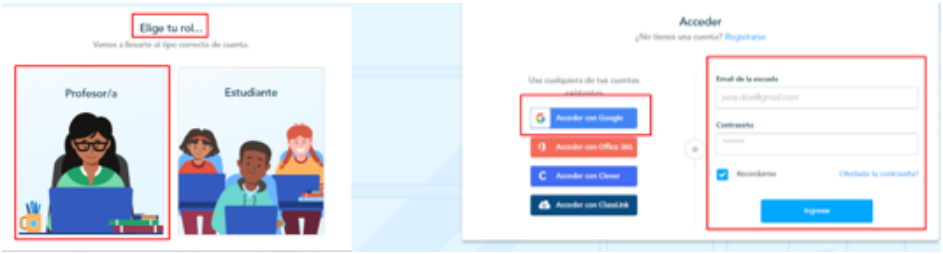
To play, you must click on Play. Settings will open with options like personalized learning, friendly name generator, view questions in disorder, etc. Next, click on classic mode. On the screen appears the Pin of the game and the participants that are entering. Students will need to log in to https://kahoot.it/ with the game Pin and their name.



Graphic 11: Start playing the Kahoot
Author: Arequipa (2021)

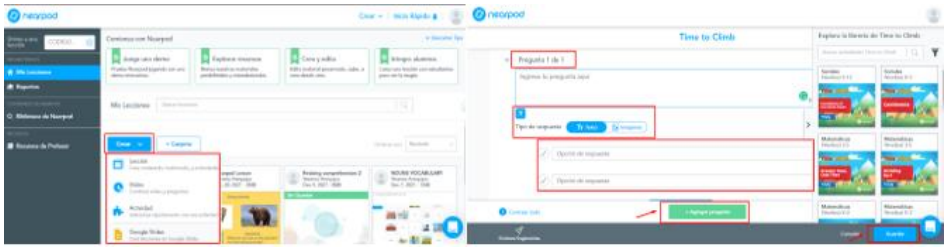
Nearpod

To start creating the activities through Nearpod, the teacher must enter https://nearpod.com/. Then, in the main window of Nearpod, the teacher must register by clicking on the Sign up for FREE button. Then, the teacher must choose a role, in this case, a teacher role. To create an activity in Nearpod, the teacher must create using a google account or typing an e-mail.



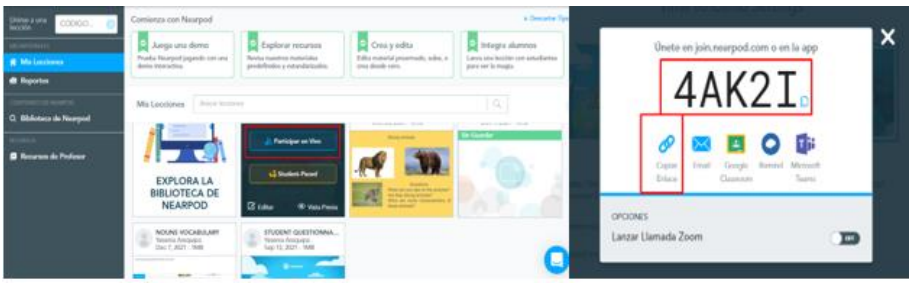
Graphic 12: Nearpod registration
Author: Arequipa (2021)

In the main window, the teacher must use the option create and choose the activity like a lesson, video, activity, or google slides. After that, the teacher must choose the activity looking for pairs, climbing time, or drawing. Time climbing is presented in this guide. To insert the question, the teacher must type the question, and insert the answers like text or add images. Then, the teacher can add more questions in the option (add question), and when the activity is ready click on the save option.



Graphic 13: Create an activity in Nearpod
Author: Arequipa (2021)

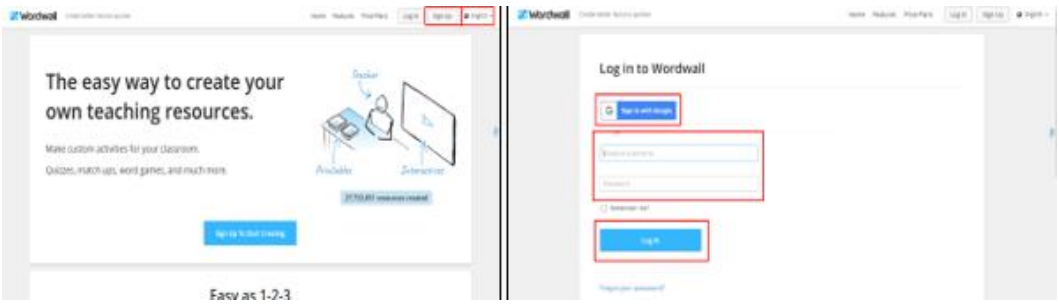
To start playing, the teacher must click in participate in live option. Then, the teacher must find some options to share such as Pin, link, or assign homework. However, the easiest for students is through a link, the students access using the link provided by the teacher. The students must access the link enter their names, and click on join. Finally, the students choose a character that they prefer and click on join game. Then, the game is ready to start.



Graphic 14: Start playing Nearpod
Author: Arequipa (2021)

Wordwall

To start creating the activities in Wordwall, the teacher must enter https://wordwall.net/. Then, in the main window of Wordwall, the teacher must register by clicking on the Sign-up button. Additionally, the teacher can change the language for better comprehension. In the next window, the teacher must register sign in with Google, or add another email. Then, click on the Log In option.



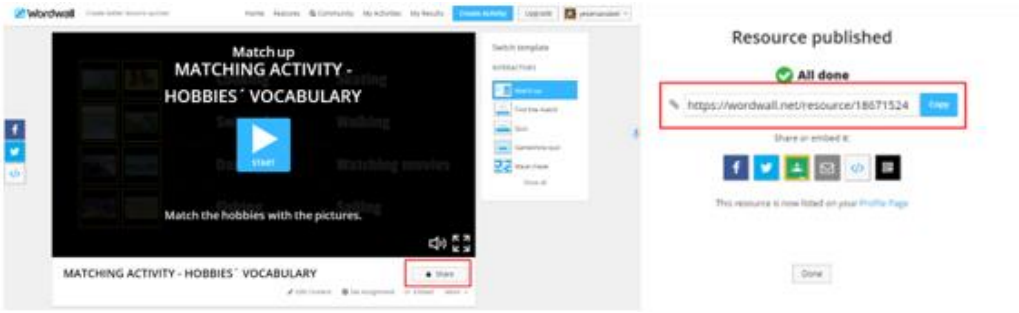
Graphic 15: Wordwall registration
Author: Arequipa (2021)

In the main room, on the top right, click on create activity button to start creating the activities. After that, you find various templates that you can use like quiz, match up, random wheel, open the box, matching pairs, wordsearch, and so on.

Choose one and start creating the activity. In the next window, the teacher needs to complete the information for the activity such as title, and instruction, and add questions according to the chosen template. When the activity is ready click on the done button.

Graphic 16: Create activities on Wordwall
Author: Arequipa (2021)

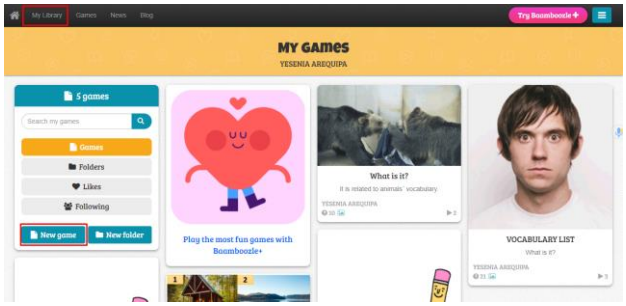
To start playing, the teacher needs to share with their students. Then, click on the share option. The teacher copy and send the link to their students to access the game. Finally, the students access the link, enter their names, and click on the start button.



Graphic 17: Start playing the game
Author: Arequipa (2021)

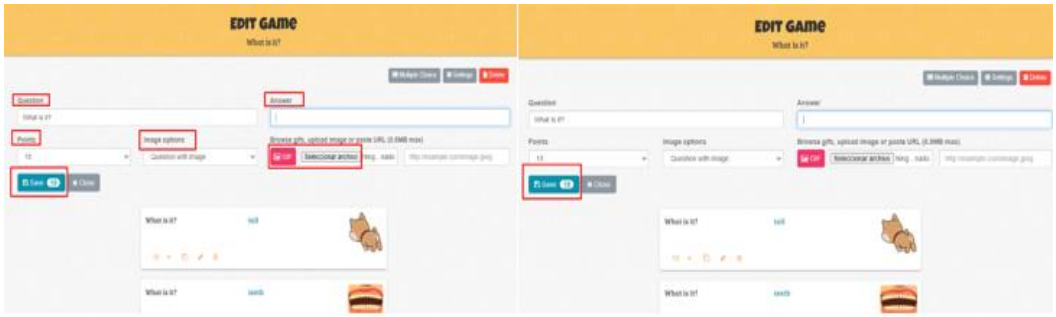
Baamboozle

To develop the activities, teachers need to access to Baamboozle page by searching in the browser https://www.baamboozle.com/. Then, in the main window, the teacher must enter the tool in the option games. In the main window, the teacher can search games created previously by other teachers, or create another new. To create a new game, click on my library and click on the new game option.



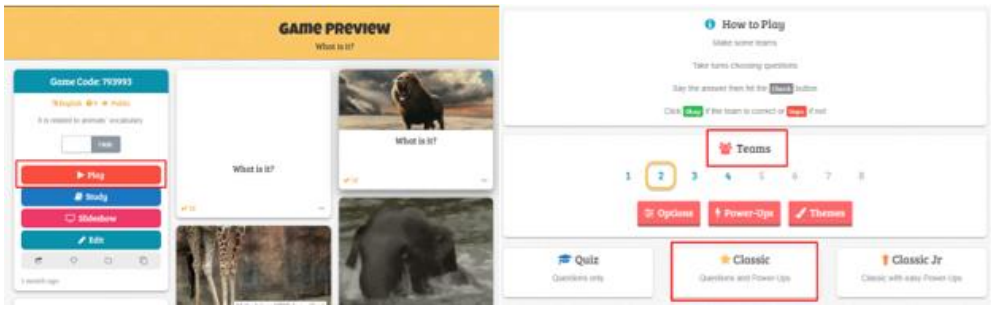
Graphic 18: Create a game in Baamboozle
Author: Arequipa (2021)

Then, the teacher needs to fill in the required fields, and make the game public for the free version. After that, the teacher needs to complete the spaces for the question like the question, and answers, also add points, images, and additional gifts. When the game is ready click on the save option.



Graphic 19: Create and save the game in Baamboozle
Author: Arequipa (2021)

To start using the game, click on the play option. Then, choose the option baamboozle free to play. The teacher must choose the number of teams, and choose the classic mode. Finally, the teacher shares the scream and starts playing with the students in classes.

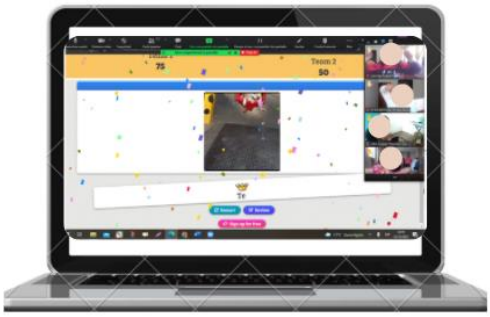


Graphic 20: Start the game
Author: Arequipa (2021)

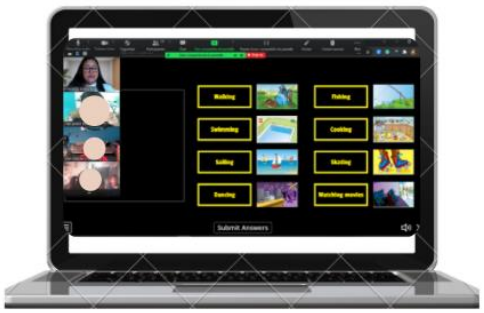
Implement

In this stage, the digital games created in Kahoot, quizizz, wordwall, Nearpod, and baamboozle were applied to the fifth-grade students of Unidad Educativa "Hermano Miguel". Students needed to have an electronic device such as a computer, tablet, Smartphone, and broadband internet to access these tools.

These tools were accessed through a Pin like quizizz and Kahoot, a link used for wordwall and Nearpod games, which were shared through the chat box on the Zoom platform, according to each moment of the class a link was sent for students to access through their electronic device except for baamboozle game because the researcher shared the scream and share the game to play in groups. Finally, all of the digital games provide feedback and the teacher sent the students the links so that they can reinforce their learned topics at home.



Graphic 21: Implementation of activities
Author: Arequipa (2021)



Graphic 22: Implementation of activities
Author: Arequipa (2021)

Evaluation

For this stage, the TAM model was applied, which consists of a questionnaire to know the opinion of the students about their acceptance of the web 3.0 gamification tools, particularly related to digital games, taking into account their perception of

the daily implementation of these tools in virtual education. The questionnaire (see annex 3) was employed at the end of the intervention with the experimental group. Finally, the results are shown in chapter IV (see chapter IV).

3.4. Hypotheses

3.4.1. Hypotheses

The following were the two hypotheses that were employed in this research:

Alternative hypothesis (H1)

The use of digital games has an impact on the development of EFL vocabulary learning in students of the fifth grade of the Unidad Educativa “Hermano Miguel”.

Null hypothesis (Ho)

The use of digital games does not have an impact on the development of EFL vocabulary learning in students of the fifth grade of the Unidad Educativa “Hermano Miguel”.

3.4.2. Variable identification

Independent variable: Digital games

Dependent variable: EFL vocabulary learning

3.5. Population

The target group of the study consisted of two groups of learners who had a coequal language proficiency, the same age between 9 to 10 years old, and the same level of A1.2 according to the Common European Framework of Reference for Languages (CEFR). 58 students of the fifth grade of primary education between male and female of the Unidad Educativa “Hermano Miguel” first quimester, the school year 2021 – 2022 were chosen as the sample of the research. Thereby, the fifth grade “A” was assigned as the control group which was taught traditionally, and the fifth grade “C” was chosen as the experimental group. The main aim to choose two groups was to identify the influence of digital games on EFL English vocabulary through three weeks of online interventions per group using zoom

meeting. The subsequent table describes the number of participants who took part in this research.

Table 1

Population

Description	Number of students
Fifth grade "A" (control group)	29
Fifth grade "C" (experimental group)	29
Total	58

Source: Population

Author: Arequipa (2021)

3.6. Data collection

3.6.1 Procedure for data collection

This research needed 5 sessions to carry out the involvement and to train the experimental group in the use of digital games for learning EFL vocabulary using the A1 Movers thematic vocabulary list of Cambridge connected with different themes that helped learners to take the post-test. All of the sessions were through zoom meetings Thereby, the instruments that helped the researcher to collect and validate the data were the following a web 3.0 survey, a structured survey, a pre-test and post-test, and a TAM questionnaire. The same ones are described below.

3.6.2 Web 3.0 survey

Surveys allow researchers to gather quantitative, numerical data and statistically analyze it to describe trends in response to questions and evaluate research questions or hypotheses (Creswell & Hirose, 2019). Thus, the researcher of the study analyzed information using 0.846 Cronbach Alpha validation for web 3.0 survey. It was carried out with both groups the control and experimental group at the beginning of the intervention with the main aim to determine the use of web 3.0 tools at Unidad Educativa "Hermano Miguel". The survey comprised 9 questions on a Likert scale, those questions were divided into 3 sections. The first section is to identify the student´s knowledge about the web 3.0 tool, the second section aims

to recognize the use of web 3.0 in their learning process, and the last one is to identify the advantages and disadvantages of the web 3.0 tools (see Annex 3).

3.6.3 Structured survey

To triangulate the results a structured survey validated by pairs was also conducted with students of the fifth grade of Unidad Educativa “Hermano Miguel”. It included questions related to the topic of the study and it aimed to determine the use of digital games in EFL vocabulary learning. Therefore, Jordan et al. (2021) stated that a structured questionnaire or survey is more strict, requiring all participants to answer the same set of preset questions, this sort of questionnaire is easier to replicate and analyze. In the same way the collection of the information allowed to get possible conclusions based on the results obtained in a useful and precise manner. The survey included 8 questions on a Likert scale and was distributed at the beginning of the involvement with both groups through Microsoft forms (see Annex 5).

3.6.4 Pre-test

Malik & Alam (2019) stated that the purpose of a pre-test evaluation model is to assess participants' baseline knowledge at the start of a course. Hence, both groups took an online vocabulary pre-test using the Microsoft Forms tool to gauge students´ previous knowledge about EFL vocabulary before the treatment (see Annex 2). The students had 30 minutes to complete the test. Hence, an adapted standardized pre-test was administered; it was based on the Cambridge A1 Movers Test. For the test was indispensable to consider the vocabulary parts of the listening sections 3 and 4 and reading sections 1 and 3. These consisted of 20 items that were intended to evaluate vocabulary. Each item was graded over 0.5 points, so all the test was evaluated over 10 points according to the Instructivo para la Evaluación Estudiantil of Ministerio de Educación.

3.6.5 Post-test

After these three weeks of treatment, the same pre-test based on the Cambridge A1 Movers Test was applied as a post-test for both groups. A post-test design can also be used to assess the success of applying knowledge offered in a training session or to evaluate participants' attitudes or views about an event (Stratton, 2019). Thereby,

the control and experimental group took an online vocabulary post-test using Microsoft Forms tool to analyze how much EFL vocabulary the students learn, to compare learners´ information, and it also helped the researcher to report the findings, both tests contained the same question (see Annex 2). Finally, the students had 30 minutes to complete the test.

3.6.6 TAM questionnaire

A TAM evaluation questionnaire was categorized into a Likert scale (see Annex 4), in which the necessary information was collected for the evaluation of the acceptance of the use of digital games technologies used in fifth-grade students of the Unidad Educativa "Hermano Miguel". Based on TAM, the researcher conducted surveys of students enrolled in the study through a Microsoft Forms questionnaire. For the Perceived Usefulness (PU) factor, questions were developed, while for the Perceived Ease of Use (PEOU), statements were made. Moreover, the answers to these questions were determined using the Likert scale, the items were placed on a scale of: strongly disagree (1), disagree (2), undecided (3), agree (4), and strongly agree (5).

3.7. Data Processing and Analysis

The researcher analyzed data from both groups by applying SPSS Statistics software. Additionally, the study used the Group Statistics and Independent-Sample T-test to identify if there is a significant difference between students´ scores. Moreover, the SPSS Statistics was used to analyze students´ reactions regarding the use of digital games in EFL vocabulary learning.

CHAPTER IV
RESULTS AND DISCUSSION

This chapter includes all of the data collection results that were obtained during the interventions in students of the fifth-grade of primary education of Unidad Educativa “Hermano Miguel”. The subsequent chapter is broken into four main sections, each of which is explained below.

The first one was the analysis and results of the web 3.0 survey that was employed by the researcher at the beginning of the treatment to both control and experimental groups. All of the population took part in it; the survey included 9 questions on a Likert scale connected to web 3.0 tools in education, even so, 3 questions closely connected with the theme of the study were analyzed.

Secondly, the author presented the analysis and results of a structured survey that was elaborated by the researcher with the main aim to determine the use of digital games in EFL vocabulary learning. The survey contained 8 questions on a Likert scale. In addition, it was applied to control and experimental groups.

Thirdly, the chapter included the analysis and results of the TAM questionnaire that was carried out at the end of the intervention with the experimental group. The questionnaire helped the researcher to collect information to determine the acceptance of certain information technology based on the Theory of Reasoned Action assumptions. The questionnaire was comprised of 15 questions on a Likert scale. The questionnaire consisted of 15 questions on a Likert scale, nevertheless, 4 questions were considered crucial to support the acceptance of web 3.0, and gamification tools in the learning context. The questions were applied to both the control and experimental group.

Additionally, the author showed the results of the pre and post-test for the adapted standardized test of the Cambridge A1 Movers Test that was applied to both groups during the treatment. In this regard, the main aim was to provide an understandable panorama of students´ scores by evaluating the final score over 10 points considering the listening and reading parts that were evaluated. The data obtained

was useful to interpret how digital games influenced fifth-grade students to improve their EFL vocabulary learning. At the end of this chapter, the verification of the hypothesis is explained using SPSS software and the T-test statistic, in which students' progress was compared.

4.1 Analysis and discussion of the results

4.1.1 Web 3.0 survey

Web 3.0 survey question number 6: Which of these web 3.0 tools does your teacher use in the teaching process?

Table 2

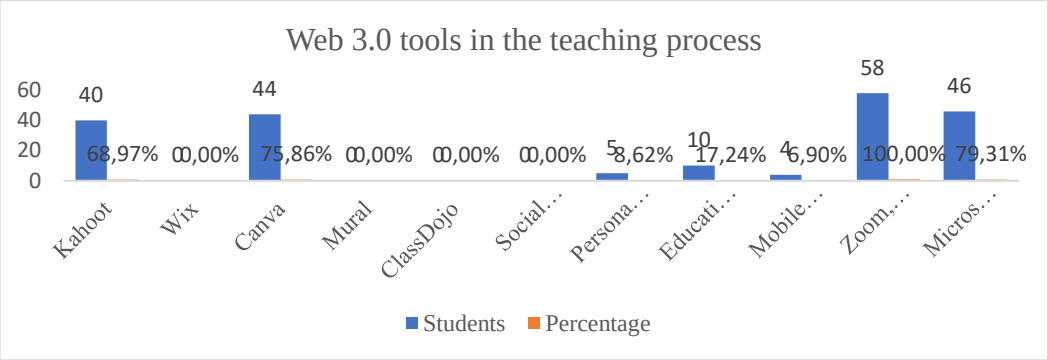
Web 3.0 tools in the teaching process

Options	Students	Percentage
Kahoot	40	68,97%
Wix	0	0,00%
Canva	44	75,86%
Mural	0	0,00%
ClassDojo	0	0,00%
Social networks like (Facebook, Instagram, Tik-Tok)	0	0,00%
Personal page (Blog, email)	5	8,62%
Educational platforms (Moodle, easle)	10	17,24%
Mobile devices (WhatsApp, Telegram, Viber, etc.)	4	6,90%
Zoom, Teams	58	100,00%
Microsoft forms, google forms	46	79,31%

Source: TAM questionnaire

Author: Arequipa (2021)

Graphic 23: Web 3.0 tools in the teaching process



Source: Web 3.0 survey

Author: Arequipa (2021)

Analysis and interpretation

The findings of the web 3.0 survey are shown in the table above, in which the population was asked to select various options from a variety of web 3.0 tools that the teacher applies in their teaching process. Therefore, table 2 shows the subsequent results. 58 students that represent 100% of the overall population, had chosen zoom and teams as the web 3.0 tools that their teacher use in the teaching process. Moreover, Microsoft forms and google forms were the second most chosen web 3.0 tools among students, with 46 students which constitute 79,31% choosing it. Furthermore, Canva platform was the third most popular option, with 44 students who represent 75,86% choosing it as a tool that teachers use to present information. The data also showed that Kahoot was located in the fourth place in terms of preference indicating that 40 students, equivalent to 68,97% mentioned that their teacher uses the aforementioned tool in the teaching process. Besides, 5 students representing the 8,62% mentioned the personal pages like blogs and emails as tools used by their teacher. Additionally, only 4 students who represent the 6,90% stated that mobile devices such as WhatsApp, Telegram, and Viber are used in their teaching process. On the other hand, none of the students answered that there are web 3.0 tools that they do not know like Wix, Mural, ClassDojo, and social networks representing 0%.

To conclude, most of the students surveyed stated that the tools used by the teacher for the teaching process were Zoom and teams considering that they are the tools used in the synchronous classes. In addition, the findings revealed that the teachers

use Kahoot and Microsoft forms in their evaluation process making this process interactive. Lastly, there was an enormous type of technological tools that both the teachers and students will implement in their teaching and learning process according to students´ level due to they are easy to use and are available all the time.

Web 3.0 survey question number 11: What kinds of web 3.0 tools does your teacher use for assessment?

Table 3

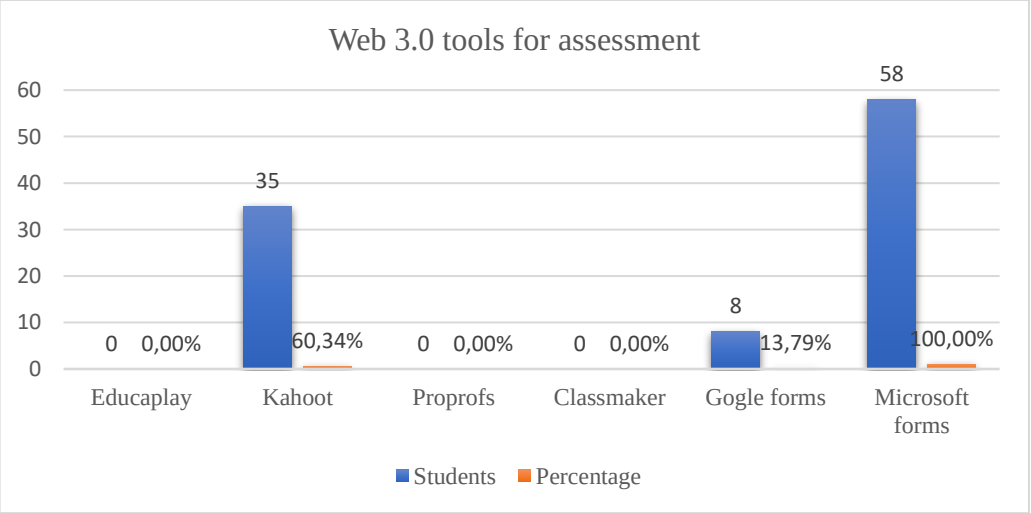
Web 3.0 tools for assessment

Options	Students	Percentage
Educaplay	0	0,00%
Kahoot	35	60,34%
Proprofs	0	0,00%
Classmaker	0	0,00%
Google forms	8	13,79%
Microsoft forms	58	100,00%

Source: Web 3.0 survey

Author: Arequipa (2021)

Graphic 24: Web 3.0 tools for assessment



Source: Web 3.0 survey

Author: Arequipa (2021)

Analysis and interpretation

Table 3 and graph 24 illustrate the findings of the web 3.0 diagnosis survey, in which participants were asked to answer the question provided at the top of the table regarding the tools that the teacher uses for the evaluation process; then the students had to choose various options.

Thus, table number 3 shows that 58 learners, or 100% of the overall population, Microsoft forms as their major tool in assessment procedures. Furthermore, Kahoot, which was related to web 3.0 technology tools and assessment processes, was the second most popular alternative, with 35 students representing 60,34%. In addition, Google forms was the third favorite option among the population with 13,79% representing the 8 students choosing it. Finally, the table displays that educaplay, proprofs, and classmaker were online tools that teachers do not use in the assessment process; that is why those tools represent the 0% in the table.

It can be deduced from table 3 and graph 6 that teachers prefer to use the Microsoft Forms tool to assess their students' activity. Consequently, the teachers should innovate their knowledge concerning the web 3.0 tools, and open their minds because there are a great number of tools that can facilitate the assessment process to do it innovatively and interactively avoiding the traditional methodologies. For that, Kahoot would be an exceptional web 3.0 tool that will be implemented more frequently in the classes due to this is a response system in which the teacher can generate a lesson, questionnaires, or quizizz through competitive knowledge games avoiding boring in the classes. In the end, the results of the web 3.0 survey, table 4 gave a better panorama of modern education, which is linked to technology and modernization.

Web 3.0 survey question number 13: Do you consider that the teacher should generate their own resources based on web 3.0 tools for the development of collaborative work?

Table 4

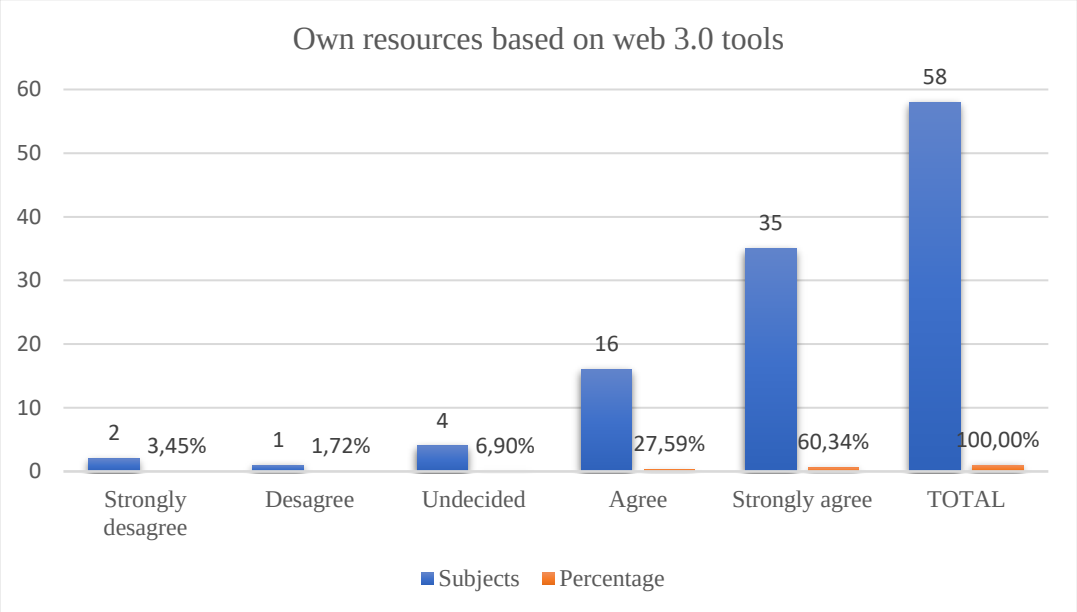
Own resources based on web 3.0 tools

Frequency of agreement	Subjects	Percentage
Strongly disagree	2	3,45%
Disagree	1	1,72%
Undecided	4	6,90%
Agree	16	27,59%
Strongly agree	35	60,34%
TOTAL	58	100,00%

Source: Web 3.0 survey

Author: Arequipa (2021)

Graphic 25: Own resources based on web 3.0 tools



Source: Web 3.0 survey

Author: Arequipa (2021)

Analysis and interpretation

According to table 4 and graphic 25, the findings based on students´ perception about the resources that teacher should generate using the web 3.0 tools shows the following results.

35 students that are equivalent to 60,34 % of the total of 58 students, stated that they strongly agree that teachers should generate their own resources by employing the web 3.0 tools for the development of collaborative work. Additionally, 27,59% representing 16 students affirmed that they agree that the web 3.0 created by the teacher allows them to work collaboratively. Moreover, 6,90% representing 4 students were undecided in their answers, and 1,72 % representing 1 student disagreed with their answers. On the other hand, in table 5 and graphic 25 related to web 3.0 tools generated by the teachers, only two students who represent the 3,45% strongly disagree, based on the frequency of agreement, whether they own resources generated by the teacher help in the collaborative work.

In a conclusion, most students consider that the teacher should generate their resources to develop collaborative work in the classroom, which will help to strengthen their language skills. The creation of tools such as Kahoot, Quizizz, Wordwall, Baamboozle, and Nearpod are useful web 3.0 tools that will support the teacher to innovate their classes and make classes fun and enjoyable.

4.1.2. Structured survey

Structured survey question number 1: Choose the digital games that you know:

Table 5

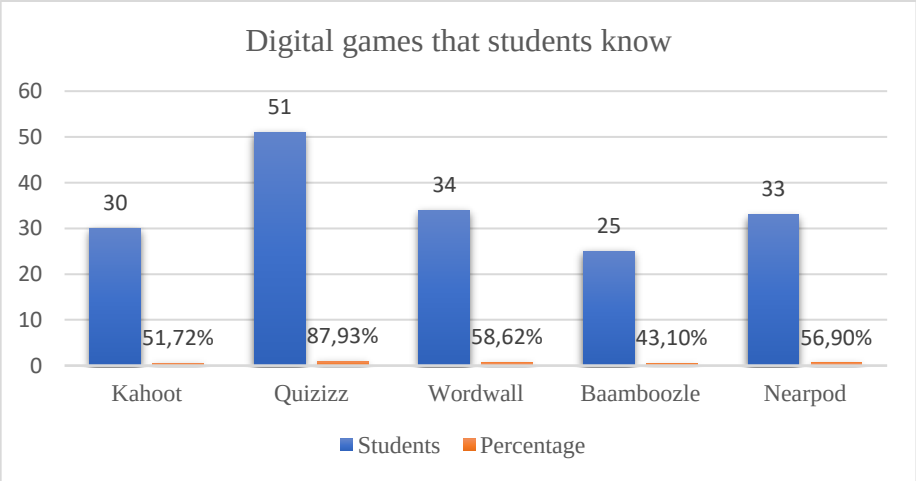
Digital games that students know

Options	Students	Percentage
Kahoot	30	51,72%
Quizizz	51	87,93%
Wordwall	34	58,62%
Baamboozle	25	43,10%
Nearpod	33	56,90%

Source: Structured survey

Author: Arequipa (2021)

Graphic 26: Digital games that students know



Source: Structured survey

Author: Arequipa (2021)

Analysis and interpretation

Out of a total of 58 students surveyed representing the100%. The most well know digital game by students was quizizz with 87,93% equivalent to 51 students, the second most popular know was wordwall with 58,62% equivalent to 34 students. The third well knows digital game mentioned by 30 students who represent 51,72% was Kahoot. Additionally, 33 students who represent the 56,90% chose Nearpod, and finally, 25 students equivalent to 43,10% selected baamboozle as a digital game that they know. To conclude, most respondents stated that they know all of the

digital games mentioned because their teacher had used them during the classes to create interactive activities that help students to motivate. Additionally, the teacher uses the games to teach English vocabulary considering that those games are easy and accessible for students to use.

Structured survey question number 2: Which of these digital games does your teacher use in the teaching process?

Table 6

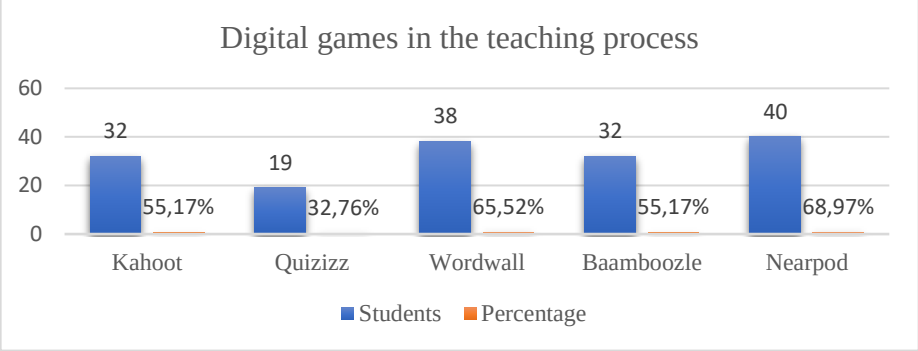
Digital games in the teaching process

Options	Students	Percentage
Kahoot	32	55,17%
Quizizz	19	32,76%
Wordwall	38	65,52%
Baamboozle	32	55,17%
Nearpod	40	68,97%

Source: Structured survey

Author: Arequipa (2021)

Graphic 27: Digital games in the teaching process



Source: Structured survey

Author: Arequipa (2021)

Analysis and interpretation

Table 6 and graphic number 27 show the results about digital games used in the teaching process in which students had the opportunity to select various options. Out of a total of 58 students surveyed representing the100%, 68,97% equivalent to 40 students stated that the teacher uses Nearpod in the teaching process, 65,52% equivalent to 38 students chose Wordwall as the second digital game used by their

teacher. Moreover, Baamboozle and Kahoot were chosen by 32 students who represent 55,17%, and quizizz was the last option among students with 32,76% equivalent to 19. Most of the students surveyed stated that the digital games used by the teacher for the teaching process are Nearpod and wordwall considering that those games are easy to use for both teachers and students. Moreover, all of the mentioned games are available for teachers to design and apply practical activities in their teaching process to increase students´ participation, promote interactive learning, and make the classes more interactive.

Structured survey question number 3: What kind of digital games does your teacher apply to teach EFL vocabulary?

Table 7

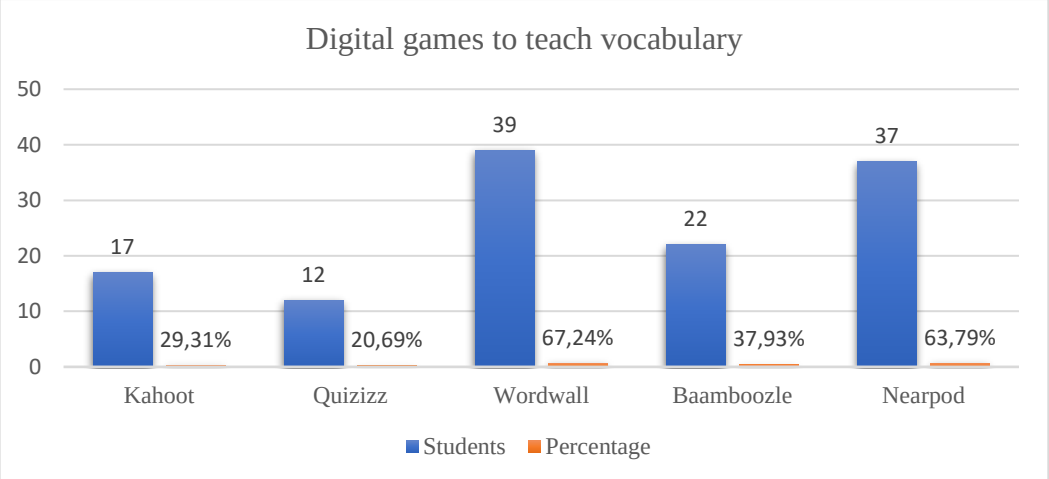
Digital games to teach vocabulary

Options	Students	Percentage
Kahoot	17	29,31%
Quizizz	12	20,69%
Wordwall	39	67,24%
Baamboozle	22	37,93%
Nearpod	37	63,79%

Source: Structured survey

Author: Arequipa (2021)

Graphic 28: Digital games to teach vocabulary



Source: Structured survey

Author: Arequipa (2021)

Analysis and interpretation

Out of a total of 58 students surveyed representing the 100%, 67,24% equivalent to 39 students stated that their teacher uses wordwall to teach, especially EFL vocabulary, 63,79% equivalent to 37 students stated that Nearpod is the second most popular digital game used by the teacher in students´ vocabulary development. Furthermore, baamboozle was the third used by teachers to teach vocabulary with 37,93% representing the 22 students. Kahoot was also used by the teacher with the 29,31% representing 17 students. Finally, quizizz was the last option chosen by students to teach EFL vocabulary with 20,69% representing 12 students. Thereby, most of the students affirmed that to teach EFL vocabulary in virtual classes they use a variety of digital games for academic purposes, these games are easy to access and offer a variety of fun activities that the teacher will apply to engage classroom experience. Moreover, those games are advantageous to create activities to teach EFL vocabulary, like matching pairs, competition games that help to increase collaboration, quizzes, climbing time, and others.

Structured survey question number 4: How often do teachers apply digital games to teach EFL vocabulary?

Table 8

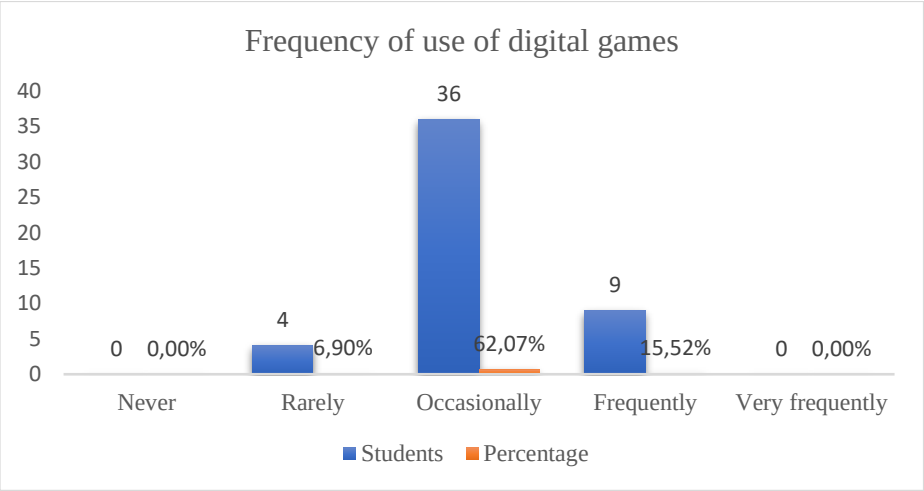
Frequency of the use of digital games

Options	Students	Percentage
Never	0	0,00%
Rarely	4	6,90%
Occasionally	36	62,07%
Frequently	9	15,52%
Very frequently	0	0,00%
Total	58	84,48%

Source: Structured survey

Author: Arequipa (2021)

Graphic 29: Frequency of use of digital games



Source: Structured survey

Author: Arequipa (2021)

Analysis and interpretation

Out of a total of 58 students surveyed representing 100%, 62,07% representing 36 students stated that the teacher uses digital games occasionally to teach EFL vocabulary. Moreover, 9 students representing 15,52% manifested that their teacher frequently uses digital games in vocabulary development, and 4 students representing the 6,90% mentioned that their teacher uses digital games rarely. Lastly, the options never and frequently were not chosen by anyone student representing the 0%.

To conclude, most of the students mentioned that the use of digital games in the teaching and learning process is occasionally. Thus, teachers should generate these kinds of activities more frequently because they allow students and teachers to maintain a friendly classroom, and make the teaching-learning process an enjoyable process.

Structured survey question number 5: Do digital games promote interest and motivation?

Table 9

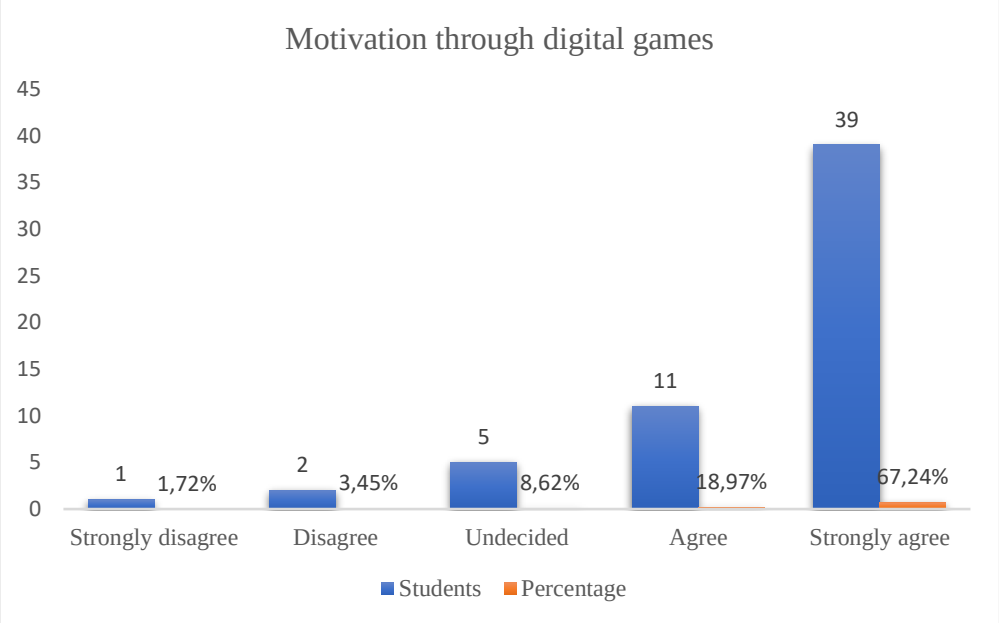
Motivation through digital games

Options	Students	Percentage
Strongly disagree	1	1,72%
Disagree	2	3,45%
Undecided	5	8,62%
Agree	11	18,97%
Strongly agree	39	67,24%
Total	58	100,00%

Source: Structured survey

Author: Arequipa (2021)

Graphic 30: Motivation through digital games



Source: Structured survey

Author: Arequipa (2021)

Analysis and interpretation

Out of a total of 58 students surveyed representing 100%, 62,24% representing 39 students strongly agree with the statement that digital games promote motivation and interest, 18,97% representing 11 students agreed that digital games promote motivation. Moreover, only five students who represent the 8,62% were not able to decide whether the digital games help them in their motivation. In addition, 2 students representing 3,45% disagreed, and only 1 student strongly disagreed with the mentioned statement.

It is noticeable that the majority of students prefer to use digital games in their teaching process because those games contain a variety of game elements like prizes, quests, graphs, avatars, social aspects, leader boards, and performance graphs that allow to promote motivation and engage learning. Furthermore, teachers should consider digital games as a solution to avoid traditional strategies to make their classes a pleasurable space to learn.

Structured survey question number 6: Does the teacher provide visual and interesting resources to learn new EFL vocabulary?

Table 10

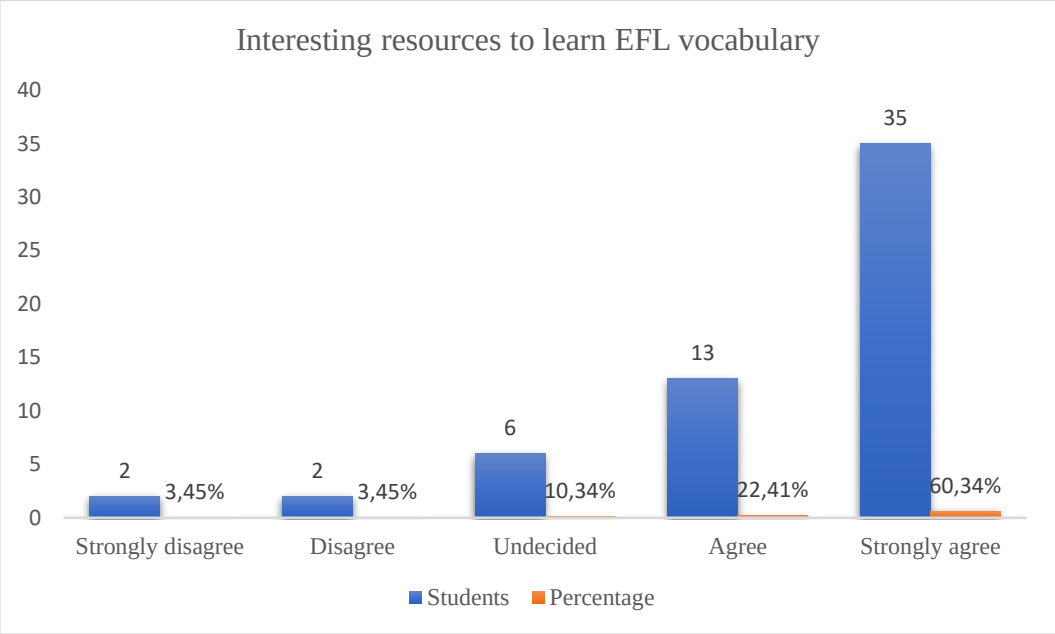
Interesting resources to learn new EFL vocabulary

Options	Students	Percentage
Strongly disagree	2	3,45%
Disagree	2	3,45%
Undecided	6	10,34%
Agree	13	22,41%
Strongly agree	35	60,34%
Total	58	100,00%

Source: Structured survey

Author: Arequipa (2021)

Graphic 31: Interesting resources to learn EFL vocabulary



Source: Structured survey

Author: Arequipa (2021)

Analysis and interpretation

Out of a total of 58 students surveyed representing the 100%, 60,34% representing 35 students strongly agreed that their teacher provides them with visual and interesting resources to learn new vocabulary, 22,41% representing 13 students agreed with the same statement, 10,34% representing 6 students were undecided, they were not able to decide if their teacher provide interesting resources to improve their vocabulary. Moreover, 2 students disagreed and 2 students strongly disagreed representing 0%.

To conclude, most students strongly agreed that the teacher provides interesting and visual resources in their learning process. Currently, technology is available and easy to use for teachers and students; hence, teachers should expand their technological tools to enable their students to improve their vocabulary proficiency. Digital games are interesting resources that are visually attractive. They had several elements like points, badges, and leader boards that are visual representers of achievements in games.

Structured survey question number 7: How does your teacher teach EFL vocabulary?

Table 11

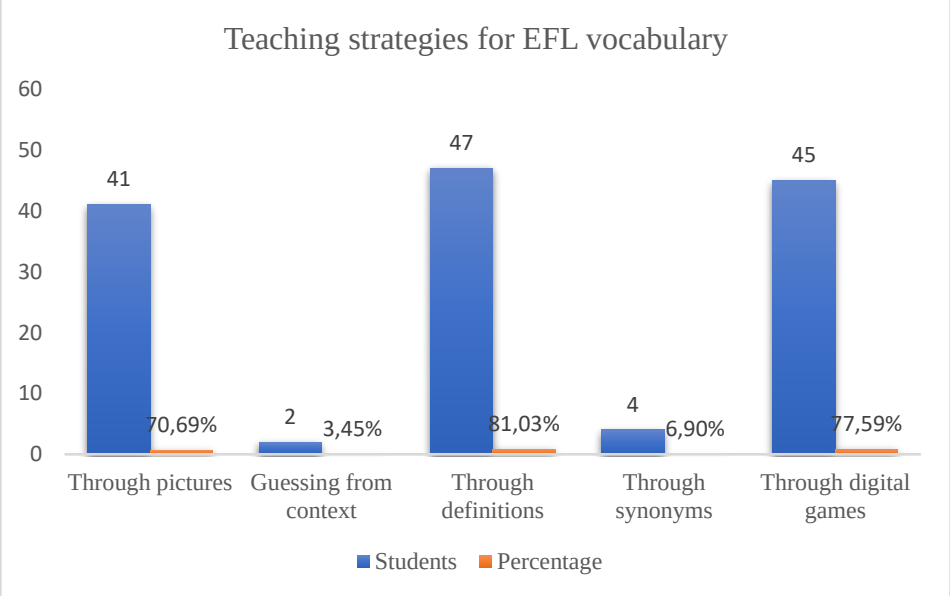
Teaching strategies for EFL vocabulary

Options	Students	Percentage
Through pictures	41	70,69%
Guessing from context	2	3,45%
Through definitions	47	81,03%
Through synonyms	4	6,90%
Through digital games	45	77,59%

Source: Structured survey

Author: Arequipa (2021)

Graphic 32: Teaching strategies for EFL vocabulary



Source: Structured survey

Author: Arequipa (2021)

Analysis and interpretation

Out of a total of 58 students surveyed representing 100%, 81,03% representing 47 students stated that their teacher teaches EFL vocabulary through definitions. Furthermore, 77,59% representing 45 students chose digital games as a teaching strategy that their teacher uses to teach vocabulary. The third teaching strategy selected by the students was through pictures. Moreover, 4 students who represent

the 6,90% mentioned that the teacher teaches new vocabulary through synonyms, and only 2 students representing the 3,45% chose to guess from context as a teaching strategy used in classes. Thereby, the majority of students agreed that the teacher used different teaching strategies to teach EFL vocabulary like through digital games, pictures, and definitions. The combination of different strategies significantly supports the learning of EFL vocabulary and avoids the monotony of the class.

Structured survey question number 8: How important is the EFL vocabulary to improve your other language skills?

Table 12

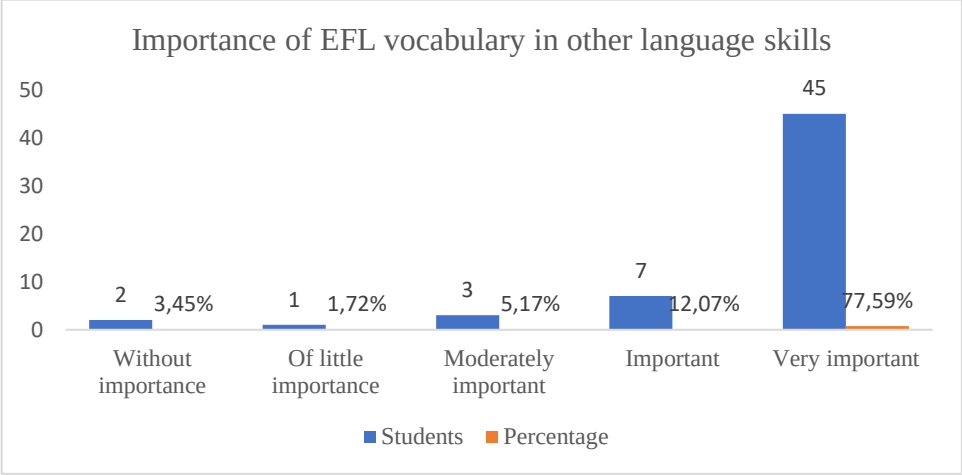
Importance of EFL vocabulary in other language skills

Options	Students	Percentage
Without importance	2	3,45%
Of little importance	1	1,72%
Moderately important	3	5,17%
Important	7	12,07%
Very important	45	77,59%
Total	58	100,00%

Source: Structured survey

Author: Arequipa (2021)

Graphic 33: Importance of EFL vocabulary in other language skills



Source: Structured survey

Author: Arequipa (2021)

Analysis and interpretation

Out of a total of 58 students surveyed representing the 100%, 77,59% representing 45 students considered that EFL vocabulary is very important to improve other language skills, 12,07% representing 7 students considered important the same statement, 5,17% representing 3 students thought that vocabulary is moderately important in the development of other language skills. Moreover, only 1 student representing the 1,72 mentioned that vocabulary has a little importance, and finally, 2 students representing the 3,45% considered without importance the vocabulary in the improvement of other language skills.

Consequently, the majority of students considered that vocabulary is the most essential part to learn a second language because it allows people to communicate and express their ideas, feelings, and thoughts, and it is the basis of other language skills. Without an expanded vocabulary, the students are not able to communicate and participate in classes. That is why teachers should consider the vocabulary as competence to be improved.

4.1.3 TAM questionnaire

TAM questionnaire question number 5: In general, I find these tools useful in my work in the virtual classroom.

Table 13

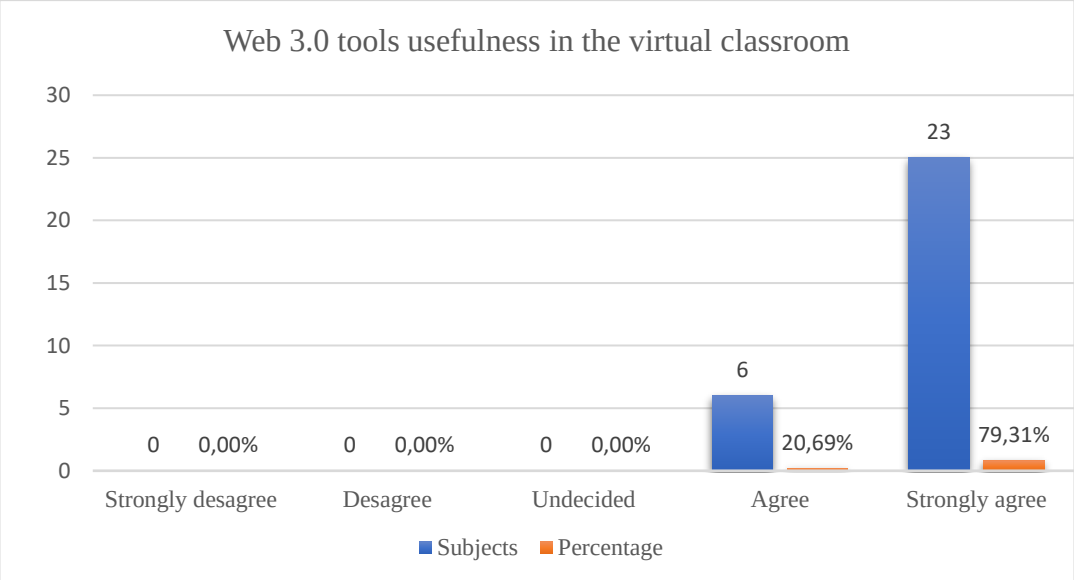
Web 3.0 tools usefulness in the virtual classroom

Frequency of agreement	Subjects	Percentage
Strongly disagree	0	0,00%
Disagree	0	0,00%
Undecided	0	0,00%
Agree	6	20,69%
Strongly agree	23	79,31%
TOTAL	29	100,00%

Source: TAM questionnaire

Author: Arequipa (2021)

Graphic 34: Web 3.0 tools usefulness in the virtual classroom



Source: TAM questionnaire

Author: Arequipa (2021)

Analysis and interpretation

Table 13 and graphic 34 present the replies of the experimental group who took the TAM questionnaire with a particular focus on digital games. The table is organized into three main aspects. The first one is the frequency of agreement, the second aspect is the subject that took the questionnaire, and the last one is the percentage of that population. Subsequently, in answer to the statement at the top of the table, 23 students, or 79,31% of the total of 29 students, stated that they strongly agreed that the web 3.0 tools are useful in the virtual classroom.

Furthermore, 20 students out of 29, who represent 20,69%, stated that they agreed considering that web 3.0 tools are useful and necessary to be implemented in virtual classes. Finally, table 13 and graphic number 34 displayed that in the frequency of agreement undecided, disagree, and strongly disagree there was nor any students that chose those answers.

According to the results, the majority of participants felt that web 3.0 tools and digital games contribute favorably and significantly to the growth of their academic activities in the virtual classrooms. In this sense, and thanks to a large number of students in agreement, it can be deduced that the implementation of digital games in the virtual classes contributes significantly and usefulness taking into account that the gamification tools are blooming in educational environments. In conclusion, the students aim to continue expanding their knowledge using current tools like digital games in the classes.

TAM questionnaire question number 10: In general, I find the web 3.0 and gamification tools to be easy to use.

Table 14

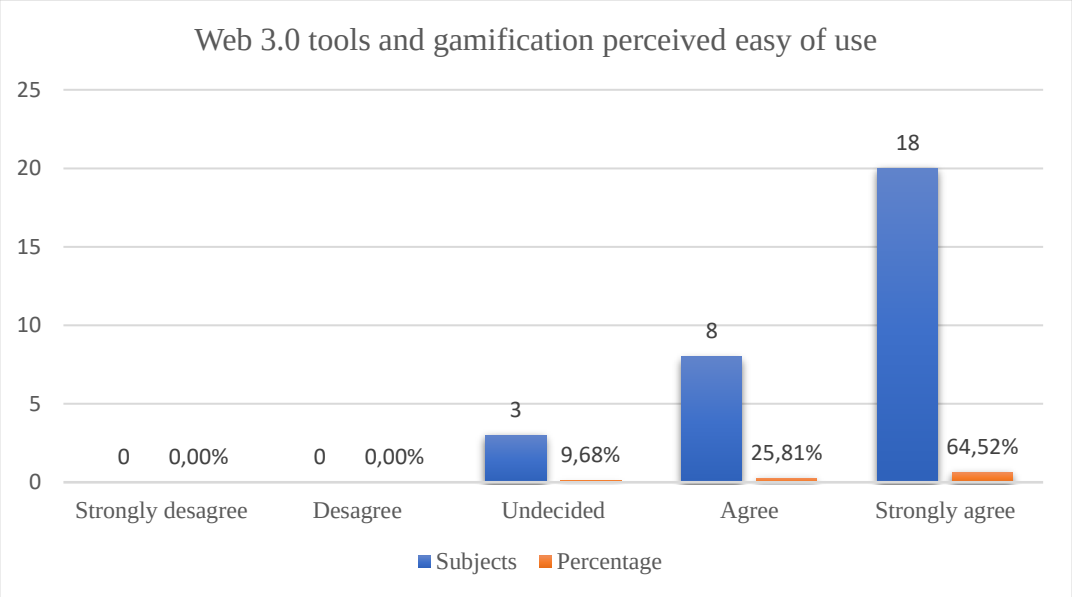
Web 3.0 tools and gamification perceived ease of use

Frequency of agreement	Subjects	Percentage
Strongly disagree	0	0,00%
Disagree	0	0,00%
Undecided	3	9,68%
Agree	8	25,81%
Strongly agree	18	64,52%
TOTAL	29	100,01%

Source: TAM questionnaire

Author: Arequipa (2021)

Graphic 35: Web 3.0 tools and gamification perceived ease of use



Source: TAM questionnaire

Author: Arequipa (2021)

Analysis and interpretation

Table 14 and graphic number 35 show the responses of the participants in the TAM questionnaire towards the web 3.0 tools, particularly focusing on the gamification or digital games tools perceived as ease of use. Table 14 is divided into three aspects. Firstly, in the table is the frequency of agreement; it represents the chosen answers for the subjects. Secondly, the population who took the questionnaire, in this case, the experimental group, and the third element is the percentage.

18 students who represent 64,52% of a total of 29 students, declared that they strongly agreed that the 3.0 tools, especially gamification tools are easy to use. Furthermore, 8 students out of 29 who represent the 37.8% mentioned that they agree and that the gamification tools or digital games are accessible for them due to the digital games are easy to use. Furthermore, table 14 and graphic 35 related to web 3.0 tools and gamification perceived ease to use show that 3 students were unable to choose or give their agreement, accounting the 9,68% of a total of 100%. Lastly, the table shows that none of the students disagreed and strongly disagreed with this question regarding the ease of use of technological tools and digital games. These options represented 0% of the total population, which is 100%.

The findings in table 14 and graph 35 provided a general and succinct panorama of how easy it is for subjects to use web 3.0 and gamification tools. Additionally, the students are familiarized with technology, and they are considered digital natives, thus, the findings reveal that for them using the technological tools is easy. It can be affirmed also that most of the students surveyed agree that the things that they make with the support of technology will be easy too if they are used correctly because with just one click can be done and undone activities using technology generate an efficient work in a short time.

TAM questionnaire question number 12: The use of web 3.0 and gamification tools allow to maintain more friendly communication with my environment (classmates and teachers)

Table 15

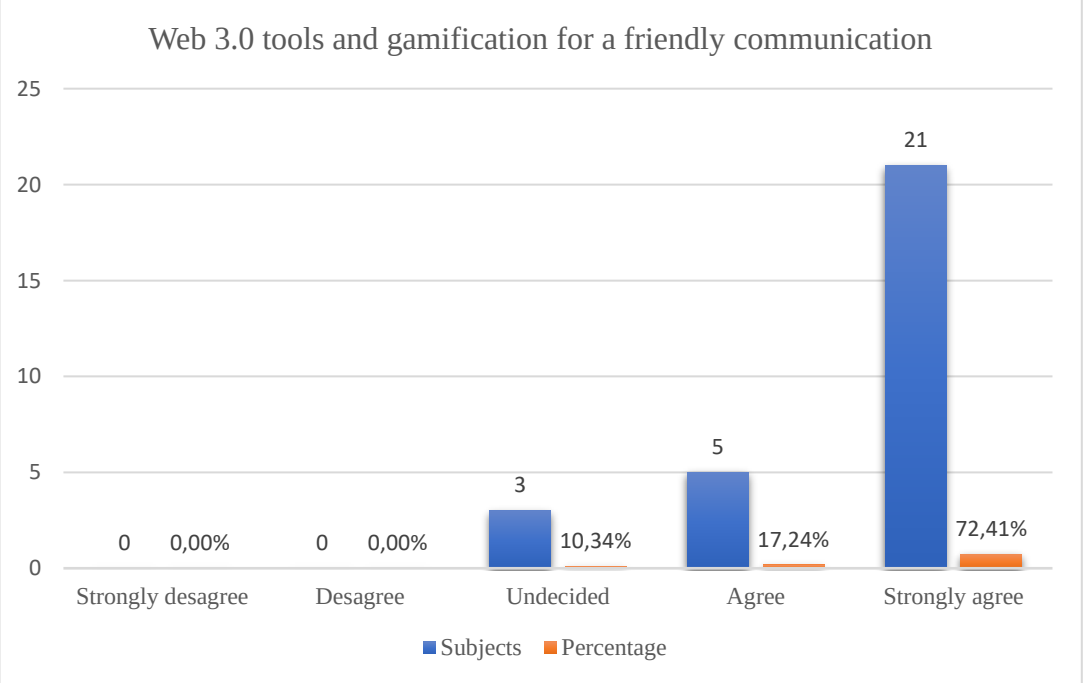
Web 3.0 tools and gamification for a friendly communication

Frequency of agreement	Subjects	Percentage
Strongly disagree	0	0,00%
Disagree	0	0,00%
Undecided	3	10,34%
Agree	5	17,24%
Strongly agree	21	72,41%
TOTAL	29	100,00%

Source: TAM questionnaire

Author: Arequipa (2021)

Graphic 36: Web 3.0 tools and gamification for a friendly communication



Source: TAM questionnaire

Author: Arequipa (2021)

Analysis and interpretation

Table number 15 and graphic number 36 reply to the responses of the student who participate in the questionnaire answering the question related to web 3.0 tools focusing on gamification or digital games for friendly communication. The table is organized in three main factors as the tables before presented. The aspects are the frequency of agreement, the subjects or participants, and the percentage.

Out of a total of 29 students surveyed representing 100%, 72,41% equivalent to 21 students strongly agreed that using web 3.0 and gamification tools allows for maintaining more friendly communication with the environment. Furthermore, 17,24% equivalent to 5 students agreed with the same statement. However, 3 students who represent the 10,34% were not able to decide, whether the digital games help them to carry out a friendly environment. Finally, the options disagree and strongly disagree were not chosen by any student representing the 0%.

In essence, most of the students surveyed agreed that the use of web 3.0 tools, especially digital games allows sustaining friendly communication since it allows the student to be the protagonist of the class without being limited by physical presence, but rather encourages the integration of collaborative learning and communication between colleagues.

TAM questionnaire question number 13: I have felt satisfied when carrying out activities with web 3.0 or gamification tools.

Table 16

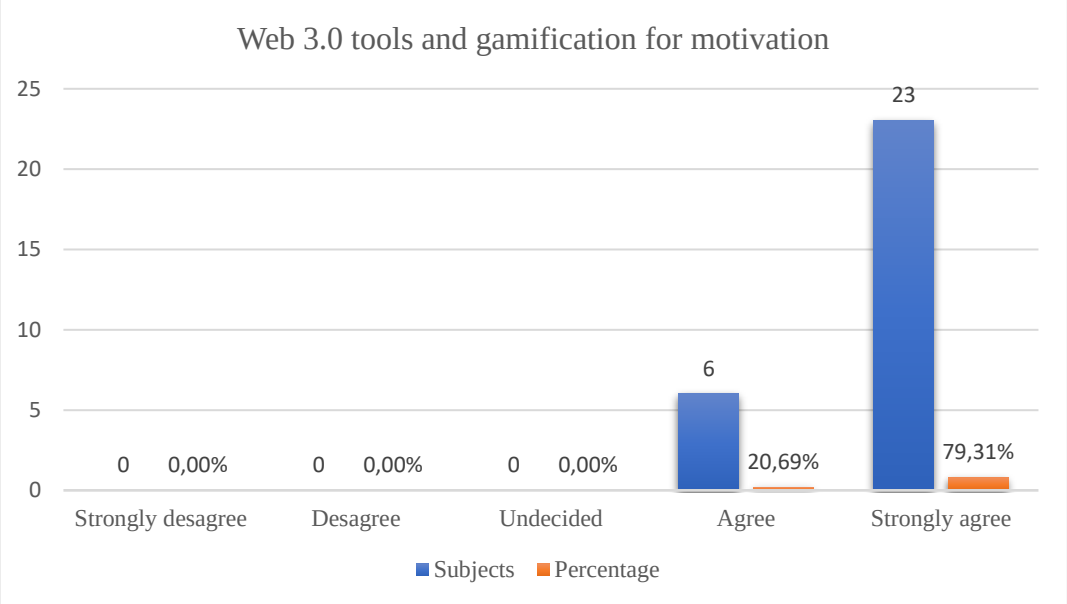
Satisfaction of the web 3.0 tools and gamification for motivation

Frequency of agreement	Subjects	Percentage
Strongly disagree	0	0,00%
Disagree	0	0,00%
Undecided	0	0,00%
Agree	6	20,69%
Strongly agree	23	79,31%
TOTAL	29	100,00%

Source: TAM questionnaire

Author: Arequipa (2021)

Graphic 37: Satisfaction of the web 3.0 tools and gamification for motivation



Source: TAM questionnaire

Author: Arequipa (2021)

Analysis and interpretation

Table 16 and graphic number 37 show the replies of the students who took the TAM, answering the question mentioned at the top of the table regarding gamification and digital games to motivation. For a better understanding, the table is divided into three different aspects, which are the frequency of agreement, the population, and the percentage.

To begin, 23 students or 79,31% of the total of 29 students said they strongly agree that they have felt satisfied when carrying out activities with web 3.0 tools, particularly gamification or digital games. Similarly, 6 students that represent the 20,69% mentioned that they are agree and satisfied with the digital games in their teaching-learning process. Furthermore, in the frequency of agreement undecided, disagree, and strongly agree no students chose those options, thus they represent 0% of the total population.

According to the results obtained, most of the students agreed that they are satisfied when carrying out activities with web 3.0 or gamification tools, since the student has access to intelligent programs where at the same time they play and learn by being in that environment arouses their interest, their motivation, and therefore they enjoy it.

4.1.4 Pre and post-test results

The results presented coming up next are the results obtained from the pre and post-test conducted with fifth-grade students to determine the effectiveness of using digital games in EFL vocabulary learning.

- **Pre and post-test based on vocabulary and listening parts 3 and 4**

Table 17

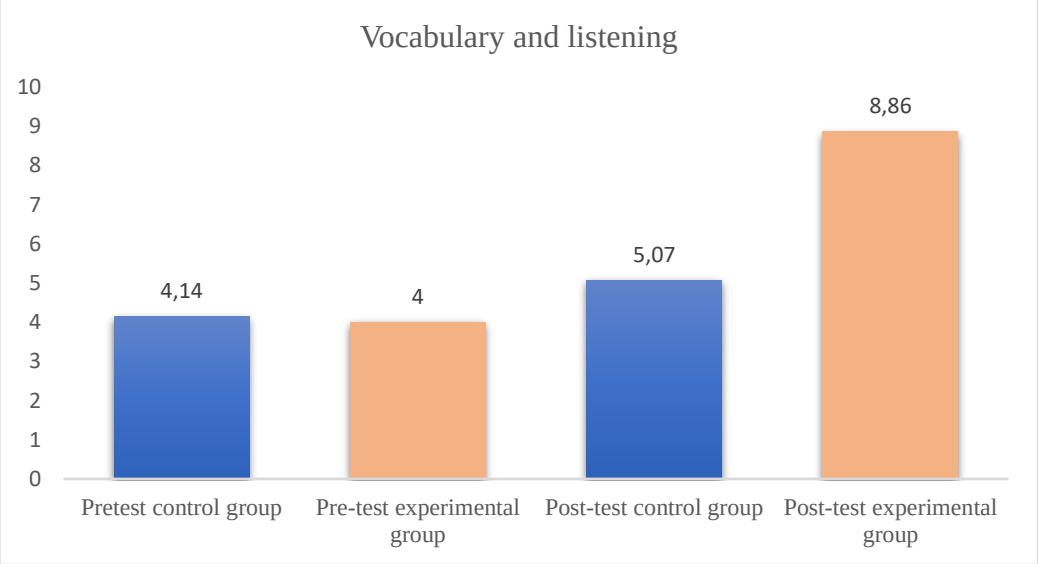
Outcomes from the pre-test and post-test based on vocabulary and listening

Participants	Outcomes
Pretest control group	4,14
Pre-test experimental group	4
Post-test control group	5,07
Post-test experimental group	8,86

Source: Field research

Author: Arequipa (2021)

Graphic 38: Pre and post-test results based on vocabulary and listening



Source: Field research

Author: Arequipa (2021)

Analysis and interpretation

Table 17 and graphic number 38 show the population´s outcomes before and after the treatment. For a better understanding, the table is divided into the pre and post-test outcomes for both control and experimental groups regarding vocabulary and listening part 3 and 4 that was evaluated on the Cambridge A1 Movers Test. The outcomes were evaluated over 10 points.

The table displays that both groups had very poor vocabulary in the criterion linked to vocabulary and listening. In addition, it can be seen that there was no substantial difference in the control group in the pre and post-test, nevertheless, there was a slight rise from 4,14 to 5,07 out of 10. On the contrary, the experimental group´s outcomes improved in the post-test after the application of the digital games in the improvement of EFL vocabulary, and there is also a meaningful difference from 4 to 8,86 out of 10 as the table shown.

Thus, it can be concluded that the use of digital games to improve listening skill, so, they are beneficial because in the post-test of the experimental group the majority of students have a greater domain of linguistic competencies, particularly the students who master their vocabulary. The students will be able to improve their listening and vocabulary skills by listening for detail the specific vocabulary to understand the conversations.

- **Pre and post-test based on vocabulary and reading parts 1 and 3**

Table 18

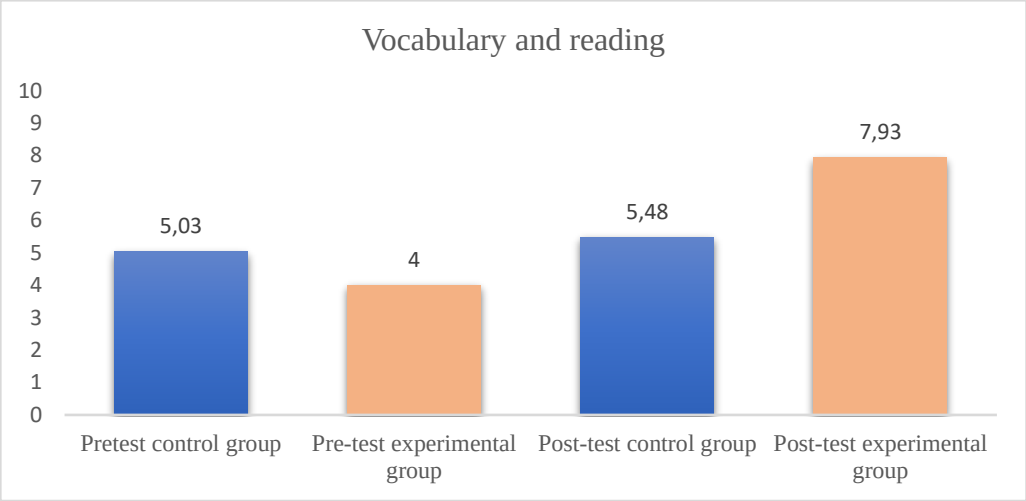
Outcomes from the pre-test and post-test based on vocabulary and reading

Participants	Outcomes
Pretest control group	5,03
Pre-test experimental group	4
Post-test control group	5,48
Post-test experimental group	7,93

Source: Field research

Author: Arequipa (2021)

Graphic 39: Pre and post-test results based on vocabulary and reading



Source: Field research

Author: Arequipa (2021)

Analysis and interpretation

Table number 18 and graphic 39 show the results obtained from the Cambridge A1 Movers Test that was applied to both the control and experimental group regarding vocabulary and reading. The table displays that both groups had an intermediate level of vocabulary that enable them to comprehend readings. In the control group, there is not a significant alteration in their scores from 5,03 to 5,48 out of 10; while in the experimental group, the difference is significant and remarkable changing the outcomes from 4 to 7,93 out of 10. As a result, the use of digital games supports the experimental group to improve their vocabulary as well as their reading skills.

- **Pre and post-test group comparison based on listening and reading skills**

Table 19

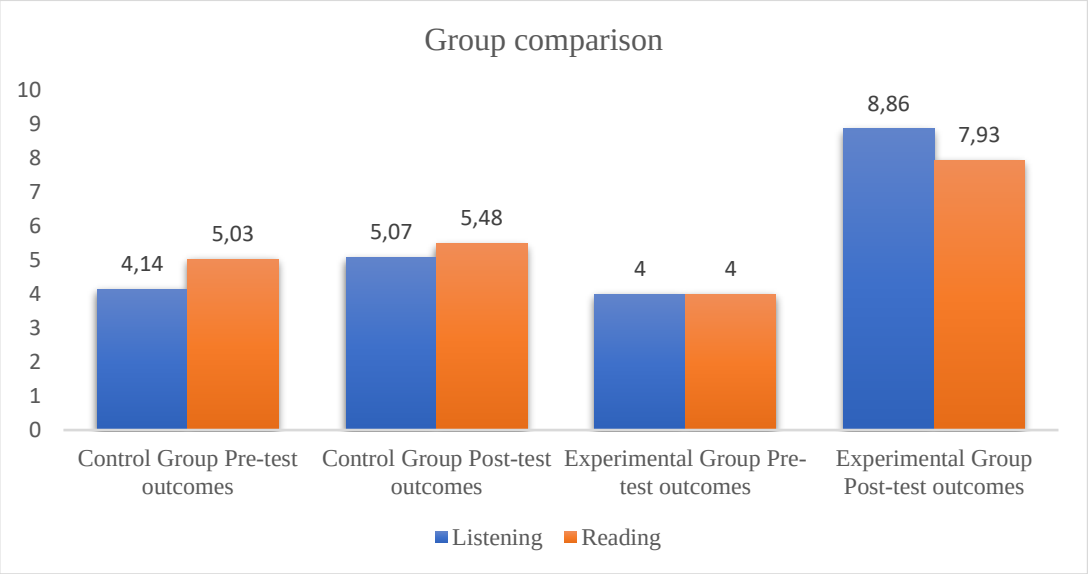
Group comparison

Criteria	Control group Pre-test outcomes	Control group Post-test outcomes	Experimental group Pre-test outcomes	Experimental group Post-test outcomes
Listening	4,14	5,07	4	8,86
Reading	5,03	5,48	4	7,93

Source: Field research

Author: Arequipa (2021)

Graphic 40: Group comparison



Source: Field research

Author: Arequipa (2021)

Analysis and interpretation

Table 19 and graphic number 40 show a group comparison regarding the outcomes before and after the interventions. The table also shows how the Cambridge grade average was drastically changed after the treatment with the experimental group. The distinction between the control group and the experimental group is well-

known. Learners in the experimental group improved their vocabulary in the areas of speaking and reading skills called intentional learning in which students through the aforementioned skills expand their vocabulary proficiency.

4.1.5 Hypothesis verification

The participants in this study were divided into two groups which were the experimental and control. These two groups confirmed the sample at two different times. A pretest and a posttest were conducted following the intervention. Thereby, the present research is quasi-experimental, it used SPSS software to confirm if the hypothesis reveals the expected results. Additionally, the Group Statistics and Independent-Sample T-test were applied to identify if there is a significant difference between students´ scores. To define the aforementioned, the next hypothesis test was required.

Alternative hypothesis (H1)

The use of digital games has an impact on the development of EFL vocabulary learning in students of the fifth grade of Unidad Educativa “Hermano Miguel”.

Null hypothesis (Ho)

The use of digital games does not have an impact on the development of EFL vocabulary learning in students of the fifth grade of Unidad Educativa “Hermano Miguel”.

Table 20

Group Statistics

Group Statistics

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
PRE1	CONTROL	29	4,5862	2,12581	,39475
	EXPERIMENTAL	29	4,0000	1,72689	,32068
POST1	CONTROL	29	5,2759	2,14470	,39826
	EXPERIMENTAL	29	8,3966	1,58328	,29401

Source: Hypothesis verification

Author: Arequipa (2021)

Table 21

Independent Samples Test

Independent Samples Test

		Leven´s Test for Equality of Variances		T-test for Equality of means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
PRE1	Equal variance assumed	1,823	,182	1,153	56	,254	,58621	,50859	-,43262	1,60503
	Equal variance not assumed			1,153	53,744	,254	,58621	,50859	-,43356	1,60598
POST1	Equal variance assumed	,740	,393	-6,304	56	,000	-3,12069	,49503	-4,11235	-2,12903
	Equal variance not assumed			-6,304	51,530	,000	-3,12069	,49503	-4,11425	-2,12713

Source: Hypothesis verification

Author: Arequipa (2021)

The statistical data collected by the control and the experimental group during the pre and post-tests are shown in the tables above. The presumption of homogeneity of variances between the two groups was observed before the t-test, as shown by Levene's test, $p = 0.182 > 0.05$. Therefore, we reject Ha and accept Ho, that is, the variances of the groups are equal, and thus the control and experimental group are

homogeneous. These t-test results help to interpret using the equal variance assumption.

Table 20 shows that there is a little difference between the Means and the standard deviation of the control group based on the average generated from the Cambridge A1 Movers Test scored over 10 points. The mean of 29 subjects in the pre-test was 4,5862, and the mean in the post-test is 5,2759. On the other hand, the same table shows that there is a significant difference between the Means and the standard deviation of the experimental group. The Mean of the 29 subjects before the involvement (Mean=4,0000) was over 10 points, and the mean jumped to (Mean=8,3966) after the involvement. Additionally, the results display that the experimental group´s grades improved considerably.

Moreover, the outcomes (See Table 21) regarding the P-value show that $p = 0 < 0.05$, we reject the Ho and accept the H1, that is, the means of the Control Group and the Experimental Group are different, consequently, **it can be concluded that the use of digital games has an impact on the development of EFL vocabulary learning in students of the fifth grade of Unidad Educativa "Hermano Miguel".**

CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This chapter provides the subsequent conclusions and recommendations for future researches after the appropriate analysis and interpretations of the results obtained related to the treatment that involved the use of digital games in EFL vocabulary learning of fifth-grade students of Unidad Educativa “Hermano Miguel”. That

- The majority of gamification strategy research has centered on the success of using digital games as a gamified teaching technique. Thus, the current study was not the exception; it was proved through the hypothesis verification due to the P-value being $p = 0 < 0.05$. As a result, the application of digital games like quizizz, Kahoot, wordwall, baamboozle, and Nearpod contributes positively to EFL vocabulary learning. Additionally, the majority of the authors noted that motivation has been a major component in this platform because it has allowed students to experiment with different ways of learning through games. Finally, digital games in learning activities are strongly recommended.
- It was identified that the use of digital games in virtual classes is accepted by the students based on the TAM questionnaire. These tools are easy to use and useful for both teachers and students enhancing the learning of vocabulary in the English language. Furthermore, they catch the students´ attention to whom the experiment was applied because the activities were designed to look like gaming containing several elements like points, badges, and leader boards that are visual representers of achievements in games making these resources visually attractive. Therefore, the digital games allow students to complete the activities in an enjoyable way to learn new vocabulary.
- The results of the pre and post-test revealed that the use of digital games contributes significantly to the expansion of EFL vocabulary, and other

language skills like listening and reading because the majority of them change their average drastically after the treatment. Some authors support that vocabulary is originated from the necessity to communicate, undoubtedly vocabulary represents the basis of other language skills because people can communicate in an oral form to express ideas involving listening and speaking skills, and they can communicate in a written form to identify words, sentences or ideas involving reading and writing skills. Hence, the teacher should take advantage of these tools by creating their own resources to develop the four language skills.

- Digital games are enjoyable activities for the improvement of EFL vocabulary. This information might be supported by the results of the TAM questionnaire, thus, the students stated that they felt satisfied and motivated while completing the gamified activities. Thereby, the bibliography shows that gamification offers learners the opportunity to get students motivated and excited about words, and it allows them to engage in wordplay to support vocabulary development. Moreover, digital games are considered educational games which were created with the main aim to enhance the teaching and learning process.

5.2 Recommendations

- Based on the information gathered during the current study, it is suggested that the teachers open their minds to new teaching strategies supported by the new technologies, particularly digital games like quizizz, Kahoot, wordwall, baamboozle, and Nearpod to avoid the monotony of traditional classes. It is recommended that teachers create their personal and interactive resources to improve students' vocabulary, and to transform their classrooms into enjoyable places of learning for the students using digital games.
- Considering the results, and the usefulness and ease of use of digital games. It is recommended to apply digital games more frequently in the classroom because these activities are advantageous tools for teachers and students. Furthermore, as evidenced, students strongly prefer to engage in activities

on interactive, unique, intuitive, and funny platforms. Hence, digital games will contribute considerably to their learning process.

- It is recommended to carry out subsequent research to determine the effectiveness of the digital games in the teaching process, not only in the EFL vocabulary learning but also in other language skills because these games allow creating a variety of useful activities for educational purposes, especially with beginner students.
- Teachers should take advantage of these new technological teaching tools, focusing on those that allow students to be motivated during the classes to avoid the traditional strategies. So, digital games are exploding in popularity because they engage students in the teaching-learning process. Consequently, teachers should update their technological skills and select the most appropriate tools that motivate their students.

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5.4 Annexes

Annex 1: Certificate Unidad Educativa "Hermano Miguel"

UNIDAD EDUCATIVA "HERMANO MIGUEL"

MARIANISTAS

LATACUNGA - COTOPAXI

Latacunga, 23 de agosto de 2021

Señora Licenciada
Yesenia Anabel Arequipa Tandalla
Presente.

Yo, Msc. Edgar Hernán Vásquez López, CI. 0501544522, en mi calidad de Rector de la Unidad Educativa "Hermano Miguel" de la ciudad de Latacunga, a petición de la parte interesada, autorizo a la Lic. Yesenia Anabel Arequipa Tandalla con cédula de identidad 050418399-7, la aplicación de su proyecto de investigación " Digital games and EFL vocabulary learning" dirigido a estudiantes de Inglés de quinto año de EGB, a desarrollarse durante el período académico 2021-2022, con la certeza de que éste estudio contribuya al mejoramiento del vocabulario en los estudiantes y por ende al fortalecimiento del proceso de enseñanza aprendizaje del idioma Inglés, además espero que los resultados que se obtengan, me sean entregados con una copia, que serán de ayuda para tomarlas en cuenta al realizar evaluaciones internas de la Institución.

Le deseo el mejor de los éxitos en su trabajo.

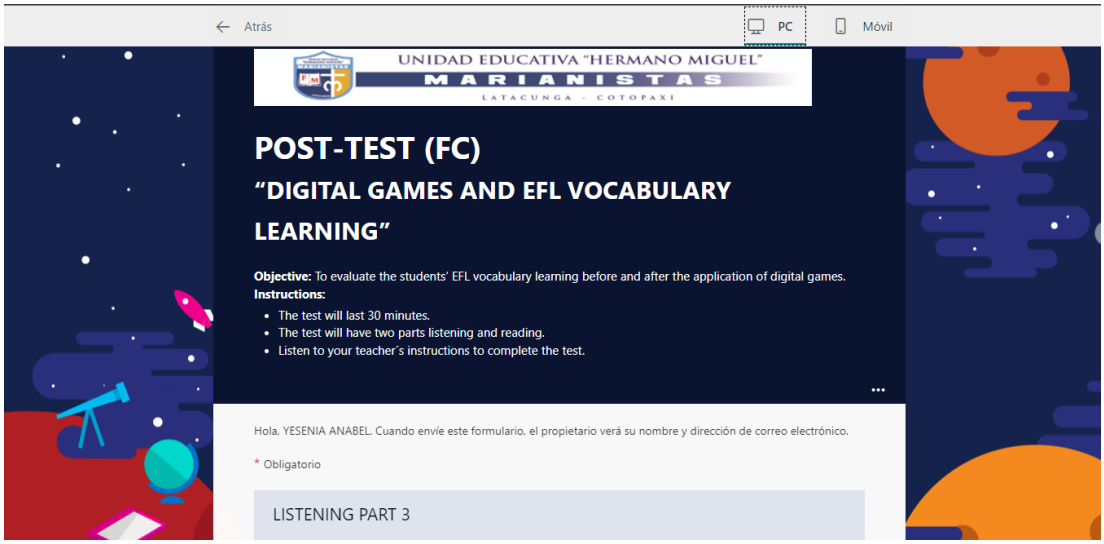
Atentamente;

Msc. Hernán Vásquez López
RECTOR

Annex 2: Pre and post-test

Cambridge A1 Movers Test

https://forms.office.com/Pages/ResponsePage.aspx?id=EZMd1SCtpU-1nk4vNkWZaCkcknOTG_tPnETcmab703VUMTJCOEdMTUVHQVJVRDMyQ0hFSTAzQzNBQS4u



Source: Cambridge Test (2018)

Author: Arequipa (2021)

Annex 3: Web 3.0 survey

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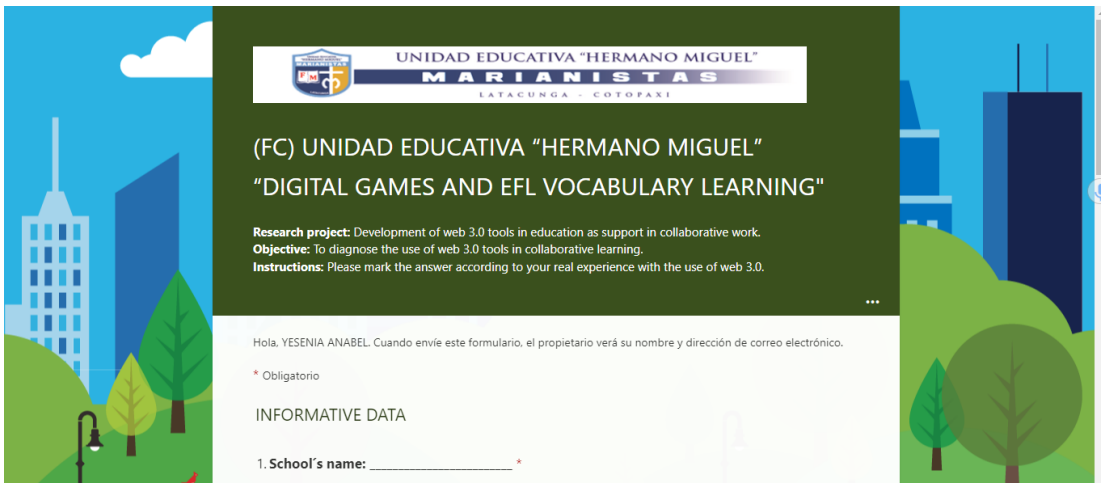

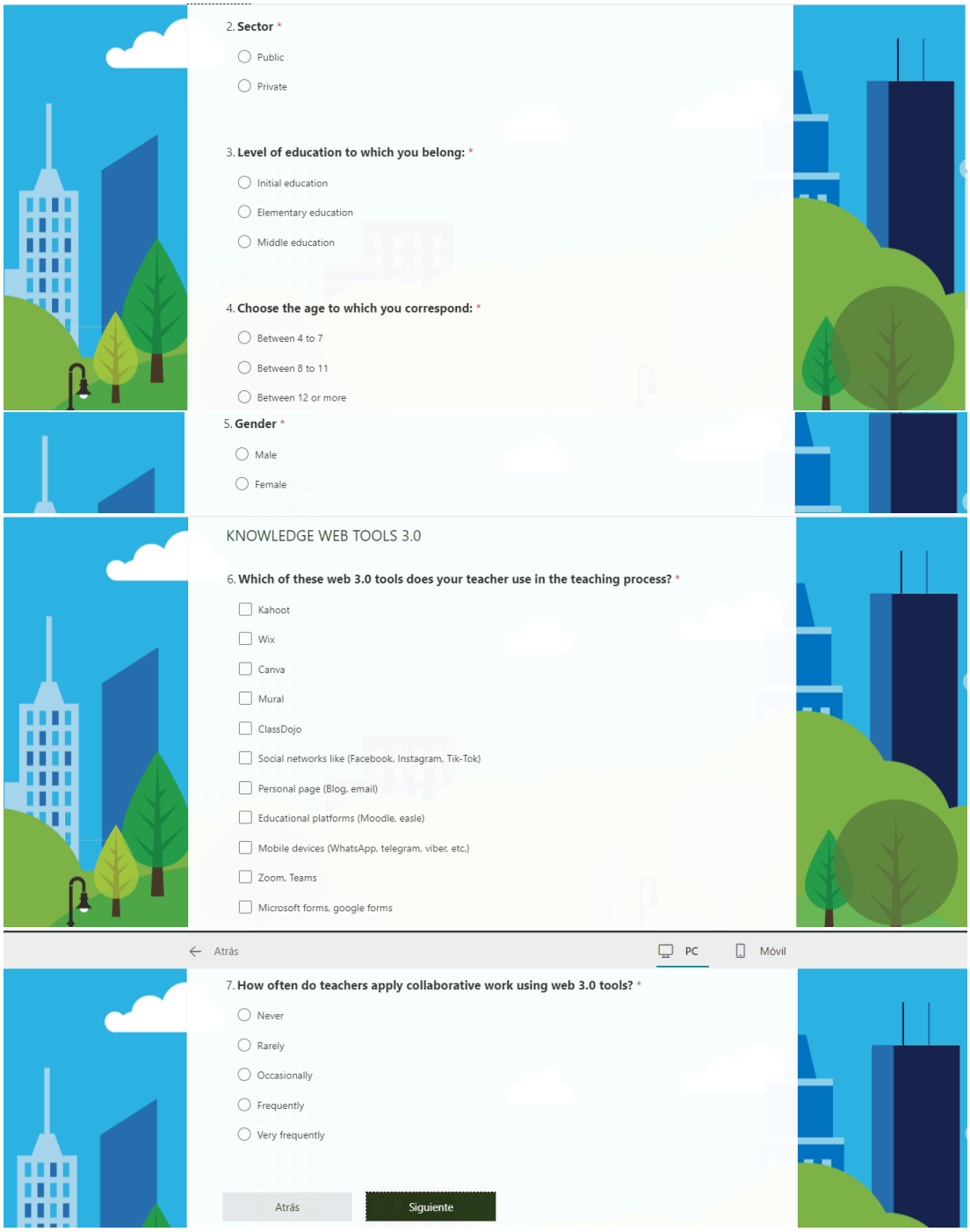

Source: Web 3.0 survey
Author: Arequipa (2021)

Annex 4: TAM questionnaire

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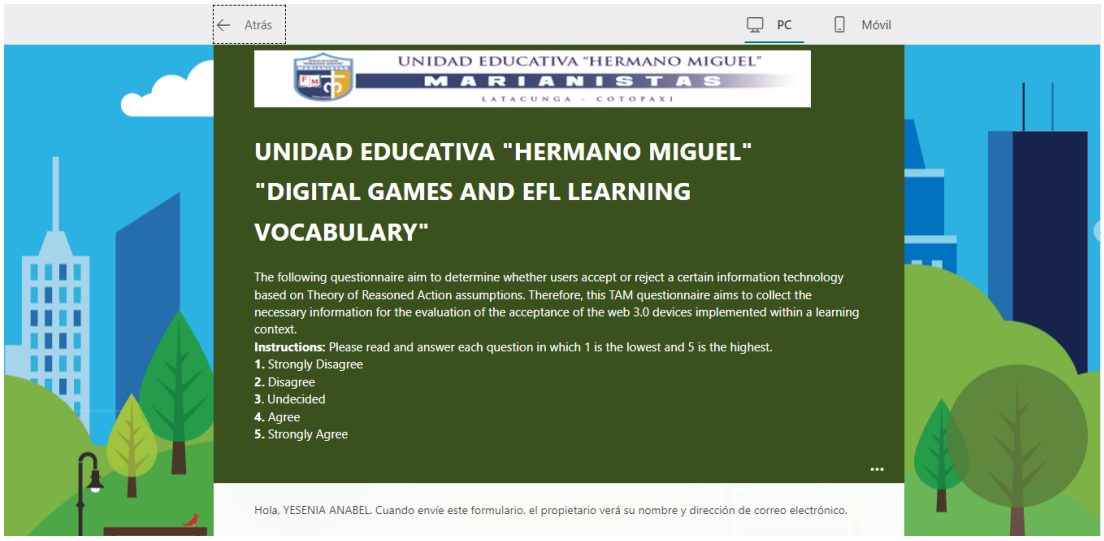
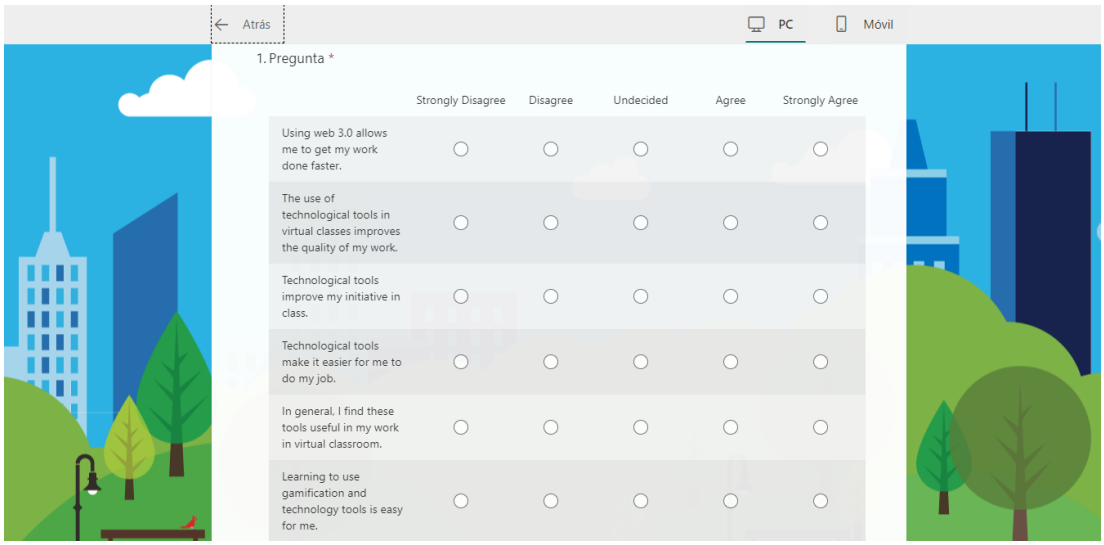
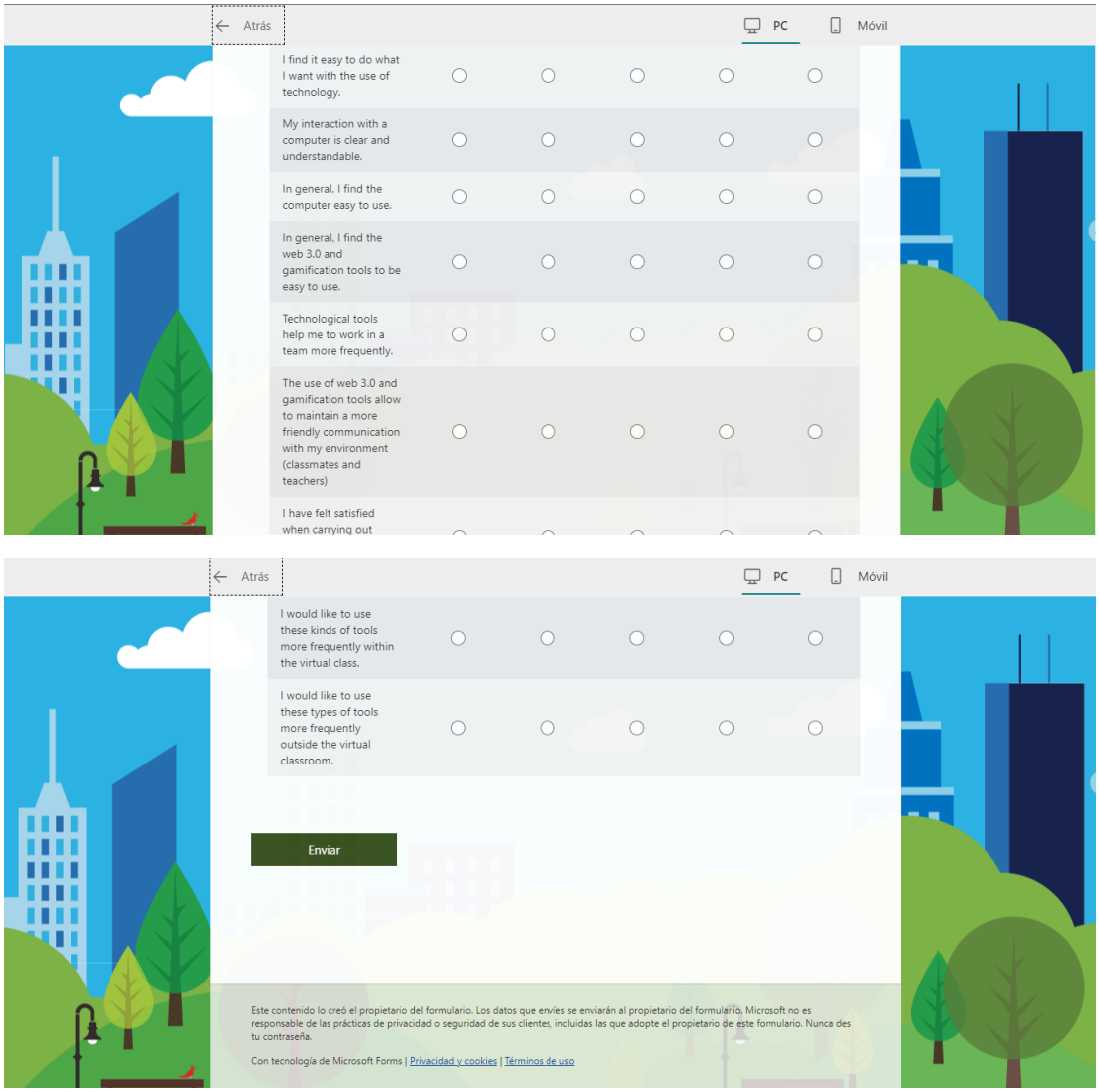


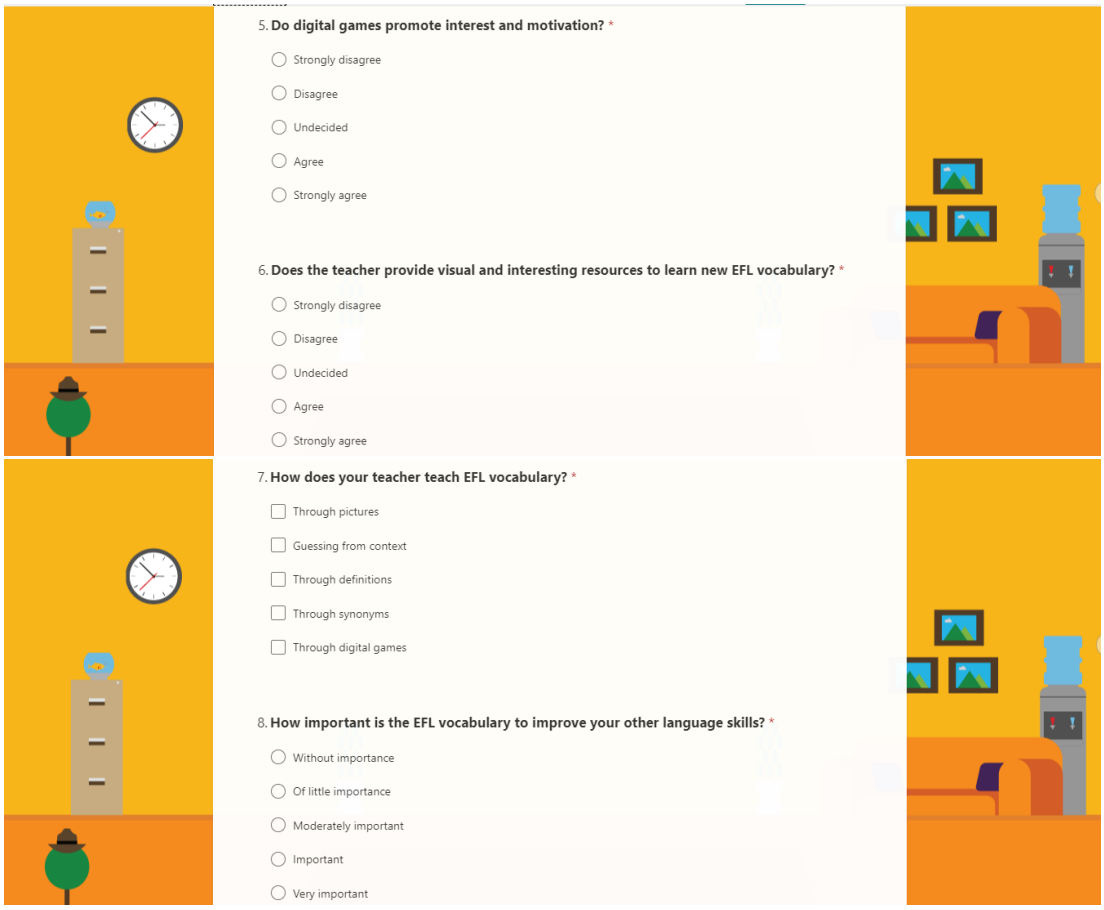




Source: TAM questionnaire
Author: Arequipa (2021)

Annex 5: Structured survey

https://forms.office.com/Pages/ResponsePage.aspx?id=EZMd1SCtpU-1nk4vNkWZaCkcknOTG_tPnETcmab703VUNUE0OFAyVE5HM01GRThTVlg4UEJDNDFHTC4u



Source: TAM questionnaire
Author: Arequipa (2021)

Annex 6: Structured survey validation

UNIVERSIDAD TÉCNICA DE AMBATO
FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN
POSGRADO
MAESTRÍA EN PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS, COHORTE 2021
***Avda. Los Chasquis y Río Payamin,* Ambato - Ecuador**

FORMATO PARA LA VALIDACIÓN DE CONTENIDO DEL INSTRUMENTO "STRUCTURED SURVEY" PERTENECIENTE A LA INVESTIGACIÓN:

"DIGITAL GAMES AND EFL VOCABULARY LEARNING"

AUTOR/A: Yesenia Anabel Arequipa Tandalla

Señale mediante un ✓, según la validación para cada pregunta:

1D- DEFICIENTE **2R- REGULAR** **3B- BUENO** **4O- ÓPTIMO**

PARÁMETROS / PREGUNTAS	Pertinencia de las preguntas del instrumento con los objetivos				Pertinencia de las preguntas del instrumento con las variables y enunciados				Calidad técnica y representatividad				Redacción y lenguaje de las preguntas			
	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O
1. Choose the digital games that you know:				✓				✓				✓				✓
2. Which of these digital games does your teacher use in the teaching process?				✓				✓				✓				✓
3. What kind of digital games does your teacher apply to teach EFL vocabulary?				✓				✓				✓				✓
4. How often do teachers apply digital games to teach EFL vocabulary?				✓				✓				✓				✓
5. Do the correct application and use of digital games promote the interest, participation, and motivation of students?				✓				✓				✓				✓
6. Does the teacher provide visual and interesting resources to learn new EFL vocabulary?				✓				✓				✓				✓
7. How does your teacher teach EFL vocabulary?				✓				✓				✓				✓
8. How important is the EFL vocabulary to improve your other language skills?				✓				✓				✓				✓

UNIVERSIDAD TÉCNICA DE AMBATO
FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN
POSGRADO
MAESTRÍA EN PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS, COHORTE 2021
***Avda. Los Chasquis y Río Payamin,* Ambato - Ecuador**

Observaciones:

_____
_____
_____
_____

WILMA ELIZABETH SUAREZ MOSQUERA

Realizado por:
Lic. Yesenia Arequipa

Validado por:
Dr Mg. Wilma Elizabeth Suárez Mosquera
CI:1802859841

UNIVERSIDAD TÉCNICA DE AMBATO
FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN
POSGRADO
MAESTRÍA EN PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS, COHORTE 2021
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FORMATO PARA LA VALIDACIÓN DE CONTENIDO DEL INSTRUMENTO "STRUCTURED SURVEY" PERTENECIENTE A LA INVESTIGACIÓN:

"DIGITAL GAMES AND EFL VOCABULARY LEARNING"

AUTOR/A: Yesenia Anabel Arequipa Tandalla

Señale mediante un ✓, según la validación para cada pregunta:

1D- DEFICIENTE **2R- REGULAR** **3B- BUENO** **4O- ÓPTIMO**

PARÁMETROS / PREGUNTAS	Pertinencia de las preguntas del instrumento con los objetivos				Pertinencia de las preguntas del instrumento con las variables y enunciados				Calidad técnica y representatividad				Redacción y lenguaje de las preguntas			
	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O	1D	2R	3B	4O
1. Choose the digital games that you know:				✓				✓				✓				✓
2. Which of these digital games does your teacher use in the teaching process?				✓				✓				✓				✓
3. What kind of digital games does your teacher apply to teach EFL vocabulary?				✓				✓				✓				✓
4. How often do teachers apply digital games to teach EFL vocabulary?				✓				✓				✓				✓
5. Do the correct application and use of digital games promote the interest, participation, and motivation of students?				✓				✓		✓				✓		
6. Does the teacher provide visual and funny resources to learn new EFL vocabulary?				✓				✓				✓				✓
7. How does your teacher teach EFL vocabulary?				✓				✓				✓				✓
8. How important is the EFL vocabulary to improve your other language skills?				✓				✓			✓				✓	

UNIVERSIDAD TÉCNICA DE AMBATO
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***Avda. Los Chasquis y Rio Payamin,* Ambato - Ecuador**

Observaciones:

Since the questionnaire is directed to students, I think that questions 5 and 8 need to be reformulated due to the technicity of the language. E.g. Do digital games promote interest and motivation?

GLORIA ISABEL ESCUDERO OROZCO

Realizado por:

Lic. Yesenia Arequipa

Validado por:

Dr. Isabel Escudero

CI:0602698904

Annex 7: Experiment design

UNIVERSIDAD TÉCNICA DE AMBATO

DIRECCIÓN DE POSGRADO

MAESTRÍA EN PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

TEMA: "DIGITAL GAMES AND EFL VOCABULARY LEARNING"

Trabajo de Investigación, previo a la obtención del Grado Académico de Magister en Pedagogía de los Idiomas Nacionales y Extranjeros

Autora: Licenciada Yesenia Anabel Arequipa Tandalla

Directora: Doctora Elsa Mayorie Chimbo Cáceres Magister

Ambato – Ecuador

2021

Table of content

Introduction

Students´ lives are impacted by technology, as it is in many other aspects of society. Thereby, gamification, also known as gamified learning has grown in popularity in EFL education, particularly the digital games are one of the most visible effects of technology in their educational context. Those games seem to be crucial to improving language learning like listening, reading, speaking, and writing which are all built on the foundation of vocabulary knowledge. Numerous research works demonstrate the gamification process and the use of digital games in many contexts, including educational contexts. Tokarieva et al. (2019) confirmed that digital games have the potential to enhance student motivation, give a more authentic learning experience, facilitate collaborative problem-solving, and promote system thinking. In the same vein, Palomino et al. (2019) mentioned that gamification and digital games´ purpose is to improve students´ experience in the training and teaching-learning process, and also to motivate them.

In order to achieve the proposed objectives of the current study that involves the use of digital games to improve EFL vocabulary learning, the Presentation, Practice, and Production is known as the PPP method was necessary to implement in the five lesson plans for students of fifth-grade of Unidad Educative "Hermano Miguel". For that, Gulo et al. (2018) had stated that the introduction to a new subject or topic using graphics, dialogues, and classroom sceneries is referred to as the presentation phase. Then, the students practice the language in one or two exercises. Finally, in the production phase, the students use the target language in conversations and to communicate in daily situations.

General objective

- Design educational digital games to promote EFL vocabulary learning.

Specific objectives

- Design lesson plans with a focus on the use of digital games for EFL vocabulary learning.
- Apply a variety of lesson plan designs in classrooms.
- Evaluate the post-test application.

SCOPE OF THE EXPERIMENT

Number of the lesson plan	Topic	Materials	Number of hours	Language skills	Activities
N.- 1	Family members and hobbies	Digital game wordwall, canva, Prezi, and padlet.	1	Listening, speaking, and vocabulary – associating words with pictures	▪ Vocabulary presentation using wordwall. ▪ Prezi presentation. ▪ Canva presentation. ▪ Padlet activity.
N.- 2	Describing pictures and given differences between them	Digital game baamboozle, Kahoot, canva, and jamboard.	1	Listening, speaking, and vocabulary – through descriptions	▪ Vocabulary presentation using baamboozle. ▪ Canva presentation. ▪ Jamboard activity. ▪ Kahoot multiple-choice activity.
N.- 3	Describing pictures through definitions	Digital game Nearpod, wordwall, padlet, and Prezi.	1	Reading, and vocabulary – associating definitions with vocabulary words.	▪ Vocabulary presentation through Nearpod. ▪ Prezi presentation. ▪ Padlet activity. ▪ Nearpod multiple-choice activity. ▪ Wordwall random wheel activity.
N.- 4	Favorite films	Digital game quizizz, wordwall, Canva, Miro, and PowerPoint.	1	Reading, and vocabulary in context	▪ Vocabulary presentation using wordwall. ▪ PowerPoint presentation. ▪ Canva presentation. ▪ Miro brainstorming. ▪ Jamboard pictures presentation.
N.- 5	Strong animals	Digital game baamboozle, wordwall, Nearpod, and AutoDraw	1	Reading, and vocabulary in context.	▪ Vocabulary presentation using baamboozle and wordwall. ▪ Nearpod slides presentation. ▪ AutoDraw activity.

Source: Lesson plans
Author: Arequipa (2021)

LESSON PLAN 1

Universidad Técnica de Ambato

Maestría en Pedagogía de los Idiomas Nacionales y Extranjeros

"DIGITAL GAMES AND EFL VOCABULARY LEARNING"

Lesson Plan 1

Arequipa Tandalla Yesenia Anabel

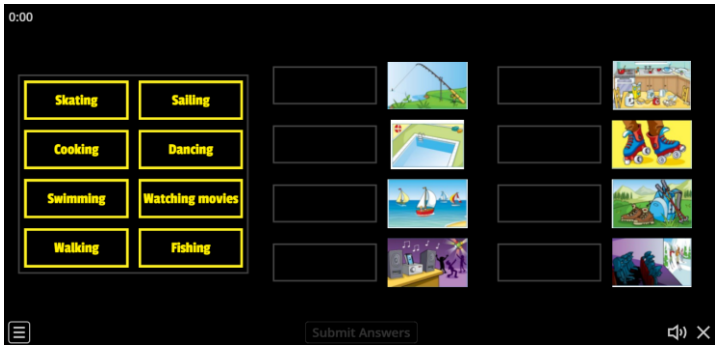
<table>
<tr><td colspan="3">LESSON PLAN 1</td></tr>
<tr><td colspan="3">Teacher’s name: Yesenia Arequipa</td></tr>
<tr><td colspan="2">Date: 13/12/2021</td><td>Time: 11:45am - 12:45 am</td></tr>
<tr><td colspan="2">Level: A1.2</td><td>Length of the first lesson: 60 mins</td></tr>
<tr><td colspan="3">Language skills: listening, speaking, and vocabulary – associating words with pictures.</td></tr>
<tr><td colspan="3">General objective:
• Students will be able to talk about hobbies using the to be verb.
Specific objectives:
• To practice vocabulary related to family members and hobbies.
• Ask and answer wh questions.
• To listen for detail to identify favorite hobbies.
• To give family members´ information.</td></tr>
<tr><td>Materials:</td><td colspan="2">Digital game wordwall, canva, Prezi, and padlet.</td></tr>
<tr><td colspan="3">Procedure:</td></tr>
<tr><td>Time:</td><td>Activities:</td><td>Materials:</td></tr>
<tr><td>20 min</td><td>PRESENTATION
Vocabulary introduction:
▪ The teacher presents a genealogical tree using Canva and introduces students to the family members. Then, the teacher creates 5 small groups and provides them a link to access a game in which students need to find in the crossword the family members‘ vocabulary.
▪ The teacher asks students to associate the vocabulary words related to hobbies with the pictures. Then, the</td><td>Link Canva:
▪ https://n9.cl/cz7fc
Family members´ game:
▪ https://wordwall.net/play/25903/083/624
Hobbies´ games:
▪ https://wordwall.net/</td></tr>
</table>

	teacher shares the link with the students to enter the game and complete the activity in the same groups.	play/18671/524/716
30 min	**PRACTICE** ▪ Then, the teacher presents some examples about the grammatical structure using to be verb to talk about hobbies through Prezi and asks students to answer some questions according to the questions they see. ▪ The teacher assigns pairs and provides them with a link in padlet. There, the students need to work together to write sentences related to hobbies using the to be verb, for instance: What is your favorite hobby? My favorite hobby is … E.g. My favorite hobby is fishing in the river. ▪ Then, the teacher presents two pictures of Katy and Peter, and she elicits students´ answers according to what they see in the pictures and write their answers in the chat box	Prezi presentation: https://prezi.com/view/aNxdBa7Wbyy63Usvddoz/ Padlet link: https://padlet.com/yeseni anabel/57qmbadakfoshm6c Link canva: ▪ https://n9.cl/cz7fc
10 min	**PRODUCTION** ▪ The teacher assigns pairs and motivates students to ask and answer questions related to their favorite hobbies and their family members´ hobbies. Student A asks the questions and student B answer the questions. Before sending them to the breakrooms, the teacher writes on the zoom board some sentence structures to help them to remember the topic like: What is your favorite hobby? My favorite hobby is…… Student A: What is your grandma´s favorite hobby? Student B: My grandma´s favorite hobby is dancing.	Link of the pictures: ▪ https://n9.cl/cz7fc

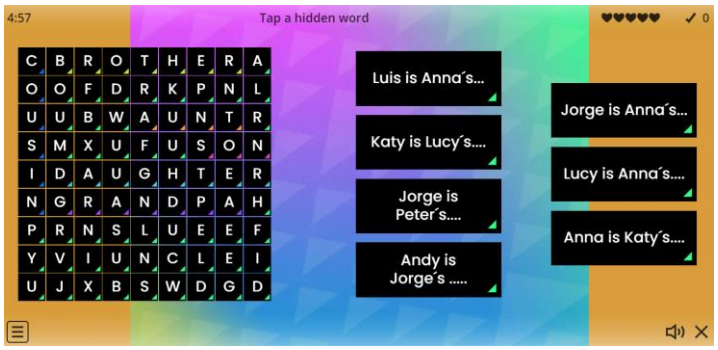
	▪ The teacher monitors the speaking activity and gives support if necessary.	

Produced by: Arequipa (2021)

Vocabulary presentation using wordwall (Annex 1)

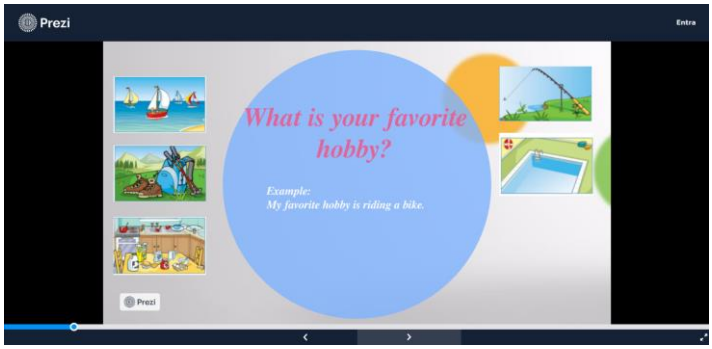


Source: Wordwall
Author: Arequipa (2021)



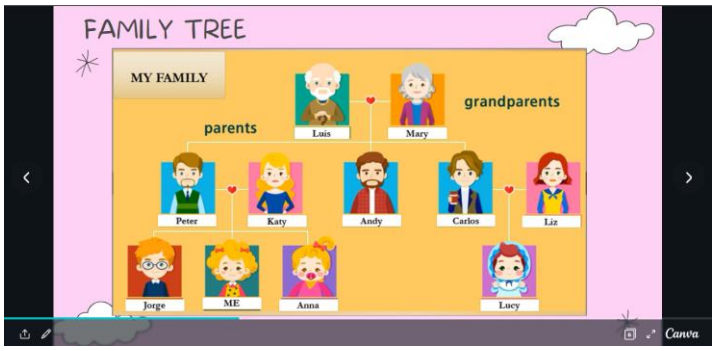
Source: Wordwall
Author: Arequipa (2021)

Prezi presentation (Annex 2)



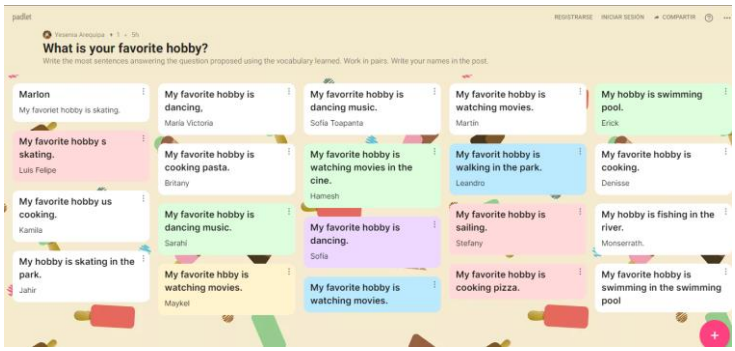
Source: Prezi
Author: Arequipa (2021)

Canva presentation (Annex 3)



Source: Canva
Author: Arequipa (2021)

Padlet activity (Annex 4)



Source: Padlet
Author: Arequipa (2021)

LESSON PLAN 2

Universidad Técnica de Ambato

Maestría en Pedagogía de los Idiomas Nacionales y Extranjeros

"DIGITAL GAMES AND EFL VOCABULARY LEARNING"

Lesson Plan 2

Arequipa Tandalla Yesenia Anabel

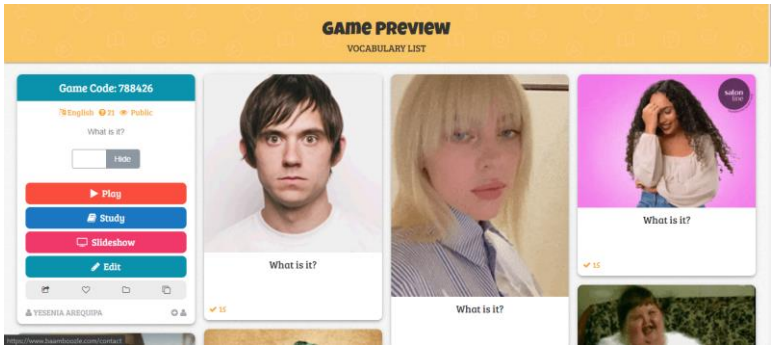
LESSON PLAN 2		
Teacher's name: Yesenia Arequipa		
Date: 14/12/2021	**Time:** 11:45 am – 12:45 am	
Level: A1.2	**Length of the first lesson:** 60 mins	
Language skills: listening, speaking, and vocabulary – through descriptions		
General objective: • Students will be able to describe pictures and give differences between them using useful phrases. **Specific objectives:** • To practice vocabulary related to the topic. • To introduce useful phrases to describe pictures. • Ask and answer wh questions. • To give students practice to describe pictures. • To give differences between two pictures.		
Materials:	Digital game baamboozle, Kahoot, canva, and jamboard.	
Procedure:		
Time:	**Activities:**	**Materials:**
15 min	**PRESENTATION** ▪ The teacher introduces a digital game on baamboozle using vocabulary words from the combined thematic vocabulary list of Cambridge such as the body and face, clothes, the world around us, daily routines, and sports and leisure. ▪ The teacher forms two main groups and explains to students that they need to work as a team to be the winners. ▪ Then, the teacher presents the game and students guess the	Baamboozle game: https://www.baamboozle.com/game/788426

	correct vocabulary word looking at the pictures.	
30 min	**PRACTICE** ▪ The teacher presents some pictures for the students using jamboard and explains to them how to describe pictures and how to differentiate pictures through brainstorming with learned vocabulary and useful phrases to describe pictures like It is about…. In that picture, I can see… On the left, I can see… On the right, it is about… In the first picture, I can see… In the second picture, I can see… ▪ After, the teacher asks questions like What is the picture about? or What can you see in the pictures? And the students can answer using the learned vocabulary and phrases like **It´s about** sharks, or **in that picture, I can** see two sharks swimming. While to differentiate pictures teacher can describe using phrases like **on the left, I can see** sharks. **On the right, it is about** fish.   ▪ Then, the teacher creates small groups of 3 students and gives them 1 slide on jamboard, they need to work as a team and use the learned vocabulary to describe the pictures and give differences between pictures. ▪ The teacher shares with the students a Kahoot link in which students need to listen to the teacher talking about some pictures and choose the correct picture that is being described.	Canva link: https://n9.cl/1snim Jamboard link: https://jamboard.google.com/d/1yCorXLUj-V70Yv43fWx0ISWNDJY8K46QwCyIRbZ-0pU/edit?usp=sharing Kahoot link: https://create.kahoot.it/share/describing-pictures/87a5db8c-1104-4b14-8057-b3b5e97e0b1f
15 min	**PRODUCTION**	

	▪ In the main room, the teacher asks for volunteers, then the teacher asks questions and presents them some pictures and the vocabulary words that they need to use in the description, for example: E.g., What can you see in the picture? Vocabulary words: fat, piano, mustache. In that picture, I can see a man. He has a mustache. He is fat. He likes playing the piano. 	Canva link: https://n9.cl/1snim

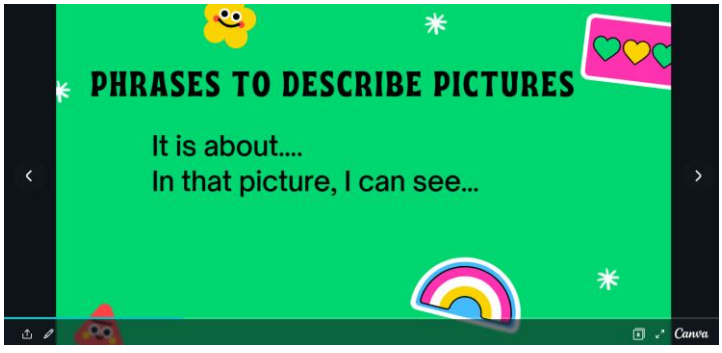
Produced by: Arequipa (2021)

Vocabulary presentation using baamboozle (Annex 1)



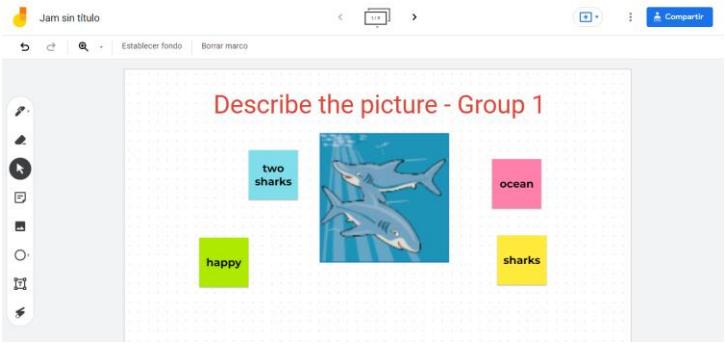
Source: Baamboozle
Author: Arequipa (2021)

Canva presentation (Annex 2)



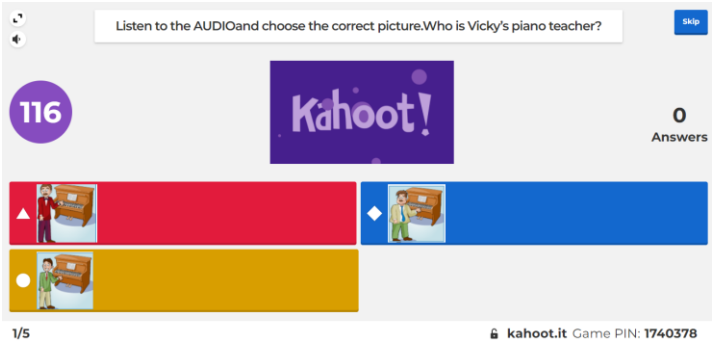
Source: Canva
Author: Arequipa (2021)

Jamboard activity (Annex 3)



Source: Jamboard
Author: Arequipa (2021)

Kahoot multiple-choice activity (Annex 4)



Source: Kahoot
Author: Arequipa (2021)

LESSON PLAN 3

Universidad Técnica de Ambato

Maestría en Pedagogía de los Idiomas Nacionales y Extranjeros

"DIGITAL GAMES AND EFL VOCABULARY LEARNING"

Lesson Plan 3

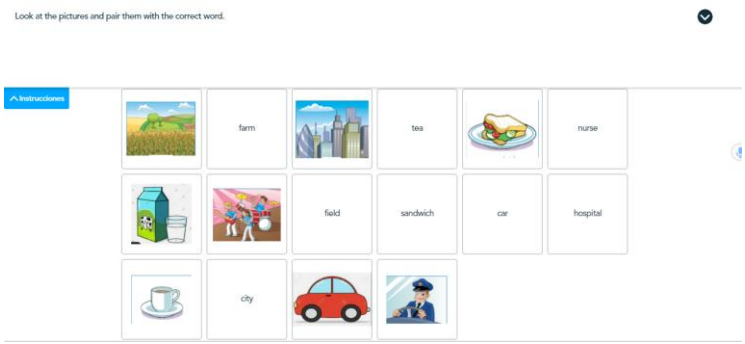
Arequipa Tandalla Yesenia Anabel

<table>
<tr><td colspan="3">LESSON PLAN 3</td></tr>
<tr><td colspan="3">Teacher's name: Yesenia Arequipa</td></tr>
<tr><td colspan="2">Date: 15/12/2021</td><td>Time: 8:45am - 9:45 am</td></tr>
<tr><td colspan="2">Level: A1.2</td><td>Length of the first lesson: 60 mins</td></tr>
<tr><td colspan="3">Language skills: reading, and vocabulary – associating definitions with vocabulary words.</td></tr>
<tr><td colspan="3">General objective:
• Students will be able to describe pictures through definitions using present simple tense.
Specific objectives:
• To give students practice in matching definitions to pictures.
• To use helpful words to comprehend the vocabulary word.
• To introduce reading activities to associate definitions and words.</td></tr>
<tr><td>Materials:</td><td colspan="2">Digital game Nearpod, wordwall, padlet, and Prezi</td></tr>
<tr><td colspan="3">Procedure:</td></tr>
<tr><td>Time:</td><td>Activities:</td><td>Materials:</td></tr>
<tr><td>15 min</td><td>PRESENTATION
▪ The teacher shares a link with students in which they need to pair the pictures with vocabulary words related to the noun, for example, library, tea, nurse, field, so on.</td><td>Nearpod link:
https://app.nearpod.com/?pin=6DDFFF7337D07D155B74C8FE95CACA17-1</td></tr>
<tr><td>30 min</td><td>PRACTICE
▪ The teacher presents to the students some definitions using the phrases to describe them in the present simple tense using Prezi tool.</td><td>Prezi link:
https://prezi.com/view/L6MCgx2RLJ3</td></tr>
</table>

	This is a place where…. You can…. here. This person…. E.g.: This person works in a hospital and helps people who are not well. ▪ Then, the teacher provides more examples and students try to guess the vocabulary word the teacher is thinking of using the helpful words to understand the definition. For example: **This is a place in the school where** you use **computers** and find **books** to take home. Answer: library ▪ Then, the teacher assigns small groups of five and asks them to think in 3 things around them and write a definition for each one in padlet. The teacher monitors the group activity in small groups. ▪ Then, the students come back to the main room and the teacher presents the padlet and reads the definitions and the students try to guess the vocabulary word that each group wrote, and the members of the group check if the word is correct giving the correct answer ▪ The teacher shares with students a link in which they need to enter the game, read the definitions carefully and choose the correct vocabulary word individually. So, the teacher provides feedback regarding the activity, remarking the correct answers to each question, and encourages students to focus on helpful words to identify the word.	BjSFNnyPv/ Padlet link: https://padlet.com/yesenianabel/ag4hf3d3tp8shpc6 Nearpod link: https://app.nearpod.com/presentation?pin=4951D21F3BE63018EE1ED0E2620ABC8F-1
15 min	**PRODUCTION** ▪ The teacher prepares a random wheel in wordwall with a list of vocabulary words, specifically nouns, and elicits them to define that words using the learned phrases and present simple tense.	Wordwall link: https://wordwall.net/resource/26223737

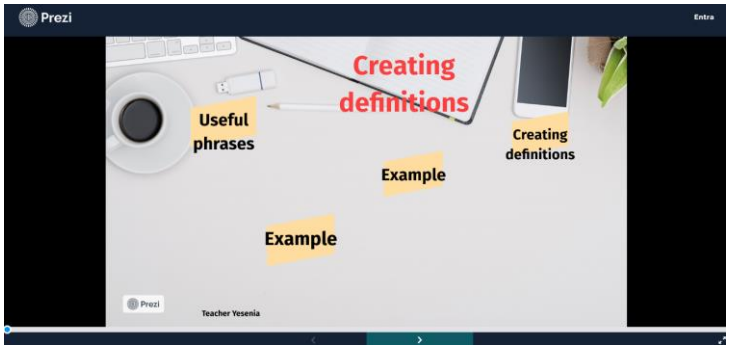
Produced by: Arequipa (2021)

Vocabulary presentation through Nearpod (Annex 1)



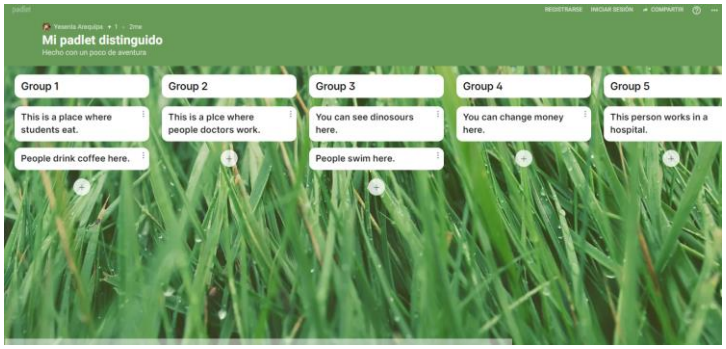
Source: Nearpod
Author: Arequipa (2021)

Prezi presentation (Annex 2)



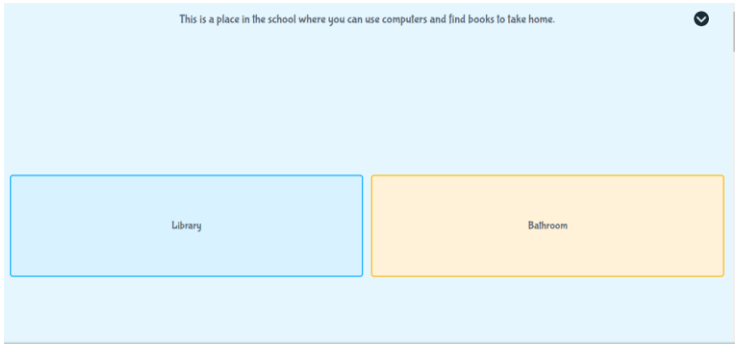
Source: Prezi
Author: Arequipa (2021)

Padlet activity (Annex 3)



Source: Padlet
Author: Arequipa (2021)

Nearpod multiple-choice activity (Annex 4)



Source: Nearpod
Author: Arequipa (2021)

Wordwall random wheel activity (Annex 5)

Source: Wordwall
Author: Arequipa (2021)

LESSON PLAN 4

Universidad Técnica de Ambato

Maestría en Pedagogía de los Idiomas Nacionales y Extranjeros

"DIGITAL GAMES AND EFL VOCABULARY LEARNING"

Lesson Plan 4

Arequipa Tandalla Yesenia Anabel

<table>
<tr><td colspan="3">LESSON PLAN 4</td></tr>
<tr><td colspan="3">Teacher’s name: Yesenia Arequipa</td></tr>
<tr><td colspan="2">Date: 16/12/2021</td><td>Time: 11:45am - 12:45 am</td></tr>
<tr><td colspan="2">Level: A1.2</td><td>Length of the first lesson: 60 mins</td></tr>
<tr><td colspan="3">Language skills: reading, and vocabulary in context.</td></tr>
<tr><td colspan="3">General objective:
Students will be able to talk about a film using short sentences in past simple tense.
Specific objectives:
To practice vocabulary words related to the story.
To introduce regular and irregular verbs in the past tense.
To practice reading for detail strategy.
Wh questions and answers to check the understanding of the text as a whole.</td></tr>
<tr><td>Materials:</td><td colspan="2">Digital game quizizz, wordwall, canva, miro, and PowerPoint.</td></tr>
<tr><td colspan="3">Procedure:</td></tr>
<tr><td>Time:</td><td>Activities:</td><td>Materials:</td></tr>
<tr><td>20 min</td><td>PRESENTATION
The teacher shares a link with students in which they need match pairs of vocabulary words and pictures that help them to understand the text.
The teacher introduces some regular and irregular verbs using PowerPoint.
Then, the teacher shares with students a link in which they need to enter and find in the crossword 10 verbs in past tense between regular and irregular that remembered from teachers´ presentation.</td><td>Wordwall link:
https://wordwall.net/play/26232/583/857
PowerPoint link:
https://n9.cl/zfmeu
Wordwall link:
https://wordwall.net/play</td></tr>
</table>

		/26234/334/223
30 min	**PRACTICE** ▪ The teacher presents to the students a text using canva based on a film called Jim and the dolphin and works following the 3 steps of reading which are: **1.** Pre-reading – Scanning strategy In that step, the teacher shares a link in which students a puzzle and they form a picture.  Then, the teacher asks students a question to introduce the text like What can you see in the picture? Then, the teacher elicits to practice scanning strategy the text and find the vocabulary words and verbs learned previously to create together a brainstorming using Miro and asks questions like: What do you think the text is about? **2.** Reading – Reading for detail The teacher provides the text through a link and presents it in the class too. Then, students need to read individually the whole text carefully and comprehend what the story is about. When they finish, the teacher uses canva to present the students some questions and assigns students in small groups. There the students discuss the possible answers to the questions. 3. post-writing – Questions and answers about the text ▪ The students come back to the main room and the teacher shares a link to the students in which they need to answer the questions that they discuss in groups.	Canva link: https://n9.cl/wu02d Miro link: https://n9.cl/9vk50

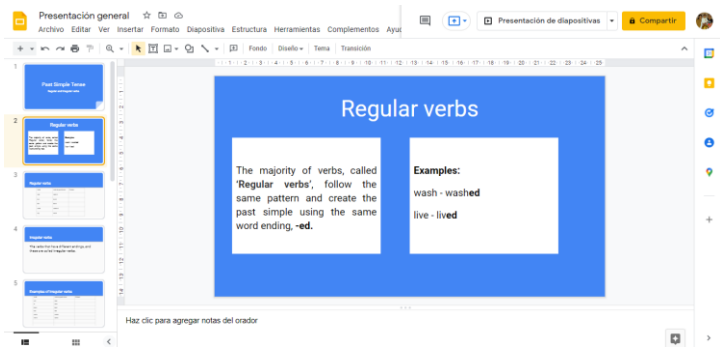
	▪ Finally, the teacher provides feedback and answers the questions together to comprehend the text in context.	
10 min	**PRODUCTION** ▪ In the end, the teacher presents some pictures using jamboard about children's films and elicits students to talk about them using the past simple tense. For example: The film is called …… It was about…..	Jamboard link: https://jamboard.google.com/d/1HZ_bgOZD11N0XA1O3U4aFYduxpCtIbZVNGUVRx-nbqY/edit?usp=sharing

Produced by: Arequipa (2021)

Vocabulary presentation using wordwall (Annex 1)

Source: Wordwall
Author: Arequipa (2021)

PowerPoint presentation (Annex 2)

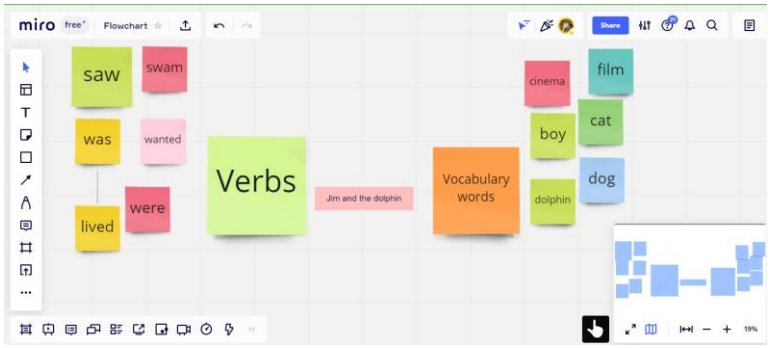


Source: PowerPoint
Author: Arequipa (2021)

Canva presentation (Annex 3)

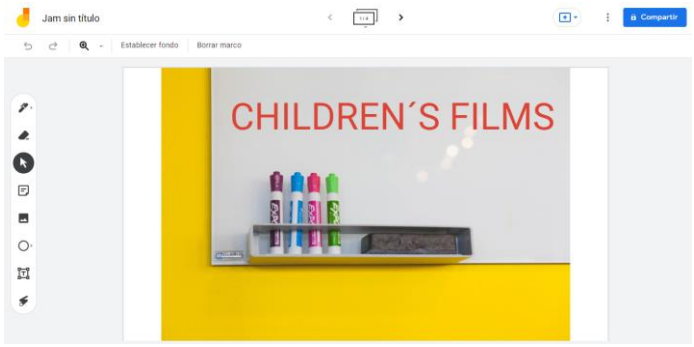
Source: Canva
Author: Arequipa (2021)

Miro brainstorming (Annex 4)



Source: Miro
Author: Arequipa (2021)

Jamboard pictures presentation (Annex 5)



Source: Jamboard
Author: Arequipa (2021)

LESSON PLAN 5

Universidad Técnica de Ambato

Maestría en Pedagogía de los Idiomas Nacionales y Extranjeros

"DIGITAL GAMES AND EFL VOCABULARY LEARNING"

Lesson Plan 5

Arequipa Tandalla Yesenia Anabel

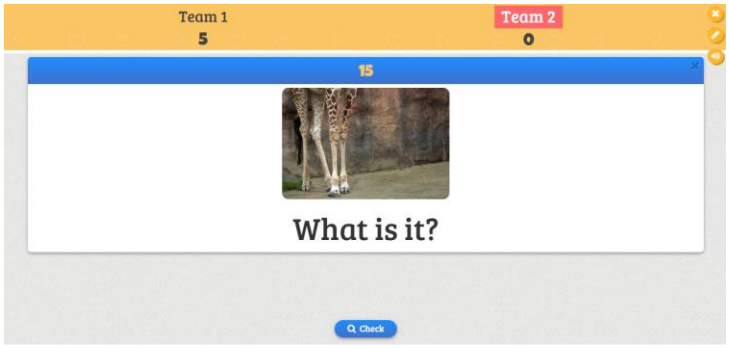
<table>
<tr><td colspan="3">LESSON PLAN 5</td></tr>
<tr><td colspan="3">Teacher’s name: Yesenia Arequipa</td></tr>
<tr><td colspan="2">Date: 17/12/2021</td><td>Time: 11:45am - 12:45 am</td></tr>
<tr><td colspan="2">Level: A1.2</td><td>Length of the first lesson: 60 mins</td></tr>
<tr><td colspan="3">Language skills: reading, and vocabulary in context.</td></tr>
<tr><td colspan="3">General objective:
Students will be able to talk about a strong animal from the story using present simple tense.
Specific objectives:
To practice vocabulary words related to animals and their characteristics.
To introduce important vocabulary words to comprehend the story.
To ask and answer Wh questions.
To practice reading for detail strategy to complete a gapped text.</td></tr>
<tr><td>Materials:</td><td colspan="2">Digital game baamboozle, wordwall, nearpod, and AutoDraw</td></tr>
<tr><td colspan="3">Procedure:</td></tr>
<tr><td>Time:</td><td>Activities:</td><td>Materials:</td></tr>
<tr><td>15 min</td><td>PRESENTATION
The teacher assigns two main groups in class and presents a game in which includes the vocabulary words related to animals and animals´ characteristics. The students need to work as a team to be winners.
The teacher presents some important vocabulary words that help students to comprehend the story using wordwall and share the link with students.</td><td>Baamboozle link:
https://www.baamboozle.com/classic/793993
Wordwall link:
https://wordwall.n</td></tr>
</table>

		et/resource/26324960
30 min	**PRACTICE** ▪ The teacher presents the students some activities in Nearpod slides which are divided into 3 steps of reading which are: **1.** Pre-reading – Scanning strategy The teacher presents the 3 animals that the story describes using Nearpod slides and asks students questions to create a brainstorming together about the animals such as: What can you see in the picture? Is this animal strong? What are some characteristics of this animal? Then, the teacher shares with students a collaborative board in Nearpod to create a brainstorming in which students write the characteristics that describe the 3 animals presented. **2.** Reading – Reading for detail The teacher shares with the students the text related to strong animals and asks them to read individually the text. When they finish, the teacher assigns groups of 5 students and asks them to answer some questions related to the story using Nearpod slides, in which each group writes their answers on the same page. **3.** Post-writing Then, the teacher asks students to complete the gaps related to the same text with the previous vocabulary presented in the presentation stage in Nearpod slides. Finally, the teacher takes a survey for the students to know what is the strongest animal according to the text using Nearpod slides to know if students understand the text.	Nearpod slides link: https://docs.google.com/presentation/d/1IgPtq83Eiw6GgrUOGam14_DrbQcA2dlyqBVOEFsuXQI/edit?usp=sharing
15 min	**PRODUCTION** The teacher draws some animals from the story using an	AutoDraw link:

	interactive board called AutoDraw. Then, the students guess what is the animal that the teacher draw and the teacher elicits students to talk about those animals using sentences in present simple tense, for example: This is a lion. The lion is strong. This is a kangaroo. The kangaroo has strong legs.	https://www.autodraw.com/share/EHHG666F3BFD

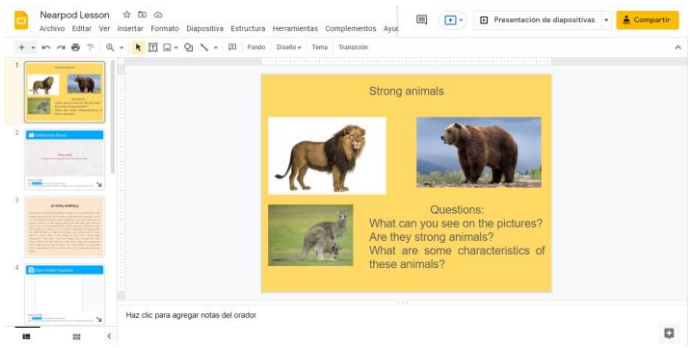
Produced by: Arequipa (2021)

Vocabulary presentation using baamboozle and wordwall (Annex 1)



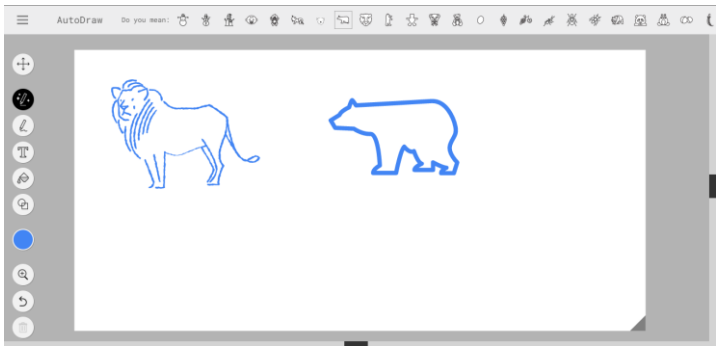
Source: Baamboozle
Author: Arequipa (2021)

Nearpod slides presentation (Annex 2)



Source: Nearpod
Author: Arequipa (2021)

AutoDraw activity (Annex 3)

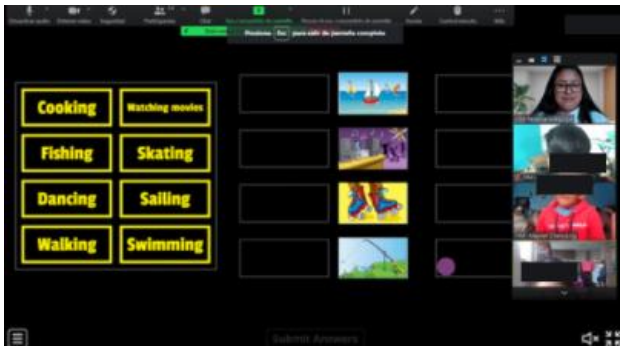


Source: AutoDraw
Author: Arequipa (2021)

Annex 8: Evidences

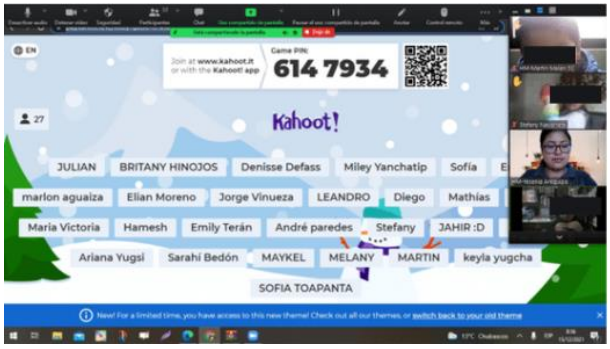
Students´ classes

Source: Activities
Author: Arequipa (2021)



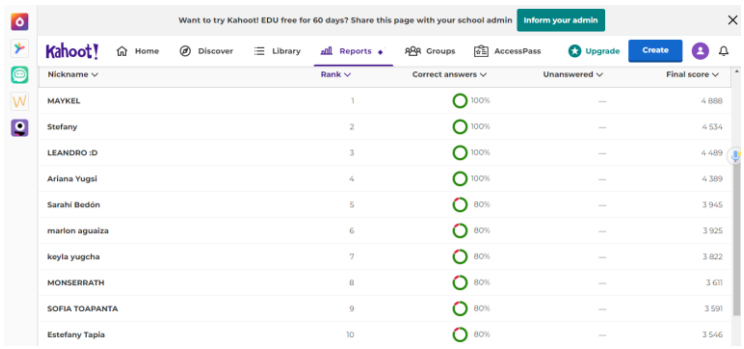
Source: Activities
Author: Arequipa (2021)

Source: Activities
Author: Arequipa (2021)



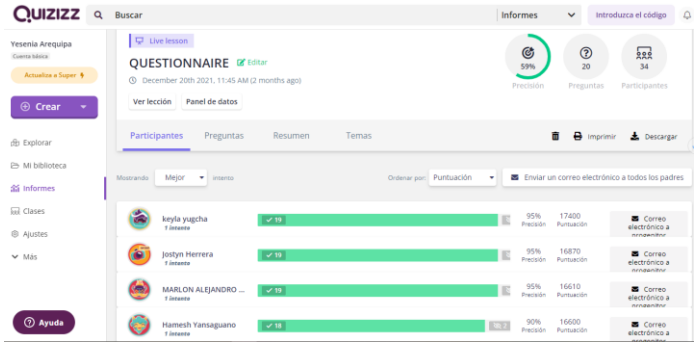
Source: Activities
Author: Arequipa (2021)

Students´ enrollment

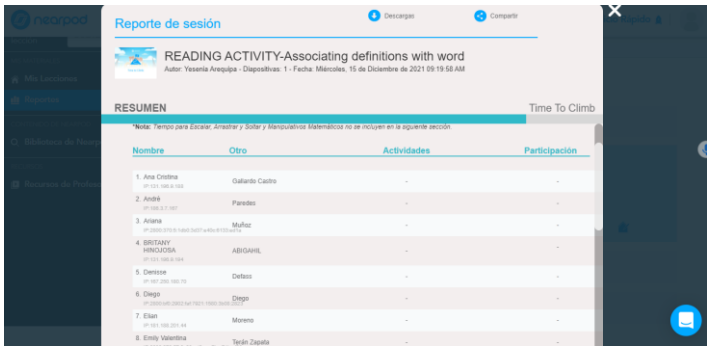


Source: Kahoot report
Author: Arequipa (2021)

Source: Wordwall report
Author: Arequipa (2021)



Source: Quizizz report
Author: Arequipa (2021)



Source: Nearpod report
Author: Arequipa (2021)

Annex 9: Urkund report