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VIRTUAL LEARNING OBJECTS FOR THE DEVELOPMENT OF ENGLISH VOCABULARY IN STUDENTS OF TENTH GRADE OF VELASCO IBARRA EDUCATIONAL UNIT, GUAMOTE CANTON, PERIOD 2023 – 2024

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Certifico que el presente trabajo de titulación denominado: **"Virtual Learning Objects for the Development of English Vocabulary in Students of Tenth Grade of Velasco Ibarra Educational Unit, Guamote Canton, Period 2023 – 2024"**, ha sido elaborado por la Licenciada Yadira Patricia Castro Molina, el mismo que ha sido orientado y revisado con el asesoramiento permanente de mi persona en calidad de Tutor. Así mismo, refrendo que dicho trabajo de titulación ha sido revisado por la herramienta antiplagio institucional; por lo que certifico que se encuentra apto para su presentación y defensa respectiva.

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Dedication

To my loved ones, friends, and upcoming endeavors.

And thus finishes a hoped dream. Now is the time to move on and pursue new goals in life.

And close this chapter which all my best and sacrifice was given.

Special dedication for me, despite the obstacles that arose, I was able to demonstrate a strong spirit and my desire to succeed as a professional person, and by being myself.

"*It always seem impossible until it's done*."-***Nelson Mandela***

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Resumen

La educación ha experimentado muchos cambios a través de los años en todos los campos y ámbitos. En el caso del idioma inglés, en relación con el auge tecnológico, se ha intentado cambiar los métodos tradicionales de enseñanza y aprendizaje adaptando novedosos recursos digitales como la utilización de Objetos de Aprendizaje Virtual (OVAS) para desarrollar distintas competencias lingüísticas, en especial el vocabulario inglés. Este informe de investigación tuvo como objetivo determinar que el uso de objetos virtuales de aprendiza ayuda al desarrollo del vocabulario inglés. Este estudio se llevó a cabo con estudiantes de décimo año de E.G. B. en la Unidad Educativa "Velasco Ibarra". En base a estas descripciones se seleccionó un diseño cuasi – experimental con un enfoque cuantitativo, siendo; de tipo aplicada por el propósito, de campo por el lugar, y transversal por el tiempo. Por efecto de esta investigación, se recolecto datos de una muestra intencional no probabilística de 56 estudiantes divididos en dos grupos que trabajaron de forma independiente el primero conocido como grupo de control (Paralelo A) conformado por 27 estudiantes y el segundo como grupo experimental (Paralelo B) con 29 estudiantes por medio de la técnica de prueba y el instrumento, un cuestionario. Los resultados indican que los usos de OVAS ayudaron a desarrollar significativamente el vocabulario de inglés. La aplicación de estas herramientas como genially, prezzi, worwall, paddle, liveworksheet y mas no solamente mejoro esta destreza, sino que también promovió mayor interacción, compromiso, sobre todo despertó el interés y motivación dentro del proceso de enseñanza y aprendizaje.

Palabras claves: *TIC, OVAS, Vocabulario, enseñanza, aprendizaje, estudiantes.*

Abstract

Education, in all fields and domains, has undergone many changes over the years. In the case of English, in connection with the technology boom, there have been attempts to change traditional teaching and learning methods by adapting new digital resources, such as virtual learning objects (VLOs), to develop various language skills, especially vocabulary. This research report aims to determine that the use of virtual learning objects helps to develop English vocabulary. The study was conducted with 10th grade students of the E.G.B. of the "Velasco Ibarra" educational unit. Based on these statements, a quasi-experimental design with a quantitative approach was chosen, with an applied type based on objective, a field type based on geographical location, and a cross-sectional type based on the time. As a result of this study, data were collected from a purposive non-probability sample of 56 students, divided into two groups, the first being a control group of 27 students (parallel A) and the second being an experimental group (parallel B) of 29 students, a test technique and a questionnaire instrument were used. The results showed that the use of the VLOs significantly improves the English vocabulary; the use of tools such as genially, prezzi, workwall, paddle, liveworksheet, etc., not only improves this skill, but also greater interaction, engagement, and most importantly, it stirred interest and motivation to learn this language.

Keywords: *ICT, VLOs, Vocabulary, teaching, learning, students.*

Introduction

During the pandemic (COVID - 19), education faced difficult situations due to this epidemic, which greatly affected the students teaching and learning process. Therefore, technology has become a powerful contraption to optimize teaching progress and renew learning in various subjects.

Virtual Learning Objects (VLOs) are digital materials designed to enhance student learning by providing interactive and engaging content. In particular, English vocabulary learning from VLOs provides learners with an engaging environment to practice and expand their lexis. These objects include various multimedia elements such as interactive games, videos, simulations and quizzes. They are often designed to target specific vocabulary such as everyday objects, animals, food or emotions. With engaging pictures, audio clips and interactive exercises, VLOs aim to make vocabulary more enjoyable and effective for learners.

For all the above reasons, learning English through VLO allows teachers to teach quickly and affordably, giving students the opportunity to learn effectively and improve different skills/sub-skills in a creative way; However, it is easy to notice how students still show problems when using English, especially when they do not know the vocabulary to express and develop the different English skills.

The following research was designed thinking about the need to find an answer that helps tenth grade students overcome the difficulties they face in each English lesson when they need to use vocabulary for producing the main language skills. In an attempt to find a solution to this problem, the idea of using Virtual Learning Objects arose as a technological strategy focuses on the development of the English Vocabulary offering several advantages like learners can explore and practice words on their own as well as students identify and

correct mistakes in real time. This feedback mechanism, gamified features, and modern digital generation encourage learners to actively engage with the content and increase their motivation to practice the acquired English vocabulary in different activities, skills and daily life.

This work is made up of five chapters that are unfold as follows:

Chapter I: It makes mention of Referential Framework which provides information about: the thesis theme, researched background, the issue framing, the problem articulation, general and specific objectives.

Chapter II: Theoretical Framework is connected with the theory related to VLOs, vocabulary and the views of some authors that sustenance the investigation.

Chapter III: It comprehends facts of the scientific method used in the development of this study. It also involved the types of investigation that were used: Scientific, applied, quantitative and transversal. Another facet of this stage is that the research design describes about the submission of the activities, the population and sample, data collection, techniques and the instruments for data collection with the corresponding table, graph, analysis and interpretation.

Chapter IV: It ascribes to the analysis and interpretation of the findings after applying the English Vocabulary Test to both independent groups. The hypothesis verification can also be found in this chapter.

Chapter V: It includes conclusions and recommendations.

Chapter VI: This part includes the proposal of the research, the same that consists on designing an online platform with VLOs for Velasco Ibarra School teachers where they will support their lessons for the development of students' English vocabulary.

Finally, relevant annexes were added at the end of the study after Chapter VI.

Chapter I

Generalities

1.1 Problem Statement

Virtual Learning objects (VLOs) are digital materials (videos, websites, interactive tutorials, activities) with defined educational value that can be functional in distinct byways to enhance teaching and learning (Kowalik, 2024). A VLO can be presented in different formats and have a number of features, becoming a strategic support for learning in any educational area, in this case English.

The knowledge gap about the usage of virtual learning objects, as well as the benefits that they generate, result in teachers having a limited use of virtual tools when teaching their classes, actions that become unfavorable to students because the planned methods are outdated and deficient, causing ineffective results in the language learning process.

Another factor is the inadequate technological accompaniment, since there is no support from someone specialized such as the ICT teacher, it causes conformism both in the teacher, by denying the opportunity to apply a constructivist methodology based on the VLO, and in the students when working unmotivated.

Within the educational field after the declaration of a health emergency by COVID - 19 worldwide, a large part of the educational institutions had adopted, in the face of the crisis caused, the suspension of classes, in addition to guaranteeing continuity, they had proposed the application of a hybrid educational model in which they had required great changes such as the use of virtual learning objects, which has also led to some effects such as absenteeism, delays in content and, above all, school dropouts, because it had been hit hard, not only in what health, but in the social, political, economic and educational.

1.1.1 Problem Formulation

How does the use of Virtual Learning Objects influence on the development of English vocabulary of tenth-grade students at the Velasco Ibarra Educational Unit?

1.2 Justification

It is transcendental to research technological resources that facilitate the learning process for students because there are several online didactic materials that they can be applied to develop English vocabulary and strengthen students' motivation, such as Virtual Learning Objects that guide students with predisposition activities, tutorials, exposure, practical exercises, videos and games, which are essential to promote communication and understanding of a second language.

It is important to carry out this study on this subject, to generate an eloquent change in educational actors, both administrative, teachers, students and undoubtedly parents, who are committed to education. It is also transformative within the educational field, because the use of virtual learning objects as digital supplies can be taken advantage for significant learning experiences in a variety of content, as well as the teaching is supported by different competences, methodology and resources, in this case it seeks to achieve educational objectives to develop the linguistic skill (vocabulary) with the assistance of virtual media.

This investigative work is aimed at students and teachers of Velasco Ibarra Educational Unit, because a useful alternative is proposed to be used in the development of English vocabulary in the classroom

The research of an applied nature is feasible to execute, because it is intended to create educational processes with appropriate digital resources in the development of English vocabulary using technological instruments that arouse curiosity in students.

1.3 Objetives

1.3.1 General Objective

- To determine that the use of virtual learning objects help to develop English vocabulary in students of tenth grades of Velasco Ibarra Educational Unit, Guamote Canton, period 2022 – 2023.

1.3.2 Specific Objectives

- To diagnose the knowledge of English vocabulary in students of tenth grade of the Velasco Ibarra Educational Unit, Guamote Canton, period 2023 - 2024.
- To select the best virtual learning objects for the development of English vocabulary in students of tenth grade of the Velasco Ibarra Educational Unit, Guamote Canton, period 2023 - 2024.
- To apply the use of virtual learning objects for the development of English vocabulary in students of tenth grade of the Velasco Ibarra Educational Unit, Guamote Canton, period 2023 - 2024.
- To evaluate the students' knowledge of English vocabulary after the use of virtual learning objects of tenth grade of the Velasco Ibarra Educational Unit, Guamote Canton, period 2023 - 2024.
- Design of an online platform with virtual learning objects that support the teaching and learning process for the development of students' English vocabulary.

Chapter II

State of the Art and Practice

2.1 Research Background

A search was carried out in the library archive of the National University of Chimborazo in the Faculty of Education, Human Sciences and Technologies. As a result, no research similar to this current topic was found. So It was made another search on the internet for supporting and developing this work.

David & Aguilar-Cruz (2023) investigated the following theme "**Designing and assessing virtual learning objects to foster English for specific purposes in higher education"** in which Four Virtual Learning Objects (VLOs) were designed to integrate English for Specific Purposes (ESP) at a public university in Colombia. Each VLO consisted of a series of Virtual Learning Scenarios (VLS), including vocabulary, a set of activities related to six language skills (Listening Comprehension, Oral Interaction, Oral Expression, Reading Comprehension, Writing Expression, Writing Interaction) and an assessment and feedback section. The impact of the VLO on students' perceptions of their progress was measured using intake and exam surveys consisting of 5-point Likert scales, multiple-choice and open-ended questions to a population of 139 students enrolled in the University English Courses (UEC) and five teachers' participation. The results showed that students' perception of VLS was positive, as each VLO was innovative and inspired learning strategies.

In addition, each VLO amended students' listening and speaking competencies. Therefore, the researchers recommend that teachers designing and implementing VLOs should emphasis on guaranteeing that students acquire the necessary knowledge and skills they need in their specific available disciplines.

Diettes (2022) carried out the following study titled **"Creation of virtual learning objects for the development of technological skills and the learning of English as a foreign language"** as a retort to the deficient of e - skills and poor performance in EFL among high school students from public institute in Bucaramanga, Colombia.

This practical research explored secondary school students' views on how devising virtual learning objects in the classroom can help them evolve their ICT skills while mastering the English language acquisition. Data were collected through direct observation and semi-structured interviews. Data crunching substantiated that students learn better English language and perform ICT skills through the invention of virtual learning objects. Results imply a necessity to remake technology-related curricula and develop enduring education training to promote the custom of certain elements.

Other research work was conducted by Martínez Ortiz (2022) with the title **"Video as a strategy for teaching English vocabulary"** in which describes how videos have a significant impact on education since they develop skills and abilities that allow the acquisition of new vocabulary considered relevant for learning the English language.

The purpose of this research was to scrutinize the use of video as a didactic tool to improve the acquisition of vocabulary in the students of Unidad Educativa "Juan de Velasco" of Segundo de Bachillerato "A", in the Riobamba city of Chimborazo province, during the academic period 2021-2022. It had qualitative and transversal design, bibliographic; at a descriptive, exploratory level. The population was conformed of 32 students. The methods profit were direct observation and questionnaires. Data was gathered using an observation guide and questionnaire as instruments to obtain the results described below.

In short, video is a prominent contrivance for scholastic process because it upgrades skills that produce English acquisition. In this vein, the utilization of teaching videos helps to further improve students' grasp.

Al-Jarf (2022) looked the research article into **"Online Vocabulary Tasks for Engaging and Motivating EFL College Students in Distance Learning During the Pandemic and Post-pandemic"** where edification vocabulary has been considered one of the mayor problems for EFL instructor and students. Due to the Covid-19 Pandemic, all institutions had been switched to in-line education from home since March 2020. A survey of university students and professors in Saudi Arabia revealed a deficiency of student interest in online teaching because there had not been adaptations in university curricula so this study proposed a variety of cyber words activities and technologies required as new modes of teaching and learning such as mobile-based applications viz Vocup, Quizlet, Quizizz, game-based mobile apps, Saving Alice, Duolingo, Kahoot, vocabulary flashcards, mobile audiobooks, collaborative mobile ebook reading; podcasts etc. To engage, motivate and facilitate interaction between students and teachers in distance learning.

The investigated data showed that online vocabulary tasks can be done separately, in duos or in small groups, being very useful for changing traditional vocabulary teaching techniques and facilitating some solutions to deal with this problem.

After an empirical observation carried out in tenth grades of the Velasco Ibarra Educational Unit, it was evidenced that the institution has the adequate virtual instructional tools and resources, but there exists poor knowledge of the virtual learning objects (VLO) that strengthen the English language. Faced with this problem, the need arises to investigate the wide range of digital resources that VLOs help to improve English vocabulary.

2.2 Legal Framework

This research report is based on the Republic of Ecuador Constitution (2008) which declares some educational articles:

Art. 26.- Education concerns lifelong human right and an unavoidable and obligatory responsibility of the nation. Education is a primacy space of public policymaking and state investment, a guarantee of equality and social inclusion, and an essential condition for a prosperous life. People, relatives, and community have the right and responsibility to contribute in education.

Art. 27.- Education should stay human being -centered and assurance integral people development within a framework of respect for human rights, a sustainable environment and democracy. Education should be partaking, enforced, intercultural, self-governing, inclusive, of high quality and humane. It should indorse gender equality, impartiality, harmony and peace. It should stimulate the development of dissimilar capacities, arts, sports, individual and community initiatives, and the ability and capacity to create and work.

Art. 28.- Education must be promoted for the common good, not for the individual benefits Universal access, continuity, mobility, and graduation without discrimination must be guaranteed and compulsory attendance at primary, basic, secondary or equivalent education must be assurance. People, communities, and everyone must have the right to participate in a society of intercultural exchange and learning. The State fosters intercultural dialogue in all its aspects.

Learning transpires within and outside the school system. Free education should be worldwide and worldly at all levels and free of charge up to the third level of tertiary education post-secondary undergraduate education.

Art. 385.- Among the background of concerning for the background, nature, life, culture and autonomy, the eventual goals of the national system of science, technology, innovation, and ancestral wisdom are:

1. To produce, adjust, and spread scientific and technological knowledge;

2. To renovate, fortify and upgrade ancestral wisdom;

3. To change technologies and inventions that stimulate national production, raise productivity and efficiency, improve the quality of life and contribution to the achievement of the good way of living.

The law has ensured the validity of human rights, the fundamental freedom of women and men, and social security in all aspects. (Republic of Ecuador Constitution, 2008)

In addition, the next articles as stated in the Reform of the Organic Law of Intercultural Education submitted by Ministry of Education (2021):

Art. 2.1 Guiding principles of Education. - Item "a" about Universal access to Education in which it is stipulated Universal, inclusive and equitable access is guaranteed to good education; durability, flexibility and achievement of the training cycle quality for teenagers, adolescents and young people, sponsoring occasions for learning for all during life without any type of discrimination and exclusion.

Art.2.4 Principles of Educational Management. - In compliance with the right to education, the State will ensure the following principles:

d. **Inter-learning and multi-learning:** The culture, art, sport, environmental sustainability, access to information and its technologies communication and knowledge technologies are considered as instrument to boost human capabilities for levels of personal and collective development.

Art. 7. Rights. - Learners have the following rights:

a. Be central enter in the teaching and learning process;

b. Obtain comprehensive and technical training that offers to the full development of their disposition, aptitudes and abilities, valuing their rights, self-determinations fundamentals and supporting gender equality, indiscrimination, valuing diversities, attention, independence and collaboration;

Art. 8.- Obligations and Responsibilities. - The following obligations and responsibilities must be fulfilled by students:

a. Obey the rules corresponding to the form of education and comply with the planned academic educational activities, duties, responsibilities and requirements rising from the teaching and learning process. However, except in sensitive situations where flexible mechanisms are allowed;

b. Participate in continuous assessment over inner and outside routes in order to legalize the excellence of teaching and peer learning.

Art.10. Rights. - Public sector teachers have the following rights:

a. Professional development, training, updating of pedagogical doctrine and methodological processes, continuing education, pedagogical development and academic learning at all levels and methods are at their service, according to their needs and the needs of the education system. It is the same as state education, i.e. education financed by the state.

Art. 11 Obligations. - Teachers have the following responsibilities**:**

b. Be fundamental actors in a significant, worth and warm education with the students in their charge;

i. Bring support and pedagogical monitoring to students, to overcome the gap and difficulties in learning and in the development of skills, abilities, skills and abilities.

2.3 Theoretical Framework

2.3.1 Information and Communication Technology (ICT)

Information and communication technology (ICT) has developed into a part of everyday life characterized by increasing globalization. Applications of technology are being used in nearly every aspect of human existence, and their significance is growing. Information and communications technologies, abbreviated as “ICT”, are defined by different authors as:

Information and communication technology includes resources such as virtual learning objects, which become multimedia learning environments for the introduction of lessons more interesting and less monotonous, so that students can easily assimilate them through visual forms, images, videos, interactive activities, text and audio. (Tamara et al., 2024)

ICT stands for "information and communication technology," and it is a subfield of "science and technology" technological, pedagogical, content, and knowledge model (IPTEK), which is an umbrella term for science and technology in general. (Pasaribu et al., 2023, p.48)

“Information and communication technologies (ICTs) are the tools that allow knowledge to be distributed and used”. (Escorcia Guzman et al., 2022, p.645)

The authors claim that opportunities offered by ICT, or information and communications technologies, include various hardware, software, network, and media components that enable modern computing through the assemblage, storing, assimilation, communication, and display of facts (speech, figures, text, and image), together with different facilities.

2.3.2 ICT Characteristics

Information and Communication Technology is seen as a transformative tool in human life, so teachers need to understand its key features to effectively utilize its benefits in supporting their teaching with the required resources. According to Jain (2023), remarks the following:

Accessibility: ICT has increased accessibility to information, allowing people worldwide to access a plethora of data and resources through the internet and mobile devices.

Connectivity: ICT enables people to communicate and collaborate across different locations, making it possible to share information instantly regardless of where individuals are located.

Speed and Efficiency: ICT tools and systems improve productivity and decision-making by enabling fast processing and dissemination of information

Interactivity: Various digital platforms facilitated by ICT promote interactivity and user engagement, such as mass media, websites, and applications.

Automation: Daily activities are made more effective through automation and computerized form of ICT, reducing the need for manpower.

Multimedia Capabilities: The multimedia context together with photographs, audios and videos are supported in the conception and operation of ICT resources.

Data Management: Data set, stowage, and examination are key components of ICT for deriving understandings and making conscious choices.

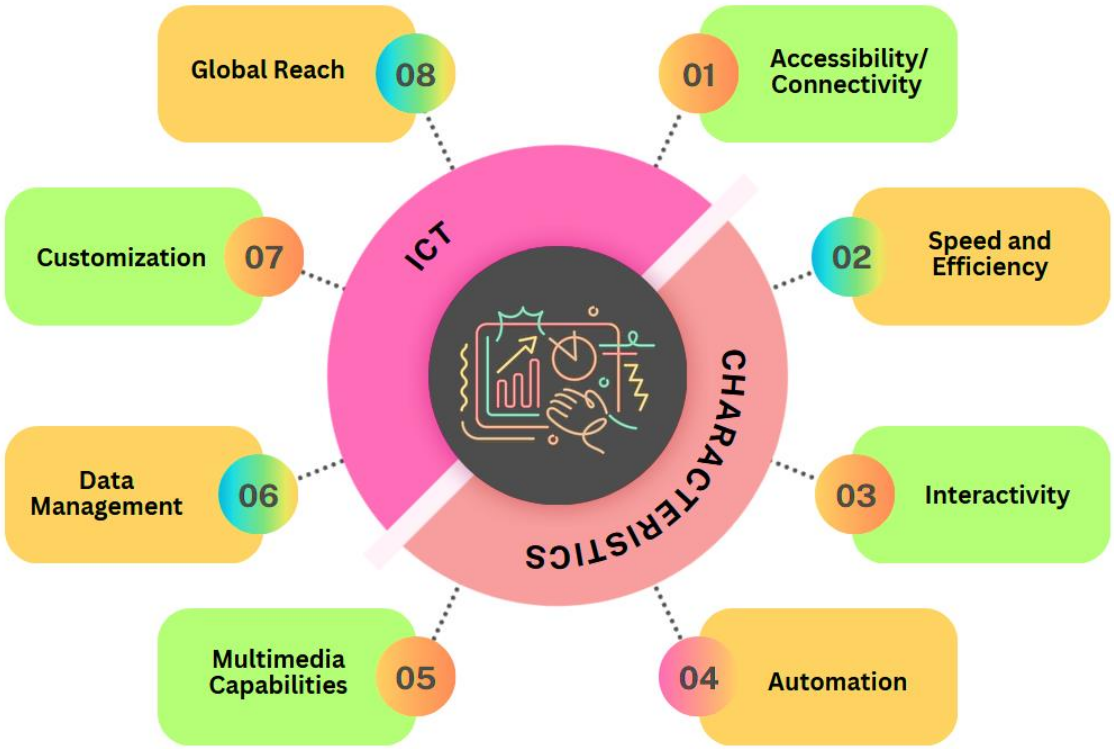
Customization: ICT mechanisms can be customized to meet individual and organizational prerequisites, letting users to familiarize technology accordingly.

Global Reach: ICT eliminates geographical barriers, allowing organizations to reach a global audience and impacting business, education, and communication significantly.

Based on mentioned above by the author, this graphic organizer is made where they are summarized in this way:

Graphic 1

ICT characteristics



Nota. It briefly shows the characteristics of ICT. Source: Author's preparation.

2.3.3 Importance of ICT in Education

The use of ICT in education has the prospective to greatly improve the standard of learning experiences for everybody. ICT in education defines as the use of information media to recover, enable, and exploit the content in tuition. ICT integration into the

educational system is crucial for changing teaching and learning methodologies and empowering students to gain and use the 21st century skills they'll need in the digital age. The education of the future depends on two ICT basics, multimedia and internet, being commanding to efficaciously combine them into the formal syllabus. Some Institutes use a collection of ICT tools in their curricula to create, communicate, store, dispense, and manage material. Educational units may have been the first to develop many proposals that address this issue taking into account updating trends, especially the Internet to generate opportunities, platforms and advantages that have to do with education. Technology practice in learning is important, but also in instruction. As Chandra et al., (2024) suggest, the integration of ICT has become a crucial component of the educational process, allowing for increased interactivity in exercises, promoting a transition from teacher and student-focused instruction, and empowering students to engage in information processing. Furthermore, ICT enables educators to stimulate students' critical thinking and comprehension by granting them swift and effortless entry to up-to-date and comprehensive data.

The integration of ICT in the classroom permits teachers to adapt their teaching techniques and materials, as technology allows for more creative, engaging, and authentic learning experiences. Despite the challenges that come with changes in teaching classes, ICT is seen as a tool to overwhelmed these difficulties. ICT in education acts as a catalyst for addressing difficulties in teaching and learning competitiveness. Serving as agents of update, ICT helps to facilitate adjustments in teaching methods, content, quality, and quantity, ultimately reducing the teacher's workload. That is to say, teachers can design and deliver interactive lessons that unite ICT, and the most common forms of applying ICT in the learning process recommended by Minamatov & Nasirdinova Qizi (2022) are:

Information technology can be applied at various points throughout a lesson, such as developing presentations, utilizing interactive whiteboards, accessing online resources, managing curricula, addressing copyright concerns, and more.

- Independent learning without teacher involvement;
- Make use of supplementary materials in a limited capacity;
- Incorporation of diagnostic and assessment tools;
- Completion of autonomous and innovative assignments at home;
- Integration of software simulating experiments and lab activities;
- Incorporation of educational games and entertainment software;
- Manipulate information and reference software.

According to this educational approach, using information technology in the classroom and extracurricular activities enhances the creative abilities of both teachers and students, sparks their interest in a variety of subjects, and motivates them to take on more challenging topics, all of which will result in greater mastery.

2.3.4 The Use of ICT for English Language Teaching and Learning

Modern technology has brought about many beneficial educational opportunities, especially for those studying English as a foreign language (EFL). Information and communication technology (ICT) incorporation into English language instruction may help learners improve their language proficiency. Since technological advancements, EFL teachers have been able to include relevant outside language experiences into their lessons and have freely used real English language learning materials and resources.

> Sana & Rachamalla (2022) stablish that the word 'ICT' includes any communication device such as computer, mobile phones, radio, and television and satellite system. It has to do with the Internet facilities. Now, the role and use of technology as a tool for teaching of the English language is increasing as educators have understood its ability to create both independent and collaborative learning environment in which students can learn English with much ease. (p.22)

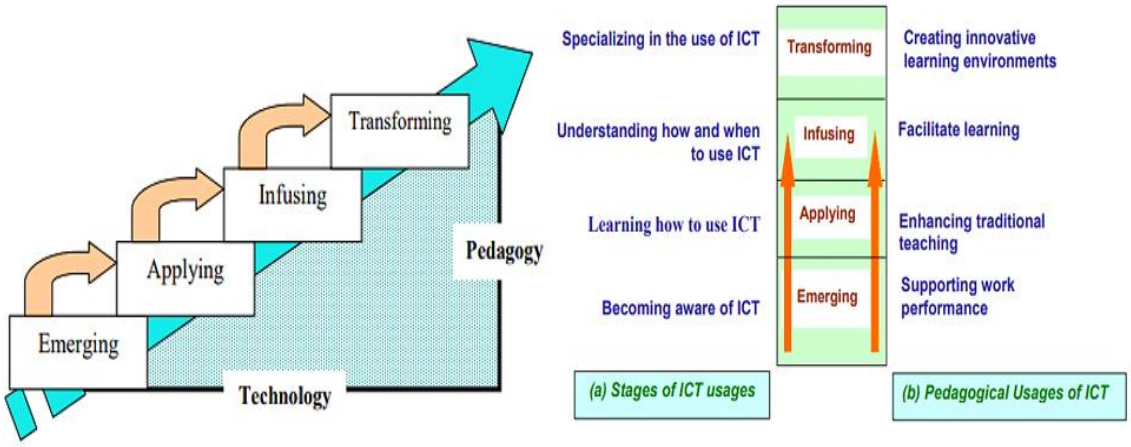
Therefore, it could be argued that integrating ICT into the teaching and learning process is essential, and that educators are expected to be creative and passionate about the process of teaching and learning. It is imperative that educators consider the use of technology in the classroom. Pasaribu et al., (2023), "ICT can make education more flexible so students can learn anytime, anyplace, affecting school instruction" (p.50). The current demands of society necessitate the use of processors and the internet in the teaching and learning process to develop the requisite English language skills. This is achieved through ICT such as videocassettes, television, and hypermedia computer software, which incorporate text, sound, colorful moving images, interactive radio with sounds, songs, comics, etc. These tools can offer stimulating and genuine content that captivates students.

Next, it is shown in this chart the Stages of ICT development as a new way of approaching teaching and learning situation with specialized ICT tools and is linked with the transforming stage in the ICT development model. (Majumdar, s. f.).

In this way, Majumdar (s. f.) points out use of ICT in education proceeds in four broad stages that may be conceived as a series of steps as seen in the graphic 2.

Graphic 2

Stages and model of ICT



Nota. Mapping model to follow in ICT process. Source: Majumdar.

The First Emerging Stage refers to the beginning of computing infrastructure where principals and instructors just initial to discover the options of using ICT adding to the curriculum. Second Applying Stage signifies that administrators and teachers use ICT for activities already carried out in school management and in the curriculum. At third Infusing Stage entails incorporating or embedding ICT throughout the curriculum. This is evident in schools that currently use a variety of computer-based technologies in their labs, classrooms, and administrative spaces. At last Transforming Stage where ICT is now seamlessly integrated into both everyday personal efficiency and professional work. There is a shift in the curriculum towards a focus on the learner, with an emphasis on integrating various subjects into practical real-life scenarios.

It can be emphasized that the author Majumdar (s. f.) proposed the four stages to create and transform the learning context with the help of ICT by using various digital tools available for each skill and subskills of the language in which teachers support their daily work performance.

2.3.5 ICT Skills and Prioritized Curriculum with Emphasis on Competencies

ICT skills in the world of education have become increasingly important among academics to permit infinite learning in space and time. Teachers are expected to occupy a vital post in the changing process of itinerant technology adoption. The use of social media when learning using itinerant technology is said to be predisposed by simple ICT skills such as computer operation, online tasks, software applications, Internet skills and World Wide Web skills.

ICT is the technological tool used in schools to improve resource management and instructional activities. Using ICT effectively requires a few specific skills like proficiency in ICT applications, social networking, online research, virtual presentations, oral PowerPoint presentations, and computer data management were all necessary for the ICT skills curriculum. By introducing them to new media and advancements in their field, ICT can help teachers and learners become more interested in their work and improve their readiness.

Besides, abilities in the teaching and learning intentions perceived ICT are related to the Prioritized Curriculum emitted by MINEDUC-SFE-2021-00008-R which is consists of competencies along with evaluation indicators and performance criteria. According to Villavicencio (2021):

> The teaching and learning process in the curriculum is approached from the areas of knowledge, which allows a comprehensive development that ensures that a topic can be treated from different theoretical and practical perspectives. In this curriculum, it is considered essential to focus on the development of communication, mathematics, socio-emotional and digital skills that encompass computational thinking and digital citizenship. (p. 7)

2.3.5.1 *Communicative Skills*.

The ability to understand and produce texts of any kind and in all communicative contexts is referred to as communication skills. The necessary abilities that enable speakers to carry out various speech acts with appropriateness and fluency are also included. By using active listening skills and a methodical, cohesive approach to idea articulation, this seeks to facilitate effective language use.

2.3.5.2 Mathematical skills.

Throughout life, a person develops and gains mathematical competencies, which enable them to use and relate numbers, their fundamental operations, symbols, forms of expression, and mathematical reasoning. The 21st century skills of problem solving, judgment, and critical thinking are linked to mathematical abilities.

2.3.5.3 Digital Skills.

Digital competencies are described as a collection of abilities and knowledge that support the responsible use of digital devices, networks, and technological applications for communication in order to access information and perform necessary management between these gadgets. In order to read, write, listen, calculate, and operate digital devices and online applications. On the other hand, there are sophisticated abilities that enable the transformative and beneficial use of ICT. Examples of these skills include machine learning, artificial intelligence (AI), and "Big Data". With the goal of attaining successful and innovative development in life, work, and social activities generally, these abilities enable to produce, trade, communicate, and cooperate with digital content as well as offer solutions to issues in the digital environment.

2.3.5.4 Socio-emotional Skills.

The knowledge, skills, and attitudes required to comprehend, communicate, and effectively control emotional phenomena are referred to as socio-emotional competencies. Providing equal opportunities for students through the promotion of comprehensive human development, the prevention of all forms of violence, and the mitigation of psychosocial risks are the goals of learning, which encompasses both cognitive and non-cognitive components. This facilitates the integration of ideas, principles, dispositions, and abilities that support the development of a personal identity, the understanding and control of emotions, the establishment of positive relationships, teamwork, and the ability to make responsible decisions in the face of difficult circumstances in morally and constructively way.

2.3.6 Virtual Learning Objects

Virtual learning objects are digital resources that can be reused in various pedagogical contexts. They can be videos, charts, infographics, films, platforms, games and documents that convey concise educational goals. There is no single definition of the abbreviation VLOs, but the following are mentioned among some.

Virtual Learning Objects are pedagogical tools that mediate knowledge, which allow a didactic presentation of the contents, taking into account different forms audiovisual and interactive. In another concept, the Virtual Learning Objects are entities digitized aimed at achieving the learning of a competence, which are configured didactically with objectives, methodology, content, evaluation, with open resources. (Pérez, 2022)

Virtual Learning Objects are known as teaching tools that allow the generation of knowledge with potential aids to the ingenious learning process. It is considered one of the most applied solutions to guarantee the reuse, practicality, longevity and teamwork of

educational resources. Students acquire autonomy and reach a higher level of interactivity through these appliances. (Nurbekova et al., 2022)

Diettes (2022), “VLO is defined as any significantly structured material, with educational purposes of a digital nature, disseminated and consulted through the Internet”. Based on this, a VLO means of supplying genuine content so that students can interact with real language and their everyday surroundings.

Hernández Urrego (2019), “A Virtual Learning Object (VLO) can be understood as a pedagogical mediator intentionally designed for a learning purpose”. In this sense, VLO works as a suitable device with its objectives and strategies for learners can mutually interact, learn, and propose their ideas.

2.3.7 Virtual Learning Objects Characteristics

Acosta et al., (2023) comment the theoretical foundations to understand these educational resources (VLOs) through a detailed review of their characteristics depending largely on the degree of extension of the resource.

Flexible: The resource is applied in different educational contexts, due to its innovation, content management and inquiry.

Personalized: Provided for changes in sequences and in all their forms, which allows a combination of learning objects in accordance with the needs.

Modular: It can be distributed in modules, parts or units.

Adaptable: Adapts to the different learning styles of students.

Reusable: The object must have the ability to be used – reused in a context with an educational purpose capable of adapting within training sequences

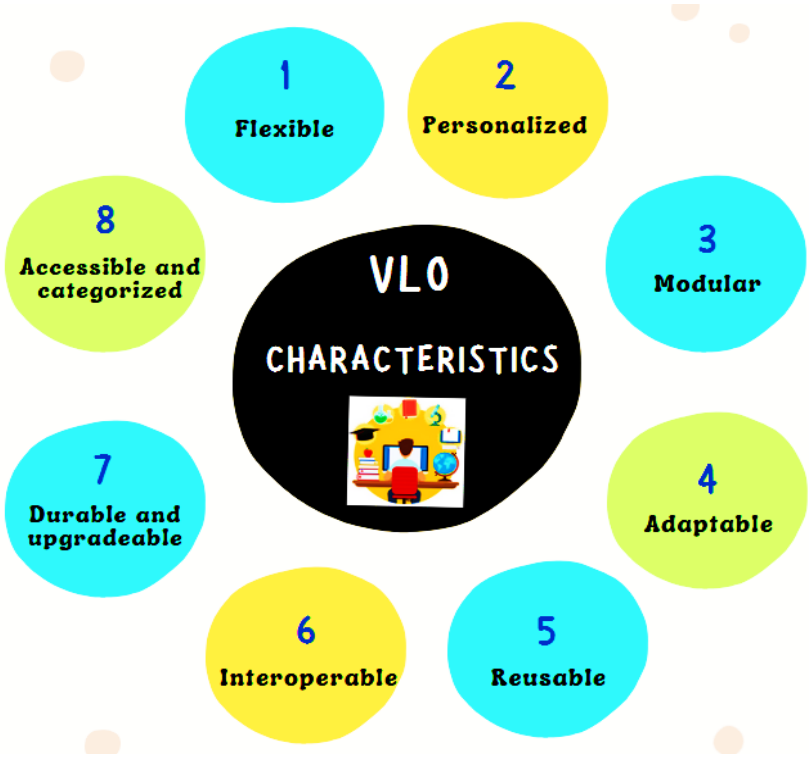
Interoperable: Learning objects need to work with multiple learning management systems and digital platforms.

Durable and upgradeable: Learning objects must be long-lasting and easily updated to incorporate the most recent advancements in both knowledge and methodology.

Accessible and categorized: In order to make learning objects easily accessible and retrievable, they need to be properly tagged and organized with relevant metadata. This guarantees that users can find and utilize content effectively.

Graphic 3

Virtual Learning Objects Characteristics



Note. It concisely shows the features of VLOs. Source: Author's preparation.

The current features of VLOs center on integrating advanced education with technology to support students' individual or group learning at their own pace. This encourages students to seek out additional information while also establishing the content required to advance in their comprehensive training.

2.3.8 Virtual Learning Objects Importance

The rapid provision of the Internet due to its low cost of service has promoted the use of virtual tools in the teaching and learning processes, without leaving aside the current demands of the world in constant innovation. The improvement of virtual environments has increased the interest to include them in education at all levels.

Virtual Learning objects play a decisive role in the workplace, where preparation and skill improvement are basic to organizational success. One benefit of learning objects is they allow corporations to offer more tailored and adaptive apprenticeship opportunities to their staff. Also, these digital resources are a highly cost-effective solution for educational and professional purposes. They can be designed to meet specific needs, and address particular skill areas or educational challenges.

As the author mentions:

> The use of virtual learning objects also favors the development of student competencies, by mobilizing their conceptual knowledge (theories, concepts and laws), procedural knowledge (skills), and also considering attitudinal knowledge (attitudes, interests and ways action), and from this mobilization, enrich the tools that allow them to respond more effectively. (Veytia-Bucheli et al., 2019, p.8).

Therefore, collaborative work plays an important role in the use of VLOs, where they work in a shared and responsible way to achieve a common goal. It is achieved when all the members share among themselves their knowledge skills in participation towards a social constructivist model and being the creators of their own significant learning in a dynamic, active and creative way. In this sense, the point of support takes place in the activities that are carried out jointly.

2.3.9 Design of Virtual Learning Objects

The design of Virtual Learning Objects (VLOs) involves systematic components to generate engaging, interactive, and effective learning experiences. Gómez López et al., (2021) propose some elements that include virtual learning objects by having a learning objective, target audience, interactivity content, multimedia activities, self-assessment, accessible navigation, and metadata.

Learning Objective: It refers to the purpose to be achieved, that is, the educational goal of the VLOs in which define the knowledge, skills, or attitudes learners will acquire. For the formulation of the objective, it is essential to implement a specific verb and a condition, which will allow the needs raised in it to be resolved, as well as the way to control the students' progress.

Target Audience: It means to identify the learners' characteristics, needs, level, and preferences.

Interactivity Content: These are cognitive and interactivity elements that allow the expected objective to be fulfilled. The contents, selection, organization and sequence work must be done, depending on the needs of the goal. These contents are classified by three important characteristics conceptual (informative data), procedural (sequential steps), and conditional (decision on what, when, and how to use certain knowledge).

Multimedia Activities: They are defined as the tools that allow compliance with the VLOs proposal; they must give according to: type of content and skill/ sub-skill, population, purpose, and cognitive processes to be stimulated. Different kinds of activities can be incorporated such as quizzes, questionnaires, games, contests, puzzles, completion, matching, sorting, application, presentations, videos, worksheets, audios, images, etc.

Self-assessment: The aim is to evaluate and examine the students' learning process against the VLO to generate new actions that reinforce what has been learned or to complete the unknown. Also, mechanisms can be implemented for formative assessment, summative assessment, and immediate feedback.

Accessible Navigation: Ensure VLOs fit easily accessible standards and can be accessed on a variety of devices. Clear navigation, a consistent layout, and visual cues should all be included in the intuitive, user-friendly interface design of VLOs.

Metadata: It is essentially a standardized inventory of already-existing georeferenced data, which enables the user to determine whether or not the data is suitable for being located. These make it easier for people to find and use VLOs when needed by providing information about their subjects and contents**.**

2.3.10 ADDIE Model to Design Virtual Learning Objects

The ADDIE model is a well –established framework for instructional design, and it can be applied to design Virtual Learning Objects (VLOs). It serves as a guide for the design of virtual learning products, giving educators, professionals, and managers the ability to create a set of tools, that can be used to review current online resources, implement new online learning objects, produce accessible content that all learners, regardless of disabilities, can navigate, understand and interact with and integrate cultural diversity and a gender perspective in all areas of knowledge.

> As the United Nations (2020) notes that the Framework is based on the principles of the ADDIE model, an instructional design model for developing and delivering learning online activities or programs that seeks to change behavior and improve performance. It offers a systematic approach to analyzing needs, designing and developing curricula and implementing and evaluating learning solutions. (p.2)

Putra et al., (2022) emphasize “the development model used in the design of learning media for the introduction of the properties of this object is ADDIE”. On this basis, the choice of this particular model is influenced by various factors. To begin with, the ADDIE model is laid out in a straightforward and methodical manner. The steps in this model are notably uncomplicated in comparison to other design models. Its systematic and uncomplicated structure renders the ADDIE model highly accessible for developers to grasp. ADDIE model is relevant in developing an interactive multimedia design because some previous research results show that implementation using the ADDIE model produces quality products and learning.

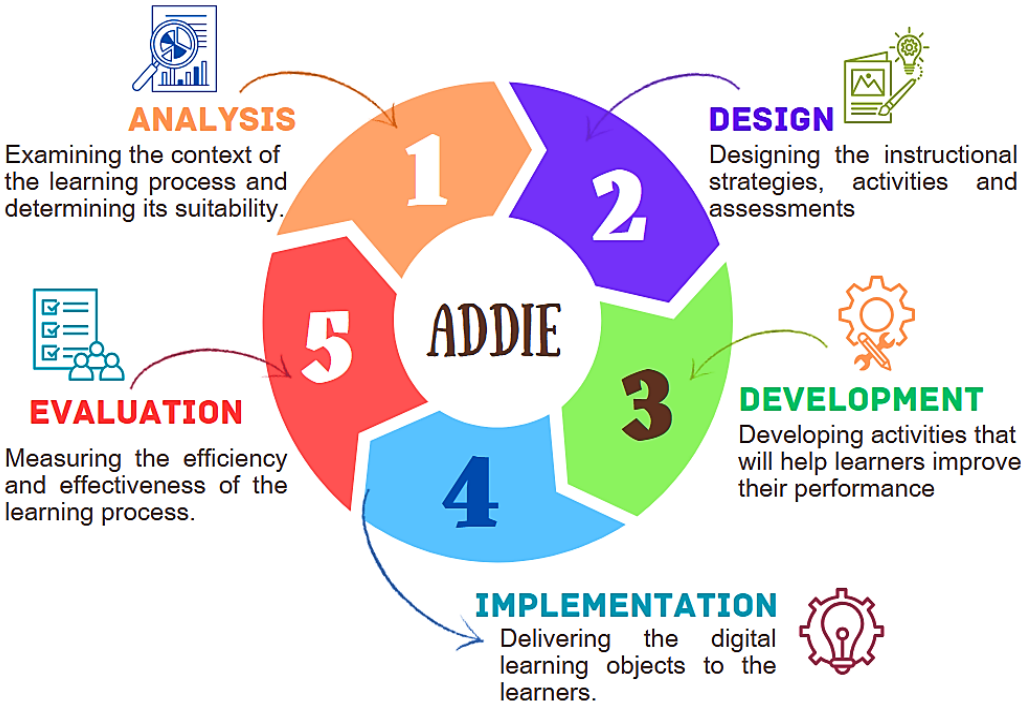
Furthermore, other authors agree with what was mentioned by Jusas et al., (2021):

> The ADDIE model was developed for the US Army by the State University of Florida and it is a fundamental model used to create new, integrated, or extended models. The model starts with the analysis of learning that is followed by the design, the development of learning goals and methodologies, the implementation of learning content, and the evaluation of the obtained result. (p.2)

According to the authors, this model offers simplicity, organization, and flexibility for embedding created or reused resources in the appropriate space, following sequential steps for a logical structure. It also helps achieve the planned objectives in the curriculum and in each topic to be taught. The graph below illustrates the five phases of the ADDIE model for VLOs design.

Graphic 4

ADDIE framework



Note. Steps detail to create an instructional methodology. Source: Author's preparation.

2.3.11 Tools to Design Virtual Learning Objects

A learning object is an entity that is generally applicable to learning, education and training in the context of mathematics, engineering, technology, foreign language, and health sciences.

According to Vieyra & González (2020), authoring tools refer to applications for generating content that conforms to digital learning standards. Many of these tools are designed as extensions to electronic presentation software, offering a unique combination of the intuitive interface found in presentation tools and the sophisticated deployment and assessment capabilities inherent in authoring tools. It is also necessary to explain that digital resources can be reused to support learning and find implements to create videos, podcasts, graphics, presentations, timelines and e-books. They are classified as follows:

Videos: Different types of videos can be created: animated videos, interviews, screenshots, slide recordings, live meeting recordings or live presentations such as:

- *Camtasia* for recording, editing and producing videos
- *Ling* as a basic tool for short videos.
- *Powtoon* is spontaneous and serves to create animated, enjoyable, and remarkable videos.

Presentations and graphics: There are a few alternatives when you need to create an interesting presentation or graphic organizers.

- *Canva* as a free-to-use available explicit design tool consents to create social media posts, presentations, posters, videos, logos and more.
- *Genially* as an interactive resource allows to make slides, vibrant infographics, e-learning media, and other engaging content for free.
- *Piktochart* helps to create infographics.
- *Prezi* as a web-based tool for creating presentations that uses motion, zoom, and spatial interactions
- *SlideShare* as a web-based presentation and infographics sharing platform designed to help businesses and individuals upload content using various devices

Podcasts: Here are some tools for creating scheduled audio podcasts. It is also possible to create video podcasts (podcasts) using the video creation tools mentioned above.

- *Vocaroo* is a humble audio recording provision that can be used by both teachers and students. It lets recording voice and playing it.

Games and quizzes platforms: There some resources to inspire every student to learn by combining easily adaptable content with inclusive assessment, training and practice technological tools.

- *Quizizz* is a virtual platform that bargains numerous tools to make a classroom pleasurable, interactive and engaging.
- *Kahoot*! is a gamify learning program that makes it easy to produce, share and play learning games or trivia quizzes in minutes.
- *Wordwall.net* allows teachers to create interactive games and printed materials for their students.
- *Padlet* is a free online tool that is best described as an online notice board. *Padlet* can be used by students and teachers to post notes on a common page.
- *Lyrics Training* is an easy and fun way to learn and improve your foreign languages skills, through the music videos and the lyrics of your favorite songs.
- *Educaplay* known as digital resource to let teachers design freed educational games.
- *Edmodo* conceptualized as an instructional network in order to provide teachers with tools to aid them link and interconnect.
- *Liveworksheets* as the name implies, worksheets created by the teacher to be used in lessons.

2.3.12 Advantages of Virtual Learning Objects in English Teaching / Learning.

The implementation of VLO in teaching has been favorable in several contexts. Rawashdeh et al., (2021) consider educational tools are highly efficient in transferring knowledge and possess the capability to surpass traditional teaching methods. One of their key features is facilitating seamless communication between educators and learners, while also supporting in the enhancement of students' skills. Other previous research has also showed a number of benefits associated with the implementation of VLO in education.

According to David & Aguilar-Cruz (2023) the students' perception is positive when they interact with VLO because it is innovative and inspired more learning strategies.

Furthermore, the Virtual Learning Objects help the students improve listening and speaking skills. The teachers who apply VLO emphasize that the students acquire skills and knowledge in specific areas of study.

Al-Jarf (2022) tells the use of online vocabulary tasks and technologies promotes the interaction between students and teacher because it motivates and engages the learning process. The online tasks can be solved individually, in pairs or small groups changing traditional vocabulary teaching. Mobile based applications, game-based mobile apps, mobile audiobooks, collaborative mobile e-books and podcasts are new modes of teaching and learning.

Among other good reasons it is possible to mention the following:

- Foster communication among teacher and students having a good relationship in the course, is greatly expanded with the use of the tools of the virtual platform.
- Facilitate for access to information being potential tools that allows to create and manage subjects in a simple way, including a wide variety of activities.
- Available at anywhere as long as they have computer or mobile device access
- Promote the space for the transmission of knowledge as well as the development in students of skills and subskills.
- The use of virtual learning objects acts as an incentive for students to find the topic interesting.
- Provide for a variety of learning styles and preferences.
- They are reusable and affordable.
- Foster interactive learning and independent transfer of English content.

2.3.13 Disadvantages of Virtual Learning Objects.

Despite the important benefits of using virtual learning objects, Rawashdeh et al., (2021), "indicate that digital learning develops a negative influence on teachers and students, since it promotes social isolation due to increased time in front of the computer screen" (p. 116), but it is important to mention that teachers and students face challenges that ultimately lead to limited or negative results. The use of virtual learning objects for teaching implies an increase in the effort and time.

- Resistance to change and lack of experience.
- Learners spend permanent time on the computer as a teaching support with the use of virtual learning objects.

2.3.14 Vocabulary Linguistic Skill

Vocabulary is an essential component for learning a language because it contains words in the act of concrete speech. Vocabulary, as an inherent element of any communicative manifestation, is the basic instrument on which the language is elaborated. For this reason, its teaching must be established as an essential way for the progress of the different linguistic competences, both oral and written.

> Isnaini & Aminatun (2021) determine that vocabulary is one of the most important parts of a language to convey ideas correctly. Developing English vocabulary means being aware of the meaning of words and understanding them when someone speaks. Vocabulary is the first step for language acquisition in the classroom where learning becomes interactive and interesting with the induction and selection of the appropriate vocabulary.

In addition, English vocabulary is best acquired when teachers support the teaching and learning process by using digital tools such as virtual learning objects, which are half of the interactive learning catching the attention of the students (Tiara et al., 2021). Based on this statement, virtual tools have a positive effect on developing English vocabulary in a different, creative, and authentic way.

2.3.15 Importance of English Vocabulary

A rich vocabulary is the key to adding new words to daily language use with literacy experiences to understand and produce increasingly complex texts and communicate for a variety purposes. Alfadil (2020) contends that the importance of vocabulary for foreign language learners relies on efficient lexical teaching administration methodological activities that amplify English vocabulary development, mainly in terms of unlike skills.

Vocabulary is one of the most important skills needed to teach and learn a foreign language. It is the basis for the development of all other skills: reading comprehension, listening comprehension, speaking, writing, spelling and pronunciation. Vocabulary is the most important mechanism that students use when trying to use English effectively. Whether interacting with native English speakers, watching movies without subtitles or listening to favorite English songs, reading texts or writing letters to friends, students always need to use words to function

2.3.15.1 Reading Skill.

One of the most important factors in reading comprehension for resident and non-resident speakers is vocabulary acquisition.

2.3.15.2 Listening Skill.

It is much more difficult to recognize and encode sounds if students have never heard or used a specific word, let alone extract the meaning. When the language is studied with advanced vocabulary, it is easier to make sense of the word through context or by relating it to other words in the same word family.

2.3.15.3 Speaking Skill.

It works the same way for second language learners who don't have a special vocabulary. If they don't know (or remember) this part of the vocabulary, they won't be able to fully convey their message.

2.3.15.4 Writing Skill.

It is much easier to express in writing way It students have a large vocabulary. It is possible to select from and express precise thoughts, feelings, ideas or events.

2.3.16 Level-based English Vocabulary in CEFR

CEFR is the abbreviation for the European Framework of Reference for Languages. It refers to a bodywork evolved by the Council of Europe and is broadly used to sketch language proficiency levels and learning outcomes. (Lew & Wolfer, 2024) view that vocabulary items are measured as a designed plan of the CFER, and it is significant to test how well the categorization system fits the observed behaviors. Below is a summary of the vocabulary ranges according to the CEFR:

Level A1 (Beginner): The vocabulary repertory is basic with specific forms used in particular situations.

Level A2 (Elementary): There is enough vocabulary to perform daily tasks, family situations, topics, basic communication, and handle simple survival needs.

Level B1 (Intermediate): Plenty of vocabulary is used in this range to express some repetitiveness on most topics for everyday life such as daily routines, family, hobbies, likes, dislikes, and modern news.

Level B2 (Upper Intermediate): The process of good vocabulary takes place at this level on both topics relevant to any area and on most general subjects. Wording may vary to avoid reiteration, but lexis gaps may still lead to hesitation.

Level C1 (Advanced): This level includes handling wide vocabulary so that pauses can be easily bridged by paraphrasing; few techniques for searching for open expression, such as mastering idioms and colloquial language.

Level C2 (Master): It means mastering a broad vocabulary, containing idiomatic and colloquial expressions, and demonstrating awareness of connotations and coherence.

As indicated in these designations, the CEFR helps to assess and develop English vocabulary skills at different skillfulness levels.

2.3.17 Features of English Vocabulary

For teaching vocabulary in line with the objectives and the needs of the students is necessary to take into account the vocabulary aspects that must be taught (Dakhi & Fitria, 2019). Thus, understanding the meaning, form, and use of lexis is mainly for communicating naturally and well.

Meaning: It refers to the definitions that transfer a word or idea to operate in an accepted way; It is indispensable to know the use of the word in a real context, which words are related to each other, and when it conveys an understandable meaning.

Form: It is connected to the inserted parts such as spelling, pronunciation, and composition of words, it being vital to notice how they look and sound, and what are perceptible, such as prefixes, suffixes and word roots.

Use: It covers the grammatical point and its functions such as verbs, adjectives, nouns, etc. In addition, it incorporates the recognition of words in a formal and informal way to vocalize commonly used together.

2.3.18 The Role of Technology to Support Vocabulary Development.

The insertion of new technologies has significantly impacted literacy development because they allow the teaching and learning of new abilities, information, and social interaction strategies. Some researchers underscore the role of technology in the process of acquiring new languages as a means of revolutionizing and improving language learning. For Fabián & Rosario (2023) The technological role has brought chances that has affected students' perception of vocabulary acquisition and, more remarkably how language learning fits in the worldwide digital context.

In this time, students' personal lives are heavily reliant on digital devices in compliance with how they use these appliances when studying. Technology effectively increases and strengthens support for equitable access, high-quality applications, and pertinent services, thereby facilitating learning for all students. Technology usage in the classroom gives learners the lucky to develop reasoning and critical thinking that are instructed. Educators also make use of the digital resources at their disposal and those of their pupils. (Eglash, 2020)

Further, there are numerous ways that technology can enhance vocabulary through digital flashcards, interactive applications, online courses, software for building vocabulary, audio-visual materials, online dictionaries, games, simulations, virtual reality experiences, chatbots driven by artificial intelligence, and spaced repetition. As a result, technology offers well-being opportunities to upgrade vocabulary, making education more approachable, interesting, and enjoyable.

2.3.19 Virtual Vocabulary Activities

The students can begin the selection of virtual activities under internet websites, mobile applications, social media sites, podcasts, YouTube videos, etc. (Al-Jarf, 2022). On this basis, teachers can search and create lists of useful English vocabulary activities through websites, podcasts, videos, or apps relevant to the lexicon knowledge and topics to be covered in the course. The writer suggests trying the following kinds of virtual vocabulary exercises and apps/ sites:

Mobile-based applications: Users can accomplish various tasks with apps like Vocup, Quizlet, Quizziz, Saving Alice, the Duolingo website, and Kahoot app. These platforms authorize the user to add words to a digital vocabulary book, create games and flashcards, play synchronous and asynchronous games, perform interactive spelling tasks, design multiple-choice quizzes, use a specialized dictionary, listen to audiobooks, and interchangeably develop the four language skills.

Audio podcasting tasks: A podcast is a type of digital audio file that can be downloaded to a mobile device or PC. Those who listen to audio podcasts with static or animated images show better attitudes, greater vocabulary retention, and greater vocabulary growth than those who do not.

Charts for drawing and viewing pictures: Reading words on flashcards with immersive images of electronic devices shows successful vocabulary acquisition, improving students' motivation and recall, compared to reviewing simple printable flashcards, so students' learning style changes from passive to active as a result of the pictures' excellent illustration of the meaning of the target words.

Based - glossed concordance: An alphabetical list of terms found in a book that includes references to the passages in which each word appears is called a concordance besides it admits the word recognition, definition, and gain fruitful knowledge of lexical items.

Video integration: Animated videos to help word-building practice increase vocabulary comprehension, retention, grammatical tense, and speaking ability to spark interest in the material to be studied.

Multimedia notations: Multimedia annotations, which consist of underlining and labeling texts, photographs, web pages, videos, songs, and other digital resources, are fragments of information that complement or clarify virtual content.

Electronic Portfolios: It is also called an e-portfolio which it is a collection of a student's work that includes assignments, projects, assignments, reports, blogs, interviews, demonstrations, essays and artifacts that demonstrate the student's learning progress and achievements with the objective of facilitate, record and archive files on it.

Social Networks: Social media platforms such as Facebook, Instagram, Telegram, WhatsApp and Twitter can be incorporated into vocabulary instruction to make it more effective than traditional methods. This is because these platforms offer a variety of teaching strategies, facilitate productive group projects, and provide quick feedback and independent learning opportunities that have a positive impact on students' English vocabulary acquisition.

Mind map: There is intermediate mapping software that can be integrated as a tool to develop vocabulary in students through organizing, comparing, grouping, connecting, and reviewing lexis, as well as brainstorming exercises or word maps.

PBL: Its acronym means Project Based Learning as regards the learning approach of study to solve problems in a real world, and challenging questions over an extended period of time, gaining knowledge and skills in the process.

In addition to the aforementioned, there are more engaging virtual activities available.

- Online crosswords
- Virtual word searches
- Vocabulary quizzes
- Digital flashcards
- Online matching games
- Virtual anagrams
- Digital hangman
- Word Association
- Online boggle
- Word sorting
- Virtual word chain
- Digital word jumble

For all of this, it is advised to integrate online word activity designs, concentrate on various word knowledge components, provide direct instruction on particular technical terms, and increase students' awareness of the vocabulary chosen to make the best use of online vocabulary activities and technologies.

Chapter III

Methodological Design

3.1 Research Approach

This research work was developed with a quantitative approach due to numerical data were compared with an English vocabulary test of two independent samples, which allowed the necessary information to be collected for the subsequent analysis of the statistics obtained and in this way answer the research questions. Taherdoost (2022), "Quantitative research is the method of employing numerical values derived from observations to explain and describe the phenomena that the observations can reflect on them" (p.54). Mathematical techniques were employed to analyze the gathered numerical data. Another author reports that quantitative research has 13 structured and systematic steps to collect and analyze numerical data using statistical methods to draw conclusions. (Pandey et al., 2023)

1. Problem definition and selection.
2. Review of the literature.
3. Formulating questions and purposes for the study.
4. Development of hypotheses.
5. Defining and determining variables.
6. Research design
7. Identification of study area groups/population and sampling
8. Data collection design
9. Selection of statistical tests to test well-defined objects/research questions and hypotheses
10. Data gathering

11. Analyzing the collected data using suitable arithmetical tools (using ICT applications)
12. Draw outcomes and conclusions.
13. Write a report on the results realized.

Moreover, key features of quantitative research are important in explaining the observations such as:

1. It reflects the need to measure and estimate the magnitude of the phenomenon or research question.
2. The researcher poses a delimited and concrete study problem about the phenomenon.
3. The background is then taken into account to develop a theoretical framework based on the variables of the research theme from which the hypothesis to be tested is derived.
4. Data collection is based on the measurement of variables using standardized procedures. and accepted by a scientific community.
5. Collect numerical data from the sample under study using measurement tools.
6. Statistical analysis is used to analyze patterns, compare groups link variables, and find interpretations by comparing them with previous studies and predictions.
7. Quantitative research should be as “objective” as possible.
8. Quantitative studies aim to check and calculate the phenomena investigated, looking for symmetries and causal relationships between elements.
9. Quantitative research aims to identify 'universal' causal laws.

10. The data generated from this approach have the standards of validity and reliability, and the conclusions derived will contribute to the generation of knowledge.

Considering the previously stated, this research approach was defined as quantitative in which was possible to study a problem based on patterns that allowed recognition of common trends in people's reactions and observing the differentiation of tendencies between the individuals. Justifying the research problem involved the theoretical review to demonstrate the significance of the topic under consideration. Their findings led to explain how one variable influences another variable by measuring the observable data of two independent samples using suitable techniques, instruments, and static methods to compare two groups in a way that helped to answer the hypotheses. Ultimately, they were interpreted to obtain conclusions and recommendations.

3.2 Research Design

The present study was based on a quasi-experimental research design because it was applied in two unconventional samples, one experimental in which the treatment or independent variable was introduced and another control within which the experimental part was not tested. For Gopalan et al., (2020) Quasi-experimental research designs, as their name implies, mimic experimental conditions in which some subjects are randomly assigned to receive treatment while others are not by using no experimental (or researcher-induced) variation in the primary independent variable of interest. An extensive perspective on the use of some virtual learning objects to enhance vocabulary skills was provided by this documentary analysis. Furthermore, the field made it possible to comprehend in detail the impact of their procedure when the methodology stage was carried out.

On the Appinio Research Blog (2023) maintains that quasi-experimental design (QED) is a research method used to study the effects of independent variables on dependent variables when full experimental control is not possible or unethical. Its main purpose is to investigate causal relationships between variables in a real-world setting, maximize internal validity, and make meaningful inferences while considering practical and ethical constraints. Researchers apply this method to answer research questions, test hypotheses, and examine the effect of interventions and treatments when traditional experimental methods cannot be used.

Moreover, there are some types of quasi-experimental designs to investigate causal relationships and study the effects of independent variables where full experimental control is a challenge. First, a one - group posttest-only design which a dependent variable is measured for one group of participants following a treatment. Second, in a one-group pretest-posttest design, the same dependent variable is measured in a group of participants before (pretest) and after (posttest) treatment is given. Third, a nonequivalent control group is considered as a control set that is matched upon certain preexisting features similar to those observed in the treatment group but to which participants are not randomly assigned, that is a dependent variable measured in a treatment group is compared to that in the nonequivalent control group. There are two kinds of quasi-experiments for non-equivalent control groups:

Nonequivalent control group pretest – posttest design: A same subordinate variable is measures in two moments a pretest and a posttest in another in-equal control group that treatment is not applying become a quasi-experimental research design in which a dependent variable is quantify in two kind of participants group before (pretest) and after (post-test).

Nonequivalent control group posttest-only design: A research with a quasi-experimental design whose dependent variable is measurement in a group after experimentation and also in a non-equivalent control group that does not take treatment.

Fourth, a basic time-series design that marks several observations over a limited time before and after the treatment operated by the investigator. Fifth, an interrupted time-series design which makes a lot of comments done in a period of time before and after a naturally happened treatment. The last one, a control series design that is a time-series design with a matched or nonequivalent control group.

Under these circumstances, a non-equivalent control group post-test design was applied in this research report because the dependent variable (English Vocabulary Test) was measured in two independent samples after a treatment in one group and that measure was compared with a control/non-equivalent comparison group that did not receive that treatment both groups had similar characteristics such as age, status, and performance level.

Procedure

The research was designed on an initial evaluation of the student's English vocabulary knowledge through 10 questions based on 4 topics taken from the MINEDUC English Pedagogical Modules that, instead of being analyzed as a formal test, was observed. Throughout this procedure could detect the ongoing vocabulary proficiency of tenth-grade students at the Velasco Ibarra Educational to ascertain some problems in both groups (control - experimental) and thus propose the research proposal.

Afterward, the topic was taught to both groups so the experimental group got treatment through the support of virtual learning resources chosen for each vocabulary topic lined with an objective, and different activities covered per class during four weeks.

In the meantime, the control group obeyed the same order without experimentation keeping a usually standard - traditional vocabulary teaching methods, tendered as follows:

Table 1

Implementation of virtual learning objects

Planning			Groups	
N°	**Week**	**Vocabulary Description**	**Control**	**Experimental**
			Resources	**VLOs**
1	From January 8th to 12th, 2024	**Topic:** Sports **Objective:** To identify sports-related vocabulary for labeling pictures with words correctly.	PowerPoint slides based on the English Pedagogical Modules	• Slide Google • Puzzel • Topworksheet
2	From January 15th to 19th, 2024	**Topic:** Types of criminals **Objective:** To learn vocabulary about types of criminals using visual and context cues for a deeper understanding of specific words.	PowerPoint slides based on the English Pedagogical Modules	• Google Sites/Audio • Wordwall
3	From January 22nd to 26th, 2024	**Topic:** Careers/ Occupations **Objective:** To assimilate career terms with their occupations by organizing and structuring the vocabulary acquired through sorting exercises.	Word document based on the English Pedagogical Modules	• Genially/ Audio • Liveworksheet • Educaplay
4	From January 29th to February 1st, 2024	**Topic:** Household appliances **Objective:** To gain lexis on household appliances through concept association for expanding vocabulary and encouraging logical thinking.	PowerPoint slides based on the English Pedagogical Modules	• Prezi • Padlet • Quizzis

Note. Schedule for the methodological application.

As it is noticed the data assembled throughout the piloting helped to maintain the pedagogical intervention. Finally, an English vocabulary test was applied to the two groups to obtain the results detailed in the next chapters of this research report.

3.3 Type of Research

3.3.1 Based on Purpose

The investigation was of applied type because it had a logical and explanatory sequence. The corporation DiscoverPhDs (2020) explains that Applied Research utilizes theory to produce useful scientific knowledge while searching strategies for particular research problems. It is also divided into technological that aims to increase productivity in specific production units by making improvements to the processes and scientific applied research that measures certain predictive objectives and takes into account variables to search for beneficial behaviors for research.

As Privitera & Ahlgrim-Delzell (2019) puts it, “Applied research uses the scientific method to answer questions concerning practical problems with potential practical solutions,” (p. 922) in other words, it seeks to respond questions about educational praxis that can be categorized into different settings such as the implementation of varied teaching, community roles and classroom management. Based on this type of research, it was possible to answer the problem formulation posed in this project, likewise it focused on the knowledge through theoretical research, and obtained results that were discussed in chapter IV.

3.3.2 Based on Geographical Context

Field research was also used since the data of interest was collected directly in the place where the events took place, that is, in the “Velasco Ibarra” Educational Unit.

According to the corporation DiscoverPhDs (2020) describes that the field research study accumulates direct data on the phenomena observed at the site and its location. In another point of view field research means one of the methods to guide an investigation. Also called field word or field study which involves collecting data in a natural, non-laboratory setting. Field research is an important type of interacting and understanding a research matter by conducting face-to-face interviews, direct surveys, and immediate observations. Field studies must be piloted in a systematic and regular manner in order to get accurate and reliable results taking into account methods used for the field work depending on the goals of the project, which are outlined according to the scientific method, which uses empirical steps for experimentation, data collection, and interpretation. (García, 2023)

Even more, field research played a predominant role in this research report thanks to the steps followed from the study site that were applied. Participants were completely immersed in the study. They participated in the activities taking place and fully interacted with all aspects of the study. This provided an opportunity to gain a deeper understanding of the handling of variables. It made possible to propose an explanation for the hypothesis, as well as contrast it with the experimentation part, analyze data, and iterate conclusions.

3.3.3 Based on Time

And then this piece of research was cross - sectional because it analyzed and interpreted dissimilar variables at a given moment. Observing a phenomenon, a single person, or a group of study subjects at a certain moment is done using a cross-sectional research strategy (DiscoverPhDs, 2020). A cross-sectional study is a type that involves looking at data from a population at one specific point in time. Investigators measure outcomes and exposures of the study subjects at the same time. It is described as taking a

“snapshot” of a group of individuals. Unlike in case-control studies (subjects selected based on the outcome status) or cohort studies (subjects selected based on the exposure status), the subjects in a cross-sectional study are simply chosen from an available population of potential apposite to the formulation question (Wang, 2020). Seen this way, it was carried out in 4 weeks from January 8 to February 2, 2024 which enabled to understand how variables behaved.

In fact, this research implemented a cross-sectional pattern as a means to collect data from two independent samples in a given period that were analyzed. The participants of this study method had varying characteristics and demographics including age, setting, gender, culture and school.

3.4 Research Level

Explanatory research, often known as a "cause and effect" model, investigates the reasons behind events when there is little information available by studying a particular subject, determines how or why a certain phenomenon is happening, and forecasts future occurrences. (George, 2021). Explanatory research seeks why and how two or more variables are related to each other. Researchers often conduct experiments to discover the effect of a particular change between two or more variations, that is, at this level the causes of social phenomena are explained. The objective is to clarify the relationship between variables, in other words, that one is the cause of the other or that when one variable occurs, the other also happens (Troy, 2021). More importantly explanatory or known as a causal research is primarily concerned with the causes of phenomena, the 'why' agent. Hypotheses in explanatory research act for a relationship between two (or more) variables and its design focuses on determining the 'why' of the correlation.

Based on the above conceptualization, the present investigative work was explanatory because it sought to inform and explain with data found the knowledge of English vocabulary before and after the use of Virtual Learning Objects of tenth-grade students at the Velasco Ibarra Educational.

3.5 Data Collection Techniques and Instruments

The present research was developed considering that data-collecting techniques define the procedures used to get together and examine various types of facts (Manawis, 2022). The data supplied was truthful and useful thanks to the technique and instrument related to this quantitative research which responded to the starting purpose of the problem research. Because of this, the following were employed in this instance:

Technique

Test

Test was used in research as a system of gathering data. According to Hayati et al., (2020), “the test is a method used by educators to measure and assess students' abilities systematically, fairly, objectively, and procedural by giving tasks in the form of questions that must be done by students so that they can produce values”(p.1). They can be standardized and adhere to a set structure and guidelines to guarantee uniformity. Through this technique, attaching the instrument was it possible to measure and compare behavioral conditions of two independent samples on English vocabulary development using Virtual Learning Objects in the teaching and learning lesson.

Instrument

Questionnaire

Taherdoost (2022), “Questionnaire, as core of the survey is based on a set of questions to gather data from respondents. Questions are the translated form of what

researchers need for their study which can be addressed using the answers of participants" (p.8).

Based on the above quotation, a questionnaire tool was designed with 10 structured-based questions containing 5 divisions, each of which comprised some tasks on the taught vocabulary topics. They were answered by tenth grade students according to the development of their English vocabulary after the methodological execution. This instrument allowed to obtain accurate and comprehensive evidence about the variables of attentiveness for this inquiry apart from demonstrating a high reliability and validity index.

3.6 Techniques for Data Processing and Interpretation

The present research work was applied to a sample of 56 tenth grade students from the Velasco Ibarra Educational Unit.

For data collection: It was requested a questionnaire at the end, after the application of VLOs for both groups to experimental and control.

For data analysis: It was used a descriptive statistics consisting of frequency distribution and variability measures through graphical representations in Excel program. In this way it was possible to determine the difference between the experimental and control group.

Data interpretation: It was made from the results obtained from the English vocabulary test in which it enabled to establish conclusions and recommendations.

The Student's t-test for two independent samples was the statistical method used to determine if there is a significant difference between the means of two independent groups. It was particularly useful when comparing the effectiveness of different instructional methods, as in this study.

3.7 Population and Sample

3.7.1 Population

The population corresponded to 203 students distributed in parallels "A - B - C - D - E - F - G" of the tenth grade of the “Velasco Ibarra” Educational Unit.

Table 2

Population detail

Parallels	Frequencies	Percentages
A	27	14%
B	29	14%
C	28	14%
D	29	14%
E	29	14%
F	30	15%
G	31	15%
Total	203	**100%**

Note. Data about students’ number of tenth-grade taken from the geographical location.

3.7.2 Sample

The sample was intentional, not probabilistic of 27 students of tenth grade “A” (control group) and 29 students of tenth grade “B” (experimental), a total of 56 students with a reliability level of 95% and an error margin of 5%.

Table 3

Sample detail

Extract	Frequencies	Percentages
A	27	48%
B	29	52%
Total	56	100%

Note. Data taken from the geographical location of this research.

3.8 Hypothesis

The use of virtual learning objects develops English vocabulary in students of tenth grades of Velasco Ibarra Educational Unit, Guamote Canton, period 2023 - 2024.

3.9 Variables

3.9.1 Independent Variable

Virtual Learning Objects (VLOs)

3.9.2 Dependent Variable

English vocabulary.

Chapter IV

Analysis and Discussion of Results

4.1 Descriptive Analysis of the Results

This section presents the findings of the study, which aimed to investigate the effectiveness of virtual learning objects (VLOs) in the development of English vocabulary among tenth-grade students at the Velasco Ibarra Educational Unit in Guamote during the 2023-2024 academic year. The research was guided by the objectives of the research.

To address these objectives, a quasi-experimental design was employed, involving two groups: an experimental group (parallel B) that utilized VLOs and a control group (parallel A) that employed traditional learning methods. The students' vocabulary knowledge was assessed using a questionnaire covering five sections: sports, types of criminals, careers/occupations, household appliances, and overall vocabulary review. The performance of both groups was evaluated and compared using hypothesis testing to determine the effectiveness of the VLOs.

The following subsections detail the results obtained from the diagnostic assessment, the implementation of the selected VLOs, the evaluation of vocabulary knowledge post-intervention, and the comparative analysis between the experimental and control groups.

Initial diagnostic assessment of vocabulary knowledge

The initial evaluation of the students' English vocabulary knowledge was conducted through observation rather than a formal quiz or test. The goal was to diagnose the current vocabulary proficiency of tenth-grade students at the Velasco Ibarra Educational Unit, ensuring that the subsequent application of VLOs could be effectively tailored to their needs. During the observation period, several problems were detected in both the experimental group and the control group of students´ descriptive analysis of the results:

a) Vocabulary deficiency. It became apparent that the majority of the students struggled with basic English vocabulary. Although they were expected to have a knowledge level equivalent to the Common European Framework of Reference for Languages (CEFR) A2, most students fell short of this benchmark. A2 level proficiency includes the ability to understand and use elementary everyday expressions and very basic phrases aimed at satisfying concrete needs. However, many students were unable to demonstrate this basic command of the language.

b) Limited lexical range. Students exhibited a very limited range of vocabulary, which hindered their ability to participate in classroom activities. Simple tasks that required the use of common nouns, verbs, and adjectives were challenging for many students, indicating significant gaps in their foundational vocabulary.

c) Communication barriers. The lack of vocabulary had a profound impact on students' ability to communicate effectively in English. They often resorted to using their native language or a mix of English and their native language when trying to express themselves. This code-switching was a clear indicator of their insufficient vocabulary knowledge.

d) Classroom interaction. Daily classroom interactions were notably affected by the students' weak vocabulary. During speaking exercises, students struggled to form complete sentences and often hesitated or paused frequently, searching for the right words. This not only slowed down the pace of lessons but also affected their confidence in using the language.

e) Comprehension issues. Listening and reading activities highlighted further deficiencies. Students had difficulty understanding instructions, following along

with readings, and grasping the meaning of spoken dialogues or audio recordings. This comprehension gap is a direct consequence of their limited vocabulary base.

The observed deficiencies in vocabulary knowledge adversely affected the students' overall learning experience. Their inability to understand basic instructions, participate in interactive activities, and express themselves hindered their progress in mastering the English language.

This underscored the critical need for targeted interventions to enhance their vocabulary acquisition. Ultimately, the initial evaluation revealed that the majority of the tenth-grade students at the Velasco Ibarra Educational Unit were performing below the expected CEFR A2 level in terms of English vocabulary proficiency. The observed limitations in their lexical range significantly impeded their ability to communicate effectively in English, thereby affecting their overall language learning process. This diagnostic assessment provided a crucial foundation for selecting and implementing appropriate virtual learning objects aimed at improving their vocabulary skills.

English assessment of vocabulary knowledge

The final assessment aimed to evaluate the vocabulary knowledge of the tenth-grade students after the implementation of VLOs in the experimental group and traditional methods in the control group. The assessment covered five sections: sports, types of criminals, careers/occupations, household appliances, and an overall vocabulary review; and the evaluation of vocabulary scored out of 10 points obtained through the sum of the sections. The results for each section in the Control group, as well as the total vocabulary knowledge, are summarized below in table 4 and graph 5:

Table 4

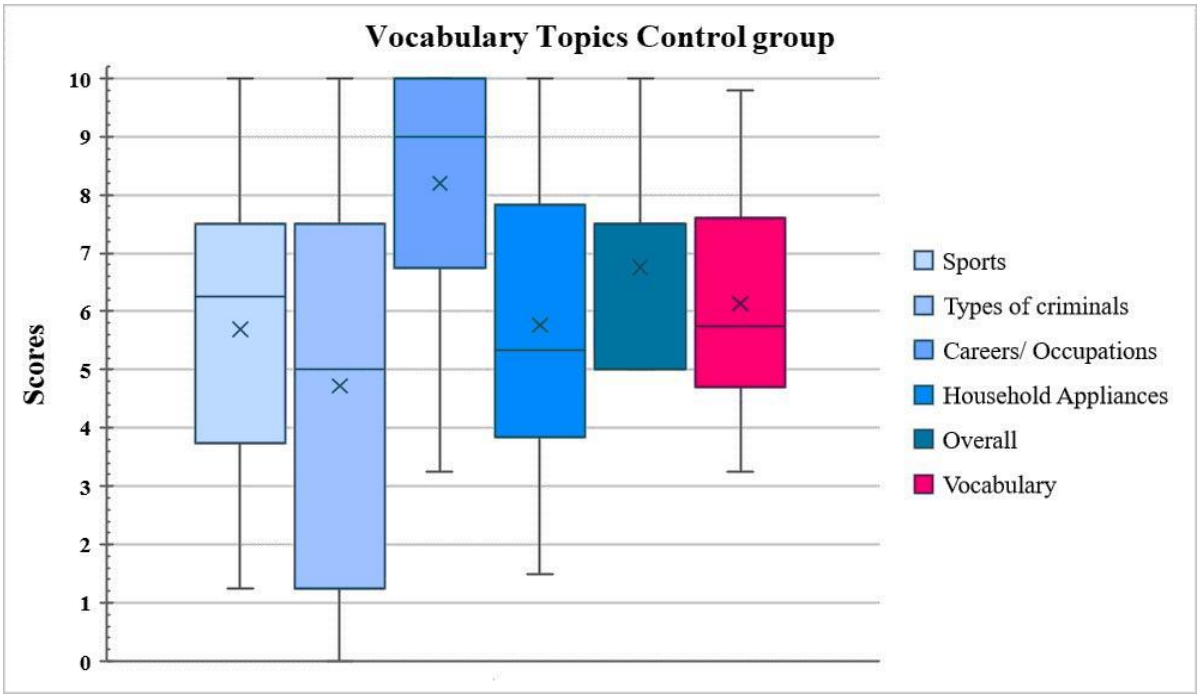
Descriptive results

Sections	Out of	Minimum	Mean	Standard Deviation	Median	Maximum	Mode
Sports	2	0.25	1.14	0.55	1.25	2.00	0.75
Types of criminals	2	0.00	0.94	0.69	1.00	2.00	1.00
Careers/occupations	2	0.65	1.64	0.37	1.80	2.00	2.00
Household appliances	3	0.45	1.73	0.71	1.60	3.00	1.15
Overall	1	0.50	0.68	0.15	0.75	1.00	0.75
Vocabulary	**10**	**3.25**	**6.13**	**1.95**	**5.75**	**9.80**	**4.70**

Note. Vocabulary English test scores by each section. Control group.

Graphic 5

Vocabulary boxplot



Note. Final English test scores by each section. Control Group.

Sport section

The students were evaluated on their knowledge of vocabulary related to sports, with a total possible score of 2 points. The mean score for this section was 1.14, indicating that on average, students in the control group could correctly identify slightly more than half of the items. The standard deviation was 0.55, showing moderate variability in the students' performance. The minimum score observed was 0.25, while the maximum score was 2.00. The median score was 1.25, and the mode was 0.75, indicating that the most frequently obtained score was slightly below the mean.

Types Criminals

In the section on types of criminals, also scored out of 2 points, the mean score was 0.94. This suggests that, on average, students knew less than half of the vocabulary terms in this category. The standard deviation of 0.69 indicates a higher variability in student performance compared to the sports section. The minimum score was 0.00, showing that some students had no knowledge of this vocabulary, while the maximum score was 2.00. The median score was 1.00, and the mode was 1.00, indicating that the most common score achieved was exactly at the midpoint.

Careers/ Occupation

For careers/occupations, the students' scores out of 2 points had a mean of 1.64, reflecting a relatively higher level of knowledge in this area. The standard deviation was 0.37, suggesting less variability and a more consistent performance among students. The minimum score recorded was 0.65, and the maximum was 2.00. The median score was 1.80, with a mode of 2.00, showing that the highest possible score was the most frequently achieved.

Household Appliances

In the household appliances section, which had a total of 3 points, the mean score was 1.73. This indicates that, on average, students knew slightly more than half of the terms in this category. The standard deviation was 0.71, indicating moderate variability. The minimum score was 0.45, and the maximum was 3.00. The median score was 1.60, and the mode was 1.15, suggesting that the most common score was lower than the mean.

Overall Vocabulary

The overall vocabulary section, scored out of 1 point, had a mean score of 0.68. This suggests that students had slightly more than half of the expected knowledge in this general review section. The standard deviation was 0.15, indicating low variability and relatively consistent performance. The minimum score was 0.50, and the maximum score was 1.00. The median score was 0.75, with a mode of 0.75, showing that the most frequent score matched the median.

Total Vocabulary Development

Combining the scores from all sections, the total vocabulary knowledge was evaluated out of 10 points. The mean score was 6.13, suggesting that students in the control group, on average, had knowledge of about 61% of the total vocabulary. The standard deviation was 1.95, indicating a high level of variability among students' total vocabulary knowledge. The minimum total score was 3.25, and the maximum was 9.80. The median total score was 5.75, with a mode of 4.70, indicating that the most frequently obtained total score was below the mean.

Similarly, the results for each section in the Experimental group, as well as the total vocabulary knowledge, are summarized below in table 5 and graph 6:

Table 5

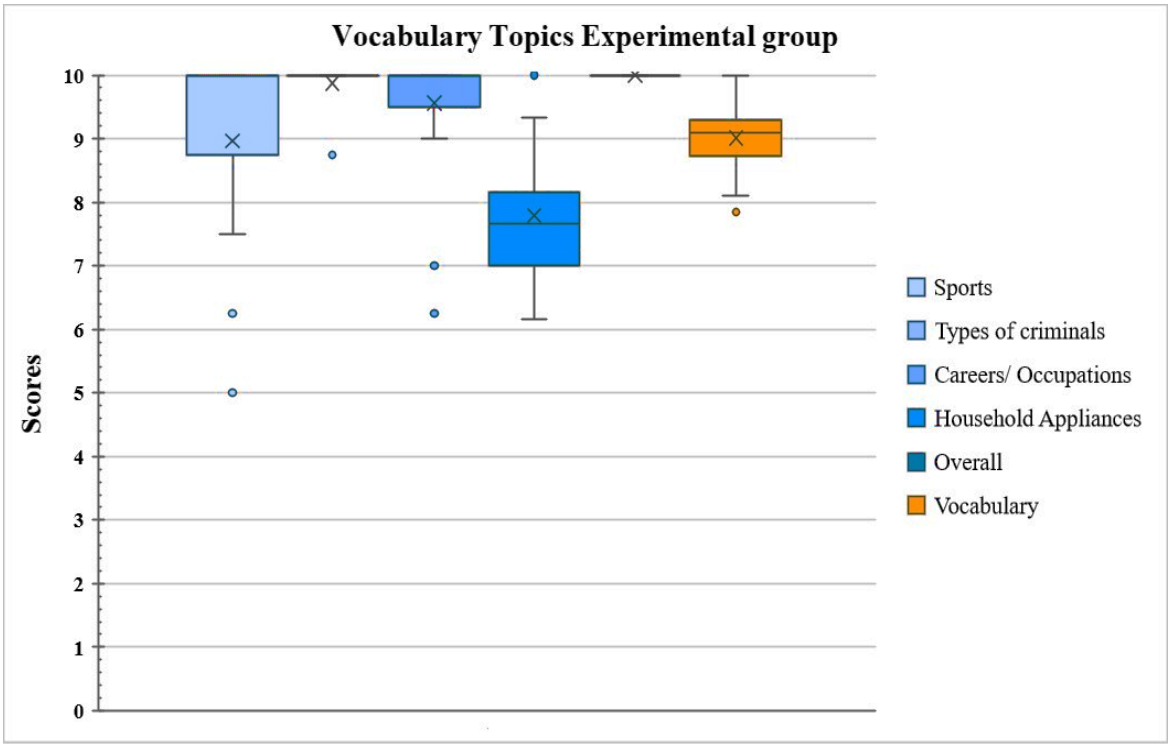
Descriptive results

Sections	Out of	Minimum	Mean	Standard Deviation	Median	Maximum	Mode
Sports	2	1.00	1.79	0.31	2.00	2.00	2.00
Types of criminals	2	1.75	1.97	0.08	2.00	2.00	2.00
Careers/occupations	2	1.25	1.91	0.20	2.00	2.00	2.00
Household appliances	3	1.85	2.34	0.30	2.30	3.00	2.30
Overall	1	1.00	1.00	0.00	1.00	1.00	1.00
Vocabulary	**10**	**7.85**	**9.02**	**0.56**	**9.10**	**10.00**	**9.30**

Note. Vocabulary English test scores by each section. Experimental group.

Graphic 6

Vocabulary boxplot



Note. English vocabulary test scores by each section. Experimental group.

Sports

In the sports section, with a total possible score of 2 points, the mean score was 1.79, indicating that students in the experimental group demonstrated strong knowledge of sports-related vocabulary. The standard deviation was 0.31, suggesting low variability and consistent performance among students. The minimum score observed was 1.00, while the maximum was 2.00. The median score was 2.00, and the mode was also 2.00, indicating that most students achieved the highest possible score in this section.

Types of criminals

For the types of criminals' section, also scored out of 2 points, the mean score was 1.97. This shows that students had nearly perfect knowledge in this category. The standard deviation was 0.08, indicating very little variability and high consistency in students' performance. Both the median and mode scores were 2.00, with the minimum score being 1.75 and the maximum score being 2.00, reflecting that almost all students achieved the maximum score.

Careers/ Occupations

In the careers/occupations section, the students' scores out of 2 points had a mean of 1.91, reflecting a high level of knowledge. The standard deviation was 0.20, indicating slightly more variability compared to the types of criminals' section but still showing overall strong performance. The minimum score was 1.25, and the maximum score was 2.00. Both the median and mode scores were 2.00, suggesting that the majority of students scored the highest possible marks.

Household appliances

In the household appliances section, scored out of 3 points, the mean score was 2.34. This indicates that students had a good grasp of vocabulary related to household appliances. The standard deviation was 0.30, indicating moderate variability. The minimum score recorded was 1.85, and the maximum score was 3.00. The median score was 2.30, and the mode was also 2.30, reflecting strong overall performance in this category.

Overall vocabulary

For the overall vocabulary section, scored out of 1 point, the mean, median, and mode scores were all 1.00, with no variability (standard deviation of 0.00). This indicates that every student in the experimental group achieved the maximum score, demonstrating complete knowledge in this general review section.

Total vocabulary development

Combining the scores from all sections, the total vocabulary knowledge was evaluated out of 10 points. The mean score was 9.02, indicating that students, on average, knew over 90% of the total vocabulary. The standard deviation was 0.56, suggesting moderate variability among students' total vocabulary knowledge. The minimum total score was 7.85, and the maximum was 10.00. The median total score was 9.10, with a mode of 9.30, indicating that most students achieved very high total scores.

Comparison between the experimental and control group

The comparative analysis aims to evaluate the effectiveness of virtual learning objects (VLOs) in the experimental group compared to traditional learning methods used in the control group. This analysis is guided by the research objectives and employs a quasi-experimental design to assess differences in vocabulary knowledge between the two groups.

Sports

The experimental group outperformed the control group with a mean score difference of 0.65. The lower standard deviation in the experimental group indicates more consistent performance, highlighting the effectiveness of VLOs in improving sports-related vocabulary.

Types of criminals

The experimental group showed a mean score increase of 1.03 compared to the control group, with the minimal variability in the experimental group's scores demonstrating the strong and uniform impact of VLOs on learning this vocabulary.

Career/ occupations

The experimental group achieved higher scores by 0.27 on average. The lower standard deviation indicates that the VLOs contributed to more consistent and higher vocabulary acquisition in this category.

Household appliances

The experimental group's mean score was 0.61 higher than that of the control group. The reduced standard deviation in the experimental group suggests more consistent and effective learning through VLOs.

Overall vocabulary

The experimental group outperformed the control group by 0.32 points on average. The lack of variability in the experimental group's scores indicates that all students achieved full marks, reflecting the efficacy of VLOs in this general review section.

Total vocabulary development

The experimental group outscored the control group by 2.89 points on average. The much lower standard deviation in the experimental group signifies that the use of VLOs not

only increased vocabulary knowledge but also ensured that the improvement was consistent across the group.

The comparative analysis demonstrates that the experimental group, which utilized virtual learning objects, performed significantly better across all sections of the vocabulary assessment compared to the control group, which relied on traditional learning methods. The mean scores in all categories were higher in the experimental group, and the lower standard deviations indicate more consistent performance among students. The analysis performed can be corroborated through the direct comparison of the total vocabulary scores obtained by the students of both groups, as shown in the following data table:

Table 6

Total English vocabulary development

N° Student	Control Group (Out of 10)	Experimental group (Out of 10)
1	7.7	9.3
2	4	8.95
3	5.95	9.3
4	4.45	9.3
5	9.25	9.05
6	8.15	8.3
7	9.3	9.3
8	6.65	9.3
9	4.85	8.1
10	5.7	8.85
11	7.6	9.1
12	5.3	9.1
13	7.1	9.1
14	9.8	7.85
15	8.15	10
16	5.3	9.25
17	3.3	8.65
18	6.65	8.6
19	3.65	9.3
20	5.75	10
21	6.35	10
22	4.7	9

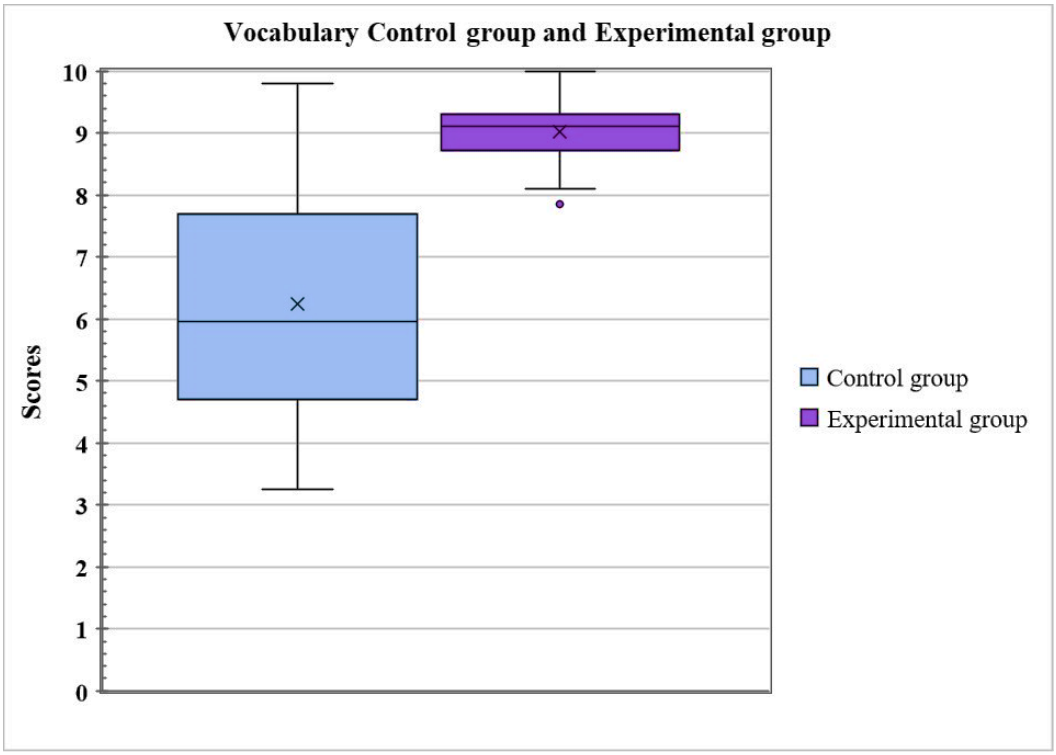
N° Student	Control Group (Out of 10)	Experimental group (Out of 10)
23	9.3	8.1
24	7.1	8.9
25	4.25	8.1
26	3.25	9.6
27	4.9	8.8
28	-	9.3
29	-	8.95

Note. Scores obtained on the total vocabulary development by students in the experimental group versus those in the control group.

In a complementary manner, a boxplot is presented below to observe the distribution of the students' scores in both groups:

Graphic 7

Vocabulary development boxplot



Note. Total English test vocabulary development.

4.2 Hypothesis Verification

The purpose of this section is to verify the research hypothesis that the use of virtual learning objects (VLOs) help students to improve their knowledge of English vocabulary more effectively than traditional methods. In that sense, the hypothesis research was formulated as follows: The use of virtual learning objects develops English vocabulary in students of tenth grades of Velasco Ibarra Educational Unit, Guamote Canton, period 2023 - 2024.

To test this hypothesis, the Student's t-test for two independent samples was applied. This statistical method was chosen to compare the post-test scores of the experimental group (Parallel B) and the control group (Parallel A) with a significance level of 0.05. Next table shows the results of the Student's t-test for two independent samples:

Table 7

Students' t - test

	Control group	Experimental group
Mean	6.2389	9.0155
Variance	3.7893	0.3100
N	27	29
Difference of means	0	
Degrees of freedom	29.5	
Studentś t value	**-7.1446**	
p-value (T<=t) single tailed	$3.03 \; x \; 10^{-8}$	
Critical value of t (one-tailed)	-1.6973	

Note. Results of the Students t – test for two independent samples.

To determine the significance of the results, the calculated t-value is compared against the critical t-value from the t-distribution table at a significance level of 0.05. For 30 degrees of freedom, the critical t-value (one-tailed) is approximately ±1.69726.

Given that the absolute value of the calculated t-value (-7.1446) is greater than the critical value of -1.69726, the null hypothesis is rejected. This indicates that there is a statistically significant difference between the mean scores of the control group (Parallel A) and the experimental group (Parallel B). It implies that the use of virtual learning objects develops English vocabulary in students of tenth grades of Velasco Ibarra Educational Unit, Guamote Canton, period 2023 - 2024.

These findings demonstrate that virtual learning objects not only enhance vocabulary acquisition but also contribute to more uniform learning outcomes among students. Therefore, integrating VLOs into the curriculum can be seen as a more effective strategy for vocabulary development in educational settings.

The use of VLOs in the experimental group provided several significant advantages. Firstly, these tools offered enhanced engagement and interactivity. For instance, platforms like Wordwall and Educaplay turned learning into an interactive and enjoyable experience, thus increasing student motivation and interest. The inclusion of multimedia elements through Google Sites/Audio and Genially/Audio allowed for a more dynamic learning experience, catering to different learning styles and making lessons more engaging.

Another advantage of VLOs was the provision of immediate feedback. Tools such as Liveworksheet and Quizzis allowed students to receive instant feedback on their performance, enabling them to quickly understand and correct their mistakes. This immediate reinforcement is crucial for effective learning and helps students progress more efficiently.

Moreover, VLOs facilitated multisensory learning. By incorporating audio, visual, and kinesthetic elements, these tools catered to various learning styles, making the vocabulary acquisition process more comprehensive and effective.

This multisensory approach is particularly beneficial for language learning, as it allows students to see, hear, and interact with new vocabulary, thereby enhancing retention and understanding.

Collaboration and interaction were also significantly enhanced through VLOs. Tools like Slide Google and Padlet promoted real-time collaboration among students, fostering a sense of community and peer learning. This collaborative environment not only enhanced the learning experience but also encouraged students to engage more deeply with the material.

Furthermore, the ability to personalize learning experiences was a standout feature of VLOs. Platforms such as Topworksheet allowed teachers to create customized learning materials that addressed the specific needs of each student. This level of personalization ensured that students could learn at their own pace and focus on areas where they needed the most improvement, thereby optimizing the learning process.

In contrast, the control group, which relied on traditional methods, faced several limitations. While these methods provided a straightforward and structured approach to learning, they lacked the dynamic and interactive elements of VLOs. The traditional tools, such as PowerPoint presentations and text-based documents, offered limited opportunities for student interaction and engagement. This lack of interactivity could lead to decreased motivation and interest among students. Additionally, traditional methods did not provide immediate feedback, which is a critical component of effective learning. The use of static documents and worksheets meant that students had to wait for teacher feedback, slowing down the learning process and potentially allowing mistakes to go uncorrected for longer periods.

The absence of multimedia elements in traditional methods also meant that lessons could be less engaging and might not cater to different learning styles. This limitation could hinder the overall effectiveness of vocabulary acquisition, as students might not be able to fully engage with the material in a way that suits their individual learning preferences. Lastly, traditional methods did not inherently promote real-time collaboration and peer learning. The use of static presentations and documents did not facilitate the same level of interaction and community building as the VLOs, potentially limiting the opportunities for students to learn from one another.

4.3 Discussion of results

The test applied to the tenth-grade students of Velasco Ibarra Educational Unit assessed their English vocabulary across topics such as sports, types of criminals, careers, household appliances, and general vocabulary knowledge. The tasks included naming sports from pictures, unscrambling letters, completing sentences with specific terms, classifying careers and occupations, and solving crossword puzzles. While the test aimed to align with the A2 level of the CEFR, certain sections required more specialized vocabulary and context application, pushing towards A2.2 level complexity. The initial observation revealed that most students did not reach the expected A2 level, highlighting significant gaps in foundational vocabulary knowledge. These gaps impacted their ability to communicate effectively in English, affecting classroom participation and comprehension. The complexity of the test underscored the need for targeted interventions like the use of VLOs, which our study demonstrated as effective in addressing these vocabulary deficiencies and improving overall language competence.

Evaluating vocabulary knowledge is essential for identifying problems or deficiencies that can hinder language learning progress. According to Schmitt (2019)

research entitled: "Understanding Vocabulary Acquisition, Instruction, and Assessment: A Research Agenda," understanding vocabulary acquisition and its progression from receptive to productive mastery is crucial. By assessing vocabulary knowledge, educators can pinpoint specific areas where students struggle, enabling targeted interventions. This aligns with the need to develop more informative measures of vocabulary knowledge and to incorporate effective lexical teaching principles into educational materials. Detecting deficiencies early allows for timely and effective strategies to address these gaps, thereby enhancing overall language competence and fluency. This comprehensive approach ensures that students are not only acquiring vocabulary but are also able to use it effectively in communication, thus facilitating smoother and more efficient language learning progress.

On the other hand, the findings of the present study related to the use of virtual learning objects to enhance English vocabulary among tenth-grade students at the Velasco Ibarra Educational Unit align with the research conducted by Diettes, (2022), titled "Creación de objetos virtuales de aprendizaje para el desarrollo de competencias tecnológicas y el aprendizaje del inglés como lengua extranjera." Parra's research emphasizes that the creation and utilization of VLOs not only foster the development of technological competencies (TICs) but also significantly motivate students to learn English as a foreign language. The findings of this study support Parra's conclusions regarding the benefits of VLOs in language learning. Effectively, the use of VLOs not only enhanced students' vocabulary retention and acquisition but also promoted the development of technological competencies, compensatory strategies, and metacognitive skills. These outcomes suggest that VLOs are not only effective in achieving specific language learning goals but also in preparing students for a broader digital and autonomous learning landscape.

Therefore, incorporating VLOs into the curriculum can be a beneficial strategy for fostering comprehensive language proficiency and learner autonomy.

The integration of VLOs such as Wordwall.net has demonstrated significant positive impacts on English vocabulary learning. The research titled "Teacher Perceptions on the Use of the Wordwall.Net Application as an English Vocabulary Learning Media" by Paksi et al., (2023), aligns closely with present observations, reinforcing the benefits and effectiveness of using interactive digital tools in language education. Teachers praised Wordwall.net for its user-friendly interface, diverse activities, and motivational impact, which align with our observations of increased student engagement in the experimental group. The ease of registering, designing activities, and managing classroom dynamics was highlighted, facilitating a smoother learning process and diverse instructional strategies. Wordwall.net also supports the development of compensatory and metacognitive strategies, promoting student autonomy and technological proficiency. Positive feedback on classroom management and evaluation capabilities further emphasizes its role in organized and efficient learning activities, contributing to improved vocabulary retention and performance.

Chapter V

Proposal Framework

5.1 Preventive Activity Planning

Informative Data

Title of the proposal: Design of an online platform with virtual learning objects that support the teaching and learning process for the development of students' English vocabulary.

School name: Unidad Educativa “Velasco Ibarra”.

Province: Chimborazo.

Canton: Guamote.

Address: 10 de agosto AV. Macas.

Beneficiaries: English Teachers/ Tenth grade students.

Application: From January 8th to February 1st, 2024

Responsible: Lic. Yadira Patricia Castro Molina.

Tutor: Mgs. Tatiana Elizabeth Martínez Zapata.

Background of the Proposal

The design of an online platform that includes virtual learning objects for adolescent students is focused in-depth study of English vocabulary development using digital resources with various activities in order to improve English language acquisition in an affordable, fun, interactive, and effective way. This platform is based on robust evidence, sets best practices providing teachers with innovative tools and multimedia tasks that promote optimal English vocabulary expansion.

Justification

The use of technology in education has become an important factor as it can help both students and teachers a lot. The research is based on the use of ICTs incorporating VLOs, interactive learning and English vocabulary teaching that educators should insert into their lessons.

Therefore, the development of this proposal aims to support students as teachers by dynamically integrating innovative pedagogical content that engages students and motivates them to learn, making a significant impact on the teaching and learning, especially the English vocabulary development.

The direct beneficiaries of this proposal are tenth grade students, since this research was carried out at this educational level with the intention of facilitating the acquisition of the English lexicon by joining virtual learning objects with various tasks, and allowing them to learn by improving their ICT and the vocabulary subskill actively.

By the use of Virtual Learning Objects (VLO), the goal is not only to improve students' skills, but also to awake interest and inspiration through the implementation of new learning objects that use technology in the educational process. Besides it does not depend on teaching style in which it is located, but how the meaning that exists between the contents, activities and teaching materials aligned with educational needs is given. In this sense, virtual learning objects play a dominant role due to the way in which their contents are conveyed as well as the transfer of knowledge is simpler and more comfortable.

Finally, this digital platform will likely be a valuable resource to foster creativity and innovation in English vocabulary development and contribute to adolescents' academic and personal success in English language learning.

Objectives

General Objective

- Propose the design of a virtual platform that uses interactive tools for the creation of virtual learning objects with various innovative and effective activities that promote the development of English vocabulary.

Specific Objectives

- Integrate various dynamic activities created with virtual learning objects that motivate the development of English vocabulary in students.
- Set virtual learning objects within the structure of sections related to vocabulary based on the ADDIE methodology on the milaulas.com platform.
- Promote the use of virtual objects by teachers during the teaching process to strengthen the English word stock learning.

Methodology of the Proposal

The development model applied in this research proposal was the ADDIE framework. Sindu et al., (2021) point out this model consists of five phases: analysis, design, development, implementation and evaluation, in which each of them is defined according to the design of the virtual platform including the components necessary to manage and achieve the set objectives.

Phase 1: Analysis

The analysis stage looks at the learning process's context and assesses its suitability, viability, and scalability. It frequently consists of the following:

- Recognize learning objectives and outcomes.
- Conduct learner analysis (needs, preferences, skills.)
- Specify who the intended audience is and determine the educational setting.
- Analyze content and resources already available.

Table 8

ADDIE Methodology Analysis Stage

Addressed to	Tenth - grade student between 12 - 13 years' old who studies at the Velasco Ibarra Educative Unit.
Content	Four vocabulary topics: sports, types of criminals, careers/occupations and household appliances for 4 weeks.
Context	Velasco Ibarra Educational Unit using one of the appropriate classrooms with a projector for the development of digital activities.
Resources	Internet access, virtual learning objects for the development of interactive activities.

Note. Analysis of the proposal. Author's preparation.

Phase 2: Design

In this phase, the findings from the analysis are employed to create a structure for the learning process and determine the instructional strategies, activities, and assessments that will be used to achieve the goals of the educational curriculum. This phase typically includes:

- Develop a clear instructional strategy.
- Create a storyboard or prototype.
- Design engaging visuals and graphics.
- Plan interactive elements (e.g., simulations, games.)
- State technical requirements and infrastructure.

It means the use of an instructional methodology combined with the structure and management of activities with different sections and procedures to teach each vocabulary topic through the use of virtual learning objects settle on the virtual platform. In this way, learners are actively involved in the assimilation and development of English vocabulary in a new and creative form.

Phase 3: Development

The development phase expands on the design phase results to enhance instructional content and activities for improving learners' performance. This encompasses creating content, designing activities, and developing assessments that are accessible to all learners and integrate cultural diversity and gender perspectives in online learning programs. This stage focus on:

- Create the VLOs context (text, images, audios, videos.)
- Build the VLOs structure and navigation.
- Implement accessibility features and conduct quality assurance and testing.

In this part, the virtual platform contains a logical sequence which is divided into sections for each vocabulary topic and following a process to teach the lexical content with various virtual objects that are detailed in the administration of this proposal.

Phase 4: Implementation

In this stage, the educational resources and services are distributed to the students. The goal is to facilitate a productive and successful learning environment that helps students achieve their objectives and encourages the desired change in behavior and performance. All these aspects are appended in the proposal:

- Deploy the VLOs on a suitable platform (LMS, website, etc.)
- Configure technical settings and integrations.
- Provide learner support and guidance.
- Offer ongoing maintenance and updates.
- Monitor analytics and performance data.

Phase 5: Evaluation

This step assesses the efficiency and effectiveness of the learning advancement. Its objective is to verify that the learning process fulfills the identified needs, resolves the identified problem, and yields improved performance. This virtual space involves:

- Assess learner engagement and satisfaction.
- Evaluate knowledge transfer and retention.
- Measure learning outcomes and achievement.
- Gather feedback a suggestion.
- Refine and review the VLOs based on evaluation result.

Administration of the Proposal

The proposal is intended only for tenth grade students of Velasco Ibarra Educative Unit. It was applied with the approval of the respective authorities in order to test its effectiveness.

The purpose of this plan is to encourage students to learn through virtual learning objects in their vocabulary lessons to improve their teaching and learning process of the English language along with other skills. Before explaining the management of the proposal, a step-by-step description of the selected virtual learning objects designed and used is provided.

1. **Google Slide**

Graphic 8

Google slide icon

Note. Got from bit.ai. Source: https://acortar.link/m9InGl

Definition

Google Slides is a virtual object also known as Google Presentation that is a web application that incorporates almost all the functions of conventional presentation programs such as Microsoft PowerPoint, with the benefits of cloud storage (Home, 2021). It involves some features like inserting images, animations, formatted content, editing transitions between slides, cooperative editing with other devices, and using different templates.

Steps to use it

1. Go to the Google homepage, then click on the grid in the top right corner and click on the Drive icon.
2. From Drive, click the blue 'Create New' button on the left side of the page. Select 'Google Slides' from the drop-down menu.
3. Chose an option from the top of the page to create a new slide.
4. Put a title and a theme to the selected slide.
5. Add new slides by clicking at the upper left hand corner button.
6. Go to the top editing bar and click insert image using the provided options or upload them.
7. Click the box with a T in the upper editing bar for introduce text, change font, size, underlined, or italic.
8. Click the blue '+ Select objects to animate' button to add animation to each item.
9. Press the Share button to edit the presentation permissions via emails, names, or get a link.
10. Click 'Present' in the top right corner to see the finished product.

This powerful presentation tool can definitely be used for various purposes including professional presentations, educational presentations, and personal presentations. Its features help to create informative and engaging content.

2. Top Worksheets

Graphic 9

Top Worksheets icon

Note. Got from bolsamania.com. Source: https://acortar.link/c5GF7u

Definition

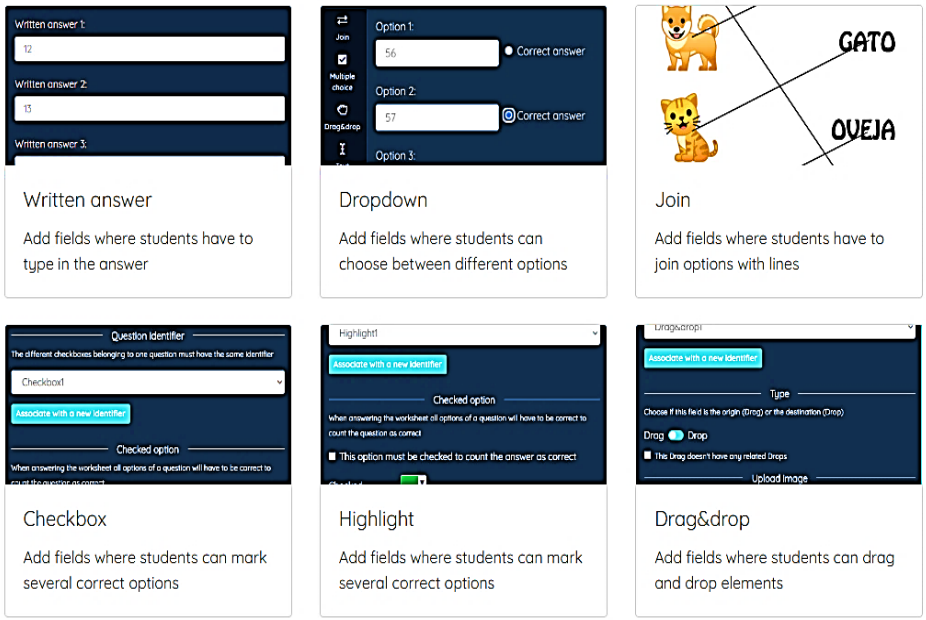
Top Worksheets are an online platform that helps create and implement proposed activities. They can be carried out through interactive sheets or cards designed attractively and practically (Alonso et al., 2023). Their key features include converting existing worksheets into interactive worksheets, browsing thousands of ready-to-use worksheets, assigning tasks and submitting them with automatic grading, cooperating on worksheet generation, and integrating with the learning management network.

Steps to use it

1. Sign up to create an account on the Top Worksheets home page https://www.topworksheets.com/es/home
2. Create worksheets by uploading a PDF document or creating them from scratch by manipulating and using the necessary tools to make them interactive. Example:

Graphic 10

Field types to add



Note. Description of each field type. Source. https://acortar.link/obGfbx

3. Share worksheets by assigning assignments to students with a single link or create close groups by logging in or registering to access assignments.
4. Manage worksheets and answers by checking students' submissions when they complete tasks.

Top Worksheet is a website that is easy to navigate without having in-depth knowledge, creating the confidence to work on an educational content for children, teenagers, and adults, whether in English or another language, counting as a great technological ally.

3. Wordwall

Graphic 11

Wordwall icon

Note. Got from eltplanning.com. Source: https://acortar.link/zipu70

Definition

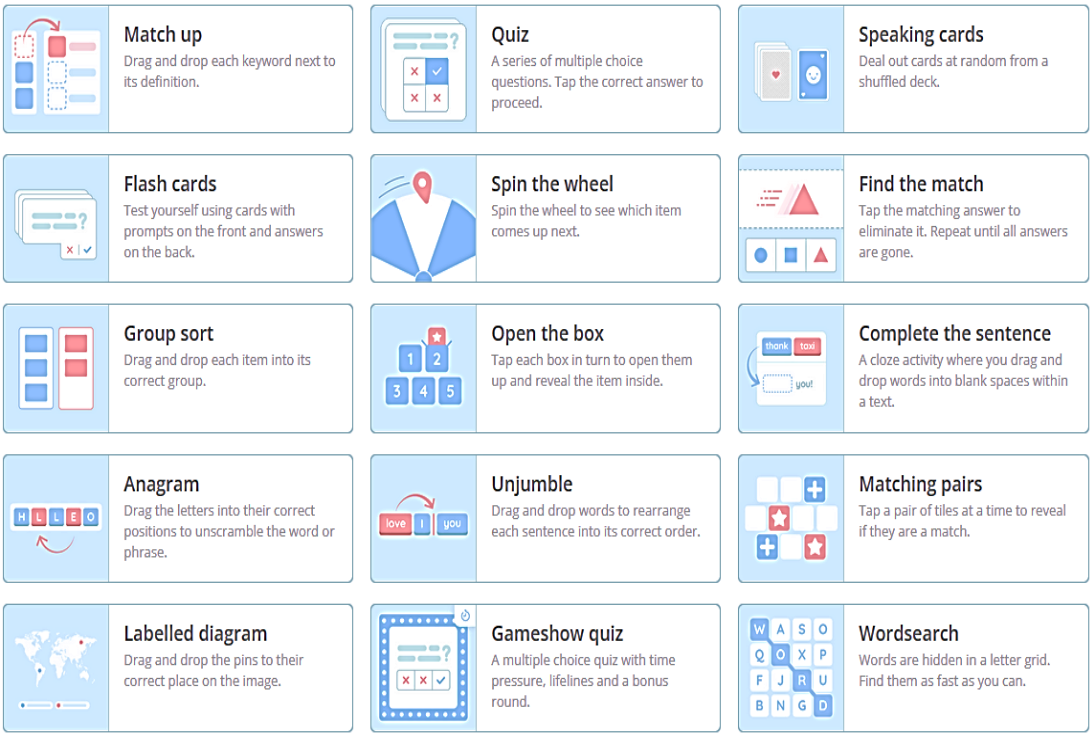
WordWall presents interactive activities and templates sketched to encourage creativity, critical thinking, and clear communication. These activities can be customized to fit grade levels, needs, and goals, providing a varied and engaging learning experience (Amri & Sukmaningrum, 2023). Teachers can create different activities such as anagrams, classification, matching up, and more. A link can be shared to assign a task to students. They can complete activities as interactive part of a class or as homework. Teachers can track the outcome of students' activity when they finish.

Steps to use it

1. Make an account using a Google account or an account with a personal email address, and then login.
2. Utilize Wordwall's community library by choosing what to employ according to the picture's title.
3. Modify a Wordwall activity by clicking *edit content* when changes are made, click in button *done* and this will be saved on *my activities* at the top of the page.
4. Create a new activity in the blue box and decide what kind when a template is selected taking into account the activity types like word search, anagrams, whack-a-mole, and random.

Graphic 12

Activities template



Note. Each activity type. Source: https://acortar.link/wVCpBn

5. Share a Wordwall activity by going to *my activities* on the website and clicking the three dots. Then click *Share Now* and click *Publish*. This will generate a link.
6. Set an assignment on Wordwall by providing it a name, having a mystery entry, adding a deadline, and deciding whether to show responses at the end or not.

This platform keeps teachers' preparation time, makes lessons more creative and attractive, and gives free to students without paper worksheets. Students are able to practice at their own pace and try again when they need more practice.

4. Puzzel

Graphic 13

Puzzel.org icon

Note. Got from puzzle.org. Source: https://acortar.link/6dOPCA

Definition

Puzzel.org is an interactive resource that allows teachers to create their own simple, personalized online puzzles. Various features and layout settings permit them to create puzzles that meet learning objectives (Puzzel.org, 2020). It has basic features such as creating a new puzzle, adding questions, modifying, changing, deleting, and publishing any task.

Steps to use it

1. Start creating a new activity by clicking on the '*Create*' button**.**

2. Edit a puzzle going to the account dashboard, and clicking on the ´*Edit*´ button for redesigning through needed modifications in real time.
3. Click on the '*Publish-tab'* when the puzzle is created or edited. Also a section for *'Clone'* or *'Copy'* options are shown.
4. Students can feel free to play any puzzle due to 60 can be performed per month per account.

Puzzles are designed to train the brain by playing online crossword puzzles, riddles, word searches, and logic problems that operate different parts of the brain and help to develop critical and analytical thinking skills, especially English vocabulary.

5. Google Sides

Graphic 14

Google sites icon

Note. Google sites vector. Source: https://acortar.link/CjSL6g

Definition

Google Sites is a basic app builder that allows to create and publish websites with deftness. It could be used as virtual canvas to show information, share projects, and assemble an e-portfolio (Lau, 2024). Google sites lets users to personalize simple web via some features as websites making, google drive integration, group edition, secure and accessibility.

Steps to use it

1. Go to home page sites.google.com.
2. Click ´*Start a New Site*´ at the top by selecting a template.
3. Enter a site name at the top left and press ´*Enter*´.
4. Edit the content by clicking ´*Insert*´ > ´*Text Box*´ to add text, click ´*Insert*´> ´*Image*´ on the right, choose where to place it, choose an image and click ´*Open or Select*´.
5. Add a section layout by clicking ´*Insert*´, under ´*Content Blocks*´, drag the layout and add text, images or videos.
6. Design the page by adding more elements such as collapsible text, search bar, image carousel, social media links, etc.
7. Add a pre-designed theme by clicking ´*Themes*´ on the right.
8. Publish the work for look it by clicking ´*Share*´ with people or groups by entering an email address.
9. Click ´*Editor*´ to allow others to make changes or redesign the site and click ´*Done*´.

Google Sites is considered an alternative environment for enhancing students' learning activities and improving their vocabulary along with other skills. It can also be easily accessed by students using networked devices or laptops.

6. Genially

Graphic 15

Genially icon

Note. Desktop App for mac, & Windows PC. Source: https://acortar.link/ukiEzL

Definition

Genially is a digital platform for making creative flashcards, slides, and gamification. Its interface is almost similar to PowerPoint and both can be used to create presentations (Syafitri & Sujannah, 2024). Also, this tool has functions that support users through various templates for hyperlinks, presentations, audio, images, YouTube videos, forms, and interactive questionnaires, avoiding making the lessons boring being easy to use, having a free version and a customized one.

How to use it

1. Click the *´Register´* button on the main page www.genial.ly via email, or by authenticating with your Gmail or social media account.
2. Start with a blank canva or use any pre-built template from the main panel or browse the log of each type of creation like infographics, slides, games, e-learning resources, etc.
3. Edit and customize the model presentation by exploring how each tool works to try the right background, color palettes, photos, text and shapes in design.
4. Add animation and interactivity starting from a template where the movements are already configured or modify them by manipulating the tools panel with a single click on it.
5. Interact with anyone by getting the link to the creation or sharing it on any social network by email, or embedding it on a web page.

Genially is one of the best interactive platforms for advanced education in the 21st century. It empowers teachers to change traditional methods and adopt innovative techniques in their academic practice, capturing students' attention with inclusion active interaction in a more immersive and effective way.

7. **Educaplay**

Graphic 16

App icon

Note. Free academic games generator. Source: https://acortar.link/KK2uTJ

Educaplay is a digital program that offers activities to enhance learning with interactive exercises that promote the active participation of students and stimulate the academic environment for the acquisition of the target language (Vargas-Saritama & Celi, 2024). Educaplay offers a wide range of tools for teachers to create educational tasks adapted to different learning styles and goals. For instance, riddles, crosswords, word searches, puzzles, and more encourage vocabulary development.

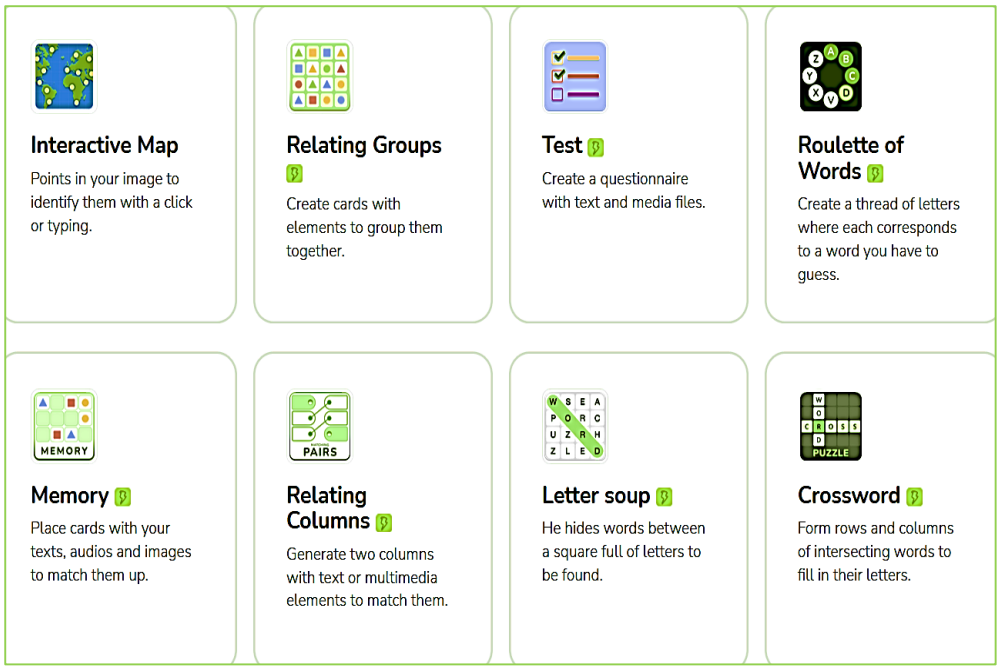
How to use it

1. Create a free account at https://es.educaplay.com/, log in from Facebook or Google.
2. Start creating tasks by clicking on one of the 17 proposed activities.
3. Share Educaplay games by inviting students without having to register or create group projects by sharing a collection with other users. Students can log in with a link or PIN.

Educaplay is perceived as an integral part of interactivity in the educational process because it offers a wide range of activities that allow students to engage in meaningful learning and, above all, to learn authentically while playing. In other words, classroom games can be created with this versatile, easy-to-use, and meaningful platform through its options for checking context becoming a summative or a formative tool of interest.

Graphic 17

Activities simple



Note. Activities description. Source: https://es.educaplay.com/editor-de-recursos/

8. Prezi

Graphic 18

Prezi icon

Note. Logo thumbnail transparent. Source: https://acortar.link/kXyapL

Prezi is a web-based presentation software that offers a diverse of records types and tools for creating and storing online slides. Creating a storyboard in an outdated PowerPoint presentation require a linear story (Jamilah et al., 2022).

This illustration tool is focused on the idea of a free-flowing canvas. Instead of slides, variety topics and subtopics on a canvas that expands and contracts with a video camera-like effect. In this sense, Prezi templates are cleverly designed and look nice and cool.

How to use it

1. Go to www.prezi.com, then click on the blue *´Get Started´* button at the top right of the site**.**
2. Set up an account, fill in the requested information, and click the *´Create your free public account´* button.
3. Go to the dashboard, then click on the sliding arrow button on the right side until the *'Start Creating'* button.
4. Click *´Create a new Prezi´* by selecting one of the *´Canvas´* to edit it.
5. Click to *´Add Text´* in the large circle shown with two labels known as a frame and equivalent to “slides” to write anything.
6. Click on the top left corner of the page where there is a circle with a "+" symbol in the middle, then click on *´Circle Frame´* to choose any one.
7. Click in the “+” circle button to add as many frames as needed.
8. Click and hold the frames overview on the left side and drag it to the desired position to reorder them.
9. Click on ´Insert´ at the top of the page to add multimedia resources such as photos, images or videos.
10. Click on '*Customize*' at the top center of the page to edit the theme and give a better appearance.
11. Click the star icon to apply a fade, motion, or animation effect to the text.

12. Click the ´*Advanced*´ button to customize the job by changing the color and checking the different options of the small pop-up screen.
13. Share the Prezi submission link when the work is complete.

Proposal Management

The virtual platform is a learning space that has several benefits for students among them being able to facilitate, convey, and reinforce the contents with the resources that the teacher provides.

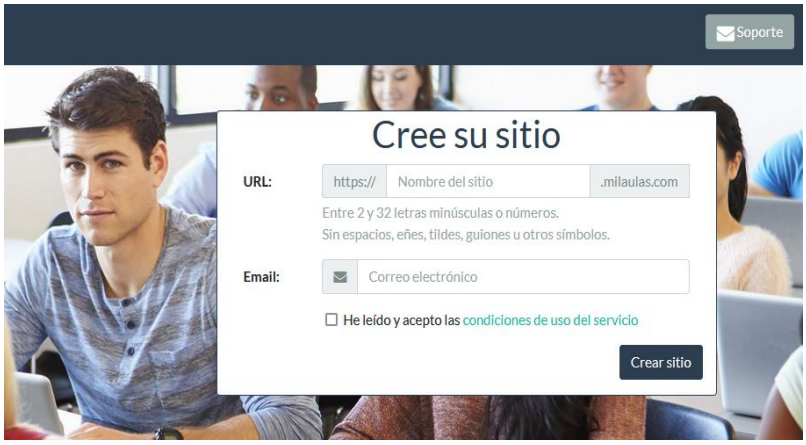
Work has been done in MOODLE to create the virtual platform, and the space that provides the website is www.milaulas.com. Below it is explained how to register and how sections of activities have been created with VLOs for the teacher incorporates into lessons and support students' knowledge of English vocabulary development.

Steps to create a virtual platform

1. Go to www.milaulas.com
2. Complete the information requested to create the site.

Graphic 19

Mil aulas



Note. Screen show of the web. Source: www.milaulas.com

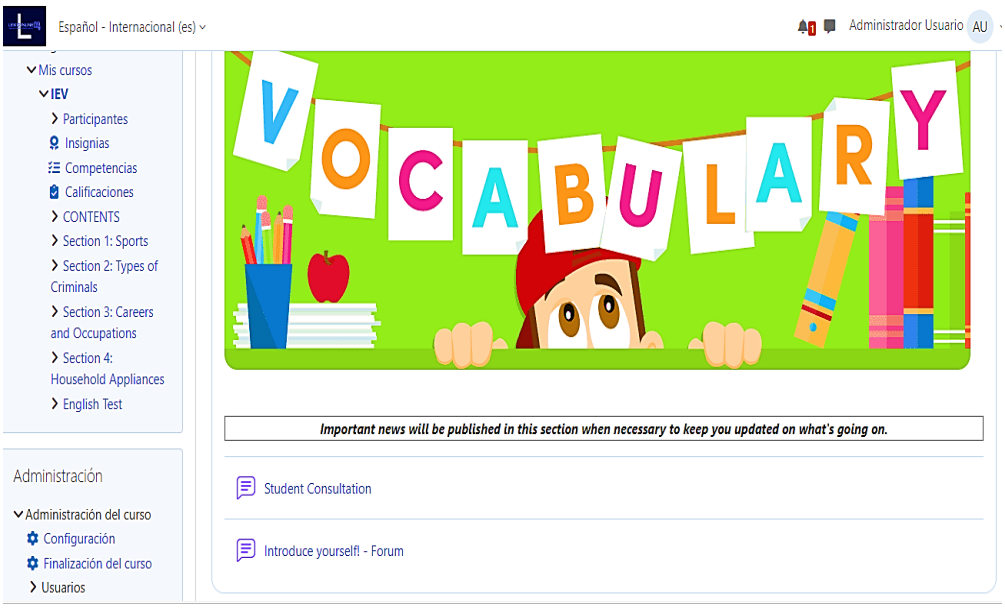
3. Enter the registered email where a website address is received, username and password, which must be used to enter the virtual classroom.
4. The website is ready to be edited through the manipulation of different tools given for the page according to the activities that the teacher is going to develop.

Initial content

The Virtual Teaching and Learning Platform is called "Interactive English Vocabulary" because it is aimed at developing English vocabulary in a fun way. In this part, it is possible to place elements such as: the website logo, the name of the subject to be taught, a forum to obtain prior information, suggestions or questions from students, as well as preliminary aspects such as welcoming students and points to consider necessary to inform students how to work throughout the lesson. The execution structure of this section is therefore as follows:

Graphic 20

Beginning



Note. Preliminary features of virtual environment. Source: Author's preparation

Vocabulary sections

The virtual platform is divided into 4 sections according to each vocabulary topic (sports, types of criminals, careers and occupations, and household appliances) and the last one refers to the final evaluation linked to various learning activities adapted to the VLOs.

Graphic 21

Sections

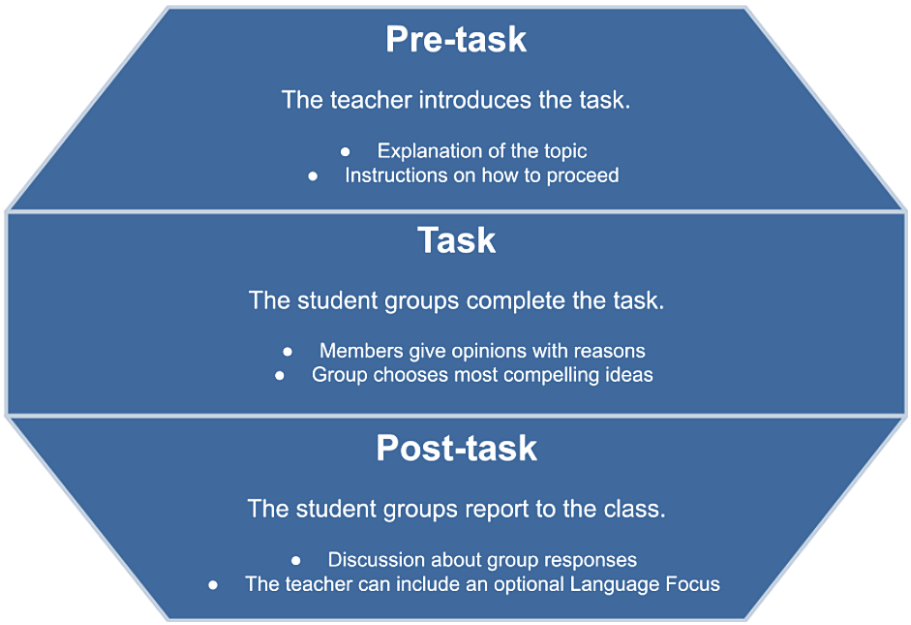
Note. Vocabulary sections of the virtual platform. Source: Author's preparation

Besides, each segment follows the structural framework of TBL (task-based learning) as a sequential method of tasks to make vocabulary lessons more understandable.

Task-Based Learning (TBL) is a language approach that aims to facilitate learners with a natural context for language use and emphasizes introducing new language features such as vocabulary, grammar and pronunciation (Naqsyabandiyah & Dehghani, 2023). In this sense, each section follows each phase of TBL by emphasizing redesigned student-centered learning activities with different VLOs that require students to complete vocabulary tasks individually or in groups, as explained below

Graphic 22

Phases of TBL



Note. Brief explanation of TBL. Source: https://acortar.link/cKT5u3

Pre - task

A setup task with an appropriate VLO was created to "frame" the topic familiarization activity, in which some instructions were provided to follow so that students could proceed to the next step indirectly.

Task

Some vocabulary activities adapted to other VLOs were proposed and students decided how to complete them according to dynamic assimilation to develop their English vocabulary, based on their interaction and engagement in the lesson.

Post – task

A whole class report about tasks completion was conducted by the teacher including "focus on vocabulary language," and an additional activity was provided through a new VLO for further practice.

Last thing

The various virtual learning objects created can be used individually through links on the web or incorporated into this proposed virtual platform “milaulas.com” as a source to help teachers and academics for the development of English vocabulary in an innovative change to support the educational process in this time.

For the structured material on the virtual site took into account vocabulary learning objectives and topic-specific activities through distinct VLOs as creative material for capture students' attention. In addition to assimilate new vocabulary, students could also browse the VLOs by study section.

Below is a chart of each section where it is possible to find some examples made in the selected tools that were the subject of study, to create virtual learning objects, which will serve as a basis for English teachers who wish to improve and innovate their educational practice with new trends.

The link to the online platform is attached so that participants, whether teachers or students, can log in once registered with a username and password generated automatically to view this proposal https://englishlexicon.milaulas.com/login/index.php

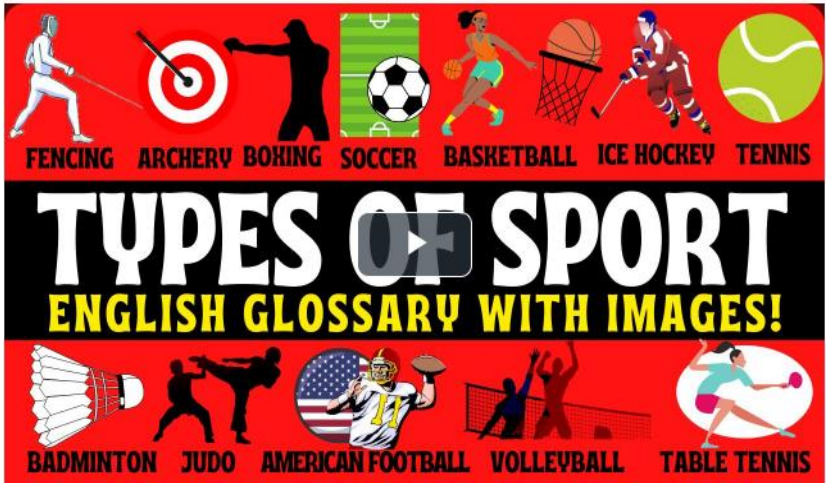
Graphic 23

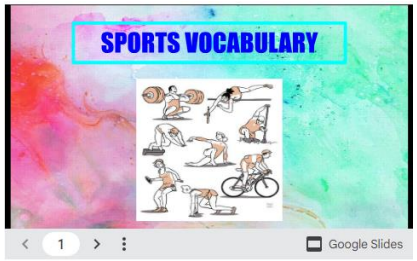
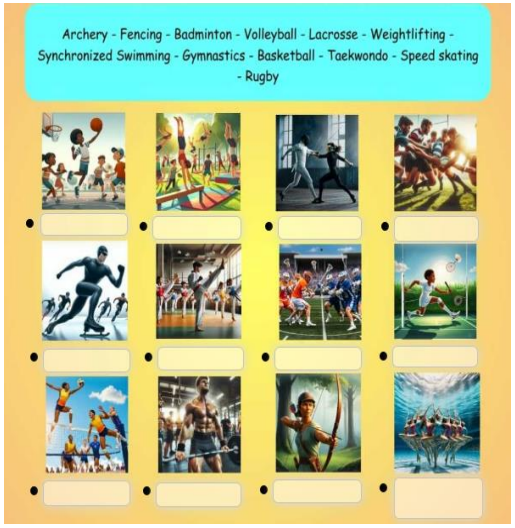
Online platform

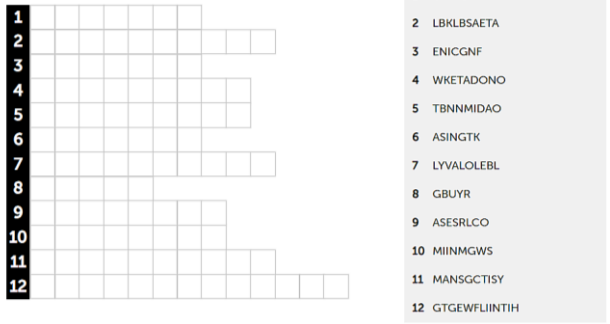
Note. Home page. Source: https://englishlexicon.milaulas.com/login/index.php

Table 9

Section 1: Overview

SECTION 1			
Objective: To identify sports-related vocabulary for labeling pictures with words correctly.			
Topic	**Phases**	**Activity**	**VLO Resources**
Sports	Pre – task	Watch the video and predict what the topic is about. Link: https://www.youtube.com/watch?v=MrOFS7UlUR0 	YouTube video

	Task	Deduce some sports vocabulary and practice intensive listening by manipulating flash cards**.** Link: https://acortar.link/7sLp2N  Write the name of each sport under the picture it corresponds to. Link: https://acortar.link/AUlDWU 	Google slide Top Worksheets

	Post – Task	Report answers. More Practice: Unscramble the letters and write the hidden words on the box. Link: https://puzzel.org/word-scramble/play?p=-NngCputMvxccBe1MkEd  	Puzzel.org
	Assignment	Sports word search Link: https://buscapalabras.com.ar/sopa-de-letras-de-sports_1325.html  	Ensopados

Note. Sports topic with its activities in different VLOs. Author's preparation

Table 10

Section 2: Types of criminals

SECTION 2			
Objective: To learn vocabulary about types of criminals using visual and context cues for a deeper understanding of specific words.			
Topic	**Phases**	**Activity**	**VLO Resources**
Types of Criminals	Pre – task	Watch the video and say as many words as you can identify Link: https://www.youtube.com/watch?v=pB2h-DDTNyg&t=42s 	YouTube video

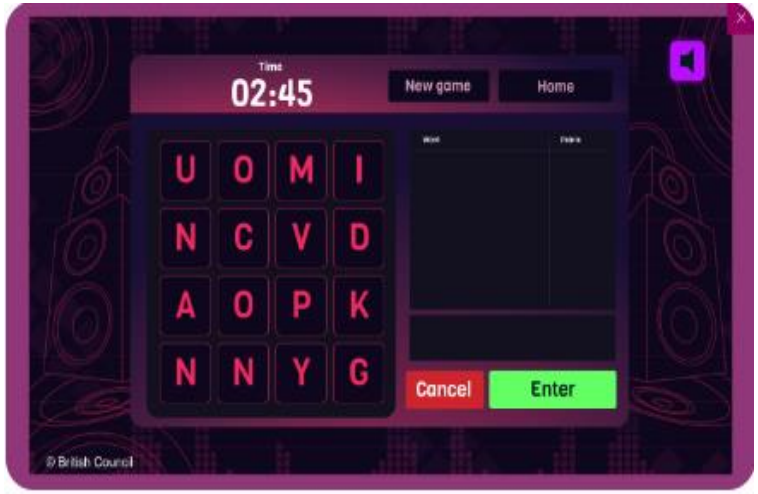
	Task	Deduce the meaning of each type criminal and practice intensive listening by manipulating flash cards**.** Link: https://sites.google.com/view/types-of-criminals/home  Drag each word to the corresponding meaning. Link: https://wordwall.net/es/resource/67113009  	Google sides Word wall

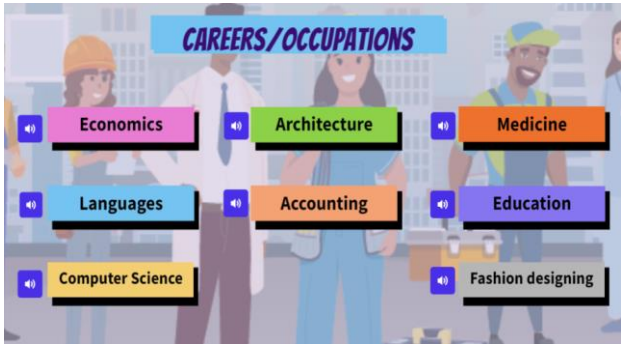
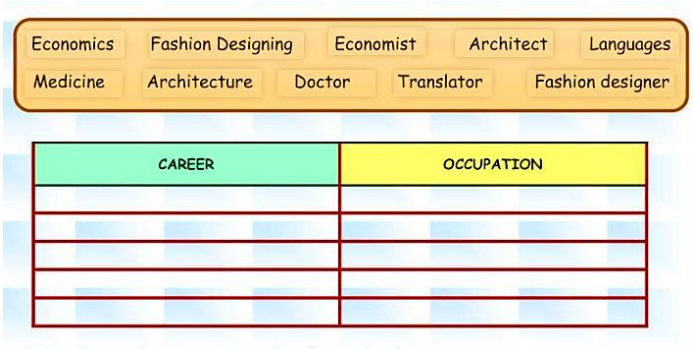
	Post – Task	Report answers. More Practice: *Gameshow quiz:* Answer the multiple choice questions using the available time, lifelines and bonus round. Link: https://wordwall.net/es/resource/67114275 	Wordwall
	Assignment	Practice the acquired vocabulary by spinning the wheel to identify which word belongs to the given meaning. Link: https://wordwall.net/es/resource/67115708 	Wordwall

Note. Types of Criminals topic with its activities in different VLOs. Author's preparation

Table 11

Section 3: Careers and occupations

SECTION 3			
Objective: To assimilate careers terms with their occupations by organizing and structuring the vocabulary acquired through sorting exercises.			
Topic	**Phases**	**Activity**	**VLO Resources**
Careers and Occupations	Pre – task	Make as many words as possible in three minutes from 16 letters. Link: https://acortar.link/smE0j4 	Wordshake

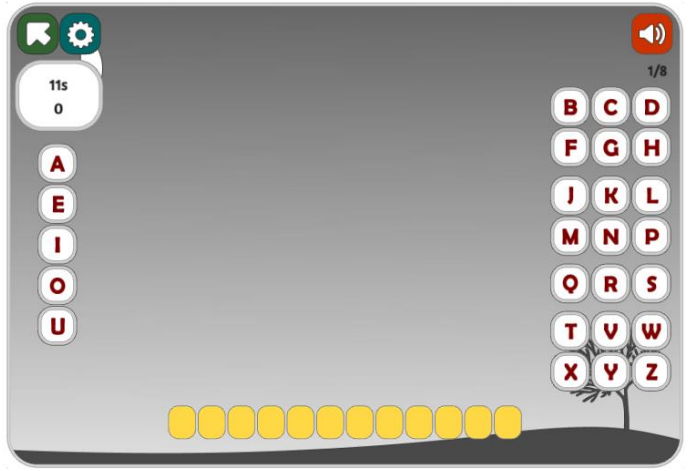
	Task	Learn about some careers with their occupations utilizing the slides from genially.com Link: https://acortar.link/q69bWi  Drag each word to the corresponding meaning. Link: https://www.liveworksheets.com/w/en/english-foreign-language-efl/7541323  	Genially Liveworksheet

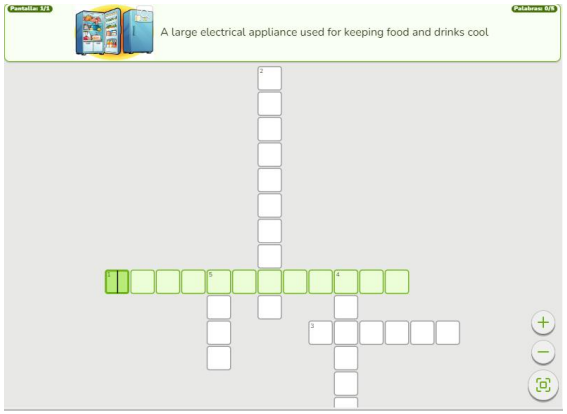
	Post – Task	Report answers. More Practice: Match the careers with their respective occupation. Link: https://es.educaplay.com/recursos-educativos/17655579-careers_and_occupations.html 	Educaplay

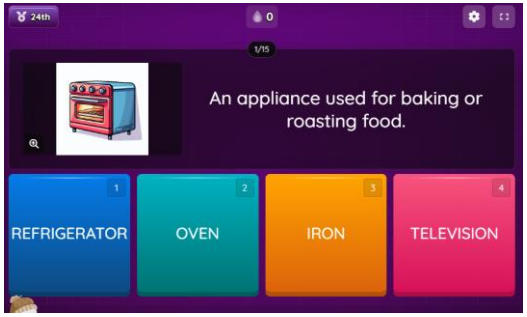
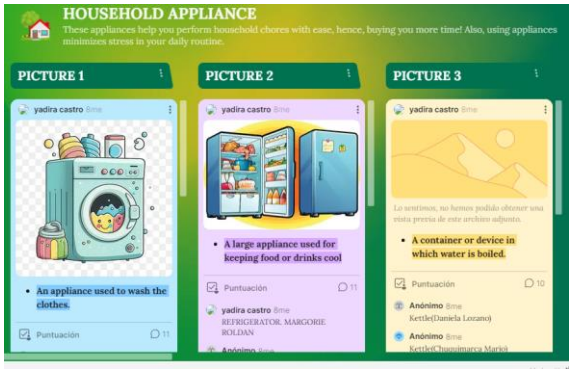
Note. Careers and occupation topic with its activities in different VLOs. Author's preparation

Table 12

Section 4: Household appliances

SECTION 4			
Objective: To gain lexis on household appliances through concept association for expanding vocabulary and encouraging logical thinking.			
Topic	**Phases**	**Activity**	**VLO Resources**
Household Appliances	Pre – task	Guess the English vocabulary topic by playing Hangman online. Link: https://www.gamestolearnenglish.com/hangman/#user/fg/47/castroyadira155/household  	Games to learn English

	Task	Recognize the meaning of a word and practice pronunciation by saying it out loud. Link: https://prezi.com/p/8j2qibh7x4l7/learning-vocabulary/?present=1  Complete the crossword puzzle. Link: https://acortar.link/8yoA5j  	Prezi Educaplay

		Complete the quiz per your teacher's instructions Link: https://quizizz.com/join?gc=86472989 	Quizzis
	Post – Task	Report answers. More Practice: Post the correct answers on padlet.com. according to the vocabulary learned. Link: https://padlet.com/castroyadira155/household-appliance-zfrj4m4b7i2sb74k 	Padlet

Note. Household appliances topic with its activities in different VLOs. Author's preparation.

Conclusions

- It is determined that before the intervention treatment, the majority of tenth grade students from both groups were detected with vocabulary deficiency, limited vocabulary, communication and comprehension barriers according to the level equivalent to the Common European Framework of Reference for Languages taken into account by the Ministry of Education of Ecuador, demonstrating that these students did not achieve the required learning, which implies that the use of innovative tools such as virtual learning objects are necessary.
- The study revealed that there is a range of Virtual Learning Objects (VLOs) available that can be analyzed, designed, developed, implemented and evaluated, so the most appropriate ones were selected according to the established vocabulary topics in addition to the learning objectives and methodological activities aligned with the most suitable digital resources.
- It is deduced that this process was carry out by designing, reusing and adapted an online platform using Virtual Learning Objects (VLOs) taking account 4 vocabulary topics related with the class activity plan.
- After evaluating the students, it was concluded that the results obtained in the experimental group were more efficient compared to the control group applied with the traditional method so that the implementation of virtual learning objects in the classroom significantly facilitates the development of English vocabulary.
- A virtual platform was created that embedded all the used VLOs offering effective resources to develop students' English Vocabulary. This web provides teachers effectively digital tools to integrate into their pedagogical practices promoting flexible, interesting and dynamic learning experiences

Recommendations

- Conduct regular assessments to determine students' vocabulary development and, if necessary, find alternative solutions in a timely manner.
- It is recommended to design virtual learning objects according to the subject studied since this will considerably favor the process of students English language acquisition and achieving the required knowledge.
- It is suggested that educational entities train themselves in the technological trends of this 21st century, such as the use of virtual learning objects for easy design, planning, application and evaluation within classroom lessons.
- It is advised that teachers make mandatory use of ICT in their lessons, integrating learning with virtual resources that strengthen and help to obtain better academic results within the process of teaching and learning a new language, especially in the development of English vocabulary.
- It is commended to encourage participation among teachers to share meaningful experiences, and best practices on the use of teaching resources like virtual learning objects in the classroom.

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Appendix

Appendix A. Permission Request

Guamote, 13 de diciembre,2023

Licenciado

Carlos Guaraca

RECTOR DE LA UNIDAD EDUCATIVA "VELASCO IBARRA"

Presente. -

De mi consideración

Yo, **YADIRA PATRICIA CASTRO MOLINA** con C.I.**0604373589** estudiante del programa de posgrado de ENSEÑANZA DE INGLES COMO LENGUA EXTRANJERA de la UNIVERSIDAD NACIONAL DE CHIMBORAZO me permito solicitarle de la manera más comedida se sirva autorizar el permiso correspondiente de las horas de clase detalladas para ejecutar la aplicación de mi proyecto de investigación titulado: VIRTUAL LEARNING OBJECTS FOR THE DEVELOPMENT OF ENGLISH VOCABULARY.

La aplicación podrá ser desarrollada dentro de mi carga horaria asignada en la asignatura de Ingles en los Décimos de Educación General Básica "A – B" desde el **08 -01-2024** hasta **01-02-2024,** en el siguiente horario:

DÍAS	**HORAS**
LUNES	8:00 – 8:45
MARTES	8:45 – 10:15
MIERCOLES	7:15 – 8:00
JUEVES	8:45 – 10:15

Además de requerir se me facilite la utilización de un espacio que cuente con proyector y pantalla, para ello sugiero el aula de **Tercero BGU "C"** a cargo del Lic. Jorge Salazar ya que cuenta con las facilidades para el acceso y traslado de los estudiantes en las horas de práctica.

Por su aceptación a la presente, le anticipo mi sincero agradecimiento.

Atentamente,

Yadira Patricia Castro Molina

C.I.0604373589

Appendix B. Response to Request

REPÚBLICA DEL ECUADOR

UNIDAD EDUCATIVA "VELASCO IBARRA"

Teléfono 032916-011-032916141

Guamote *** Chimborazo *** Ecuador

MINISTERIO DE EDUCACIÓN

Ministerio de Educación

OFICIO N°.00141UEVIG-23

Guamote, 15 de diciembre de 2023.

Master
Daniel Haro Mendoza.
DIRECTOR DE POSGRADO DE LA UNACH DE CHIMBORAZO.
Presente.-

Quien suscribe, extiende un cordial y atento saludo a nombre de quienes hacemos la Unidad Educativa "Velasco Ibarra", acompañado del mejor de los éxitos en las funciones que viene ejecutando en beneficio de la educación.

Por medio del presente tengo a bien informar que la Señorita: **CASTRO MOLINA YADIRA PATRICA**, con cedula de identidad N° 0604373589, estudiante del **PROGRAMA DE POSGRADO DE ENSEÑANZA DE INGLES COMO LENGUA EXTRANJERA,** de la Universidad Nacional de Chimborazo, ha sido **ACEPTADA** para ejecutar la aplicación de su proyecto de investigación titulado: **VIRTUAL LEARNING OBJECTS FOR THE DEVELOPMENT OF ENGLISH VOCABULARY,** desde el 08 de Enero al 01 de febrero del 2024 con los estudiantes de **DECIMO AÑO DE EDUCACION BASICA.**

Particular que comunico para los fines consiguientes.

Atentamente.

Lic. Carlos Guaraca L.
RECTOR UEVI-G

Lic. Carlos Guaraca Lema
0602538068
manuel.guaraca@educacion.gob.ec
Cel 0992851940

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EL NUEVO ECUADOR

Appendix C. Questionnaire

DATA RECOLECTION INSTRUMENT			
TEST TO STUDENTS			
1. INFORMATIVE DATA			
Author:	Lic. Yadira Castro.		
Subject:	English		
Course:	Tenth B.G.E	**Parallel:**	A - B

THEME OF THE DEGREE PROJECT:

VIRTUAL LEARNING OBJECTS FOR THE DEVELOPMENT OF ENGLISH VOCABULARY IN STUDENTS OF TENTH GRADE OF VELASCO IBARRA EDUCATIONAL UNIT, GUAMOTE CANTON, PERIOD 2023 – 2024.

OBJECTIVE:

- To evaluate the students' knowledge of English vocabulary after the use of virtual learning objects of tenth grade of the Velasco Ibarra Educational Unit, Guamote Canton, period 2023 - 2024.

INSTRUCTIONS:

- Read each question carefully before to answer.
- Use a blue pen for the development of each question.
- It is not allowed any erasures or amendment.
- It is not allowed to leave the examination room during the exam
- Each item has a quantitative grade.

Good Luck!

2. VOCABULARY ACTIVITIES IN WHICH THE LEVEL OF LEARNING ACHIEVEMENT IS EVALUATED

TOPIC 1: SPORTS

1. Write the name of each sport under the picture it corresponds to. — **1 point**

Archery | Skating | Weightlifting | Fencing



_____ _____ _____ _____

2. Unscramble the letters and write the hidden words on the lines. — **1 point**

a) corlaess _____

b) ymgsatncis _____

c) ugbry _____

d) wontakedo _____

TOPIC 2: TYPES OF CRIMINALS

3. Complete the sentences with the words in the charts. — **1 point**

Burglar | Bank robber | Shoplifter | Identity thief

a) A person who steals from a store is a _____

b) A person who enters a home or building to steal is a _____

c) A person who takes the name of another person is an _____

d) A person who takes the money from the bank is a _____

4. Write the number of the type of criminal next to its definition. **1 point**

1	Kidnapper		A person who takes the ideas of another person without given them credit
2	Drug dealer		A person who takes a person until someone pays to get them back.
3	Pickpocket		A person who sells illegal substances.
4	Plagiarist		A person who steals things from purses or bags.

TOPIC 3: CAREERS

5. Classify the career with their respective occupation. Use the words in the box. **1 point**

Economics Fashion Designing Economist Architect Languages

Medicine Architecture Doctor Translator Fashion designer

CAREER	OCCUPATION

6. Look at the picture and select the best option.	**1 point**

a) Nursing
b) Economics
c) Engineering

a) Electricity
b) Fashion Designer
c) Psychology

a) Languages
b) Medicine
c) Architecture

a) Electricity
d) Fashion Designer
e) Psychology

TOPIC 4: HOUSEHOLD APPLIANCE	
7. Underline the best options.	**1 point**

A container or device in which water is boiled.

a) Kettle
b) Oven
c) Washing

An appliance used to wash the clothes.

a) Iron
b) Washing machine
c) Hand blender

8. Circle the correct answers.	**1 point**

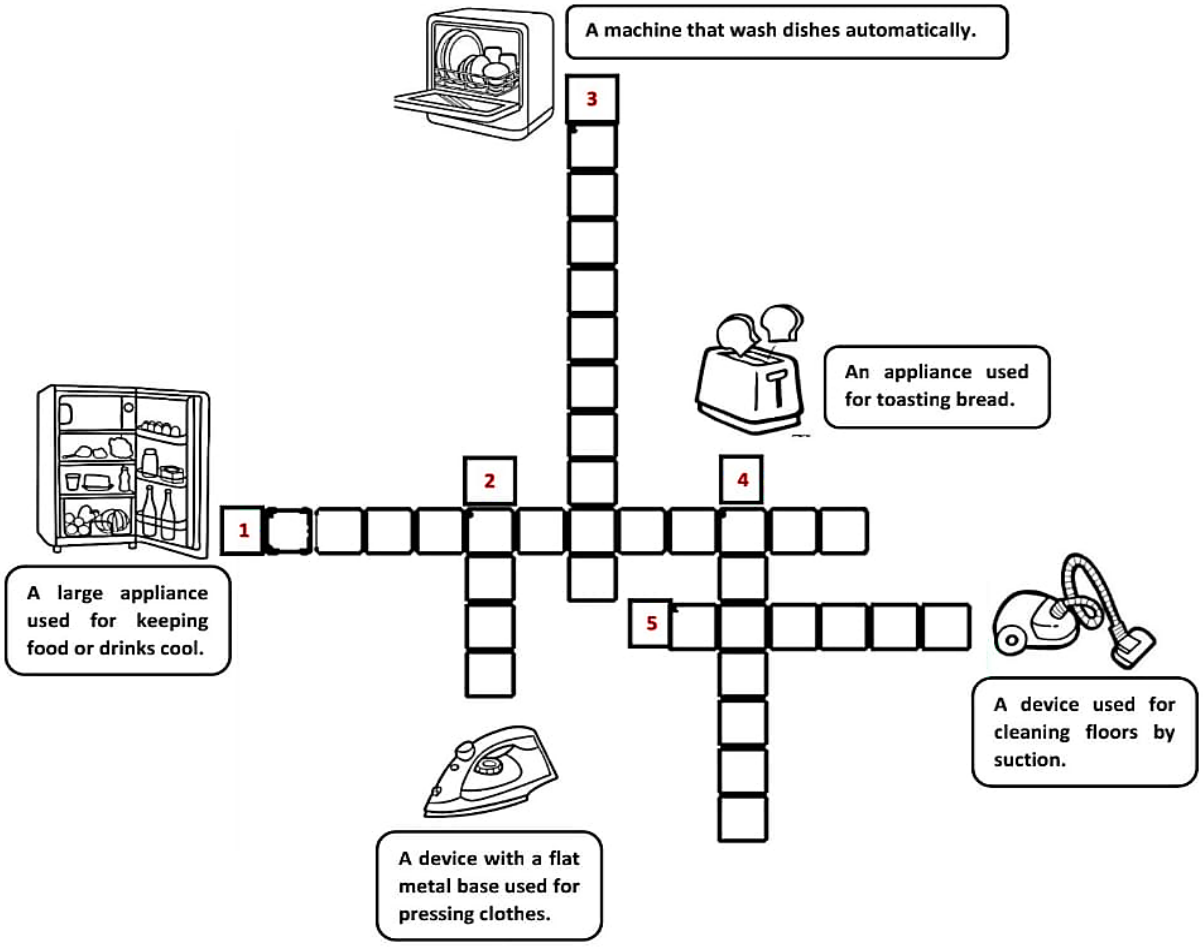
a) The carpet is very dirty; we need to use the (*vacuum cleaner/ iron*)

b) I watch the football game on (*refrigerator/ television*)

c) We want to roast a chicken; we need to use the (*washing machine/ oven*)

d) The soup is warming up on the (*stove/ machine*)

9. Complete the crossword puzzle according the pictures and meaning given. — **1 point**



10. What word does not belong to each group? Select the correct option. — **1 point**

Group 1	Group 2	Group 3	Group 4
pickpocket	bungee jumping	Architect	Oven
burglar	swimming	Medicine	Refrigerator
plagiarist	paragliding	Engineering	Fork
sheriff	scuba diving	Electricity	Iron

Appendix D. Instrument Validation

Dirección de Postgrado
VICERRECTORADO DE INVESTIGACIÓN, VINCULACIÓN Y POSTGRADO

en movimiento

Validation of Research Instruments

Theme: VIRTUAL LEARNING OBJECTS FOR THE DEVELOPMENT OF ENGLISH VOCABULARY IN STUDENTS OF TENTH GRADE OF VELASCO IBARRA EDUCATIONAL UNIT, GUAMOTE CANTON, PERIOD 2023 – 2024.

General Objective: To determine that the use of virtual learning objects help to develop English vocabulary in students of tenth grades of Velasco Ibarra Educational Unit, Guamote Canton, period 2023 - 2024.

Author: Lcda. Yadira Patricia Castro Molina.
Evaluator: Mgs. Mishell Gabriela Salao Espinoza
Academic tutor: Mgs. Tatiana Elizabeth Martínez Zapata

Type of Instrument: Vocabulary English Test

Rating scale:

Poor	Fair	Average	Good	Excellent
1	2	3	4	5

Aspect 1:

Criteria	1	2	3	4	5
Does the instrument gather data suitable for and relevant to the research topic?					X
Do the items have a logical relation with the thesis objectives?					X
Do the items have a connection with the variables?					X
Is there a logical organization with the items display?					X
Do the items contain clear and definite instructions to use the instrument?					X
Are the items clear, concise and appropriate to the target audience?					X

Aspect 2:

Principles of Assessment	Criteria description	1	2	3	4	5
Validity	Does the instrument measure what it intends to measure?					X
Reliability	Is the test consistent or free from random errors; presenting constant conditions across two or more administrations? Does the instrument give precise directions, and use an appropriate rubric for scoring?					X
Authenticity	Does the instrument reflect "real-world" language, containing language that is as natural as possible?					X
Practicality	Is the test appropriate regarding logistical aspects (time, budget, and administrative issues) involved in making, giving, and scoring the instrument?					X
Washback	Does the instrument have a positive impact on the participants?					X

Validated by Mishell Salao

ID:0650151566

MISHELL GABRIELA SALAO ESPINOZA

Signature

Validation of Research Instruments

Theme: VIRTUAL LEARNING OBJECTS FOR THE DEVELOPMENT OF ENGLISH VOCABULARY IN STUDENTS OF TENTH GRADE OF VELASCO IBARRA EDUCATIONAL UNIT, GUAMOTE CANTON, PERIOD 2023 – 2024.

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Evaluator: M.Ed. Jhon Jairo Inca Guerrero
Academic tutor: Mgs. Tatiana Elizabeth Martínez Zapata

Type of Instrument: Vocabulary English Test

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Do the items have a logical relation with the thesis objectives?				X	
Do the items have a connection with the variables?					x
Is there a logical organization with the items display?					x
Do the items contain clear and definite instructions to use the instrument?					x
Are the items clear, concise and appropriate to the target audience?					x

Aspect 2:

Principles of Assessment	Criteria description	1	2	3	4	5
Validity	Does the instrument measure what it intends to measure?					X
Reliability	Is the test consistent or free from random errors; presenting constant conditions across two or more administrations? Does the instrument give precise directions, and use an appropriate rubric for scoring?					X
Authenticity	Does the instrument reflect "real-world" language, containing language that is as natural as possible?					X
Practicality	Is the test appropriate regarding logistical aspects (time, budget, and administrative issues) involved in making, giving, and scoring the instrument?					X
Washback	Does the instrument have a positive impact on the participants?					X

Validated by M.Ed. Jhon Inca

ID: 060413657-2

JHON JAIRO INCA GUERRERO

Signature

Appendix E. Sports Vocabulary Assessment

Dirección de Postgrado
VICERRECTORADO DE INVESTIGACIÓN, VINCULACIÓN Y POSTGRADO

en movimiento

SPORTS

NAME: _____

1. Look, find, and write the words.

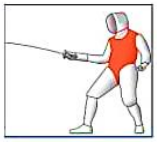






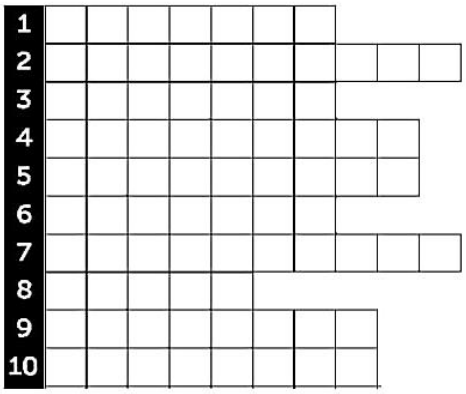






T	E	S	K	E	E	R	S	D	W	B	T	S
A	L	S	L	I	U	R	A	I	E	A	B	W
E	G	I	S	G	G	C	B	N	I	S	A	I
A	L	C	B	O	C	O	H	E	G	K	D	M
N	C	Y	T	R	R	I	E	G	H	E	M	M
M	M	O	A	R	G	C	E	M	T	T	I	I
V	O	L	L	E	Y	B	A	L	L	B	N	N
S	K	A	T	I	N	G	S	L	I	A	T	G
E	V	B	R	A	E	E	N	N	F	L	O	M
R	L	E	I	R	S	A	A	E	T	L	N	S
O	A	G	Y	M	N	A	S	T	I	C	S	P
O	D	N	O	W	K	E	A	T	N	G	P	Q
L	F	E	N	C	I	N	G	D	G	G	A	P

2. Unscramble the words.



1 CAYREHR
2 LBKLBSAETA
3 ENICGNF
4 WKETADONO
5 TBNNMIDAO
6 ASINGTK
7 LYVALOLEBL
8 GBUYR
9 ASESRLCO
10 MIINMGWS

Appendix F. Assessment About Types of Criminals

Dirección de Postgrado
VICERRECTORADO DE INVESTIGACIÓN, VINCULACIÓN Y POSTGRADO

en movimiento

TYPES OF CRIMINALS

NAME: _____ DATE: January 30th, 2024.

1. Complete the meanings with the words in the boxes. Then number the pictures properly.

Burglar	Shoplifter	Identity thief	Bank robber
Pickpocket	Kidnapper	Plagiarist	Drug dealer

A person who steals from a store	1
A person who steals things from purses or bags.	2
A person who takes a person until someone pays to get them back.	3
A person who takes the name of another person.	4
A person who takes the money from the bank.	5
A person who sells illegal substances.	6
A person who enters a home or building to steal.	7
A person who takes the ideas of another person without given them credit	8

Appendix G. Careers and Occupations Assessment

Dirección de Postgrado
VICERRECTORADO DE INVESTIGACIÓN, VINCULACIÓN Y POSTGRADO

en movimiento

CAREERS/ OCCUPATIONS

NAME: _____ DATE: February 6th, 2024.

1. Classify the career with their respective occupation. Use the words in the box.

Economics	Fashion Designing	Economist	Architect	Languages
Medicine	Architecture	Doctor	Translator	Fashion designer

CAREER	OCCUPATION

2. Look at the picture and select the best option.

a) Architect
b) Fashion designer
c) Doctor

a) Nurse
b) Architect
c) Economist

a) Architect
b) Accountant
c) Teacher

a) Nurse
b) Doctor
c) Translator

a) Nurse
b) Doctor
c) Translator

a) Teacher
b) Chef
c) Dentist

a) Teacher
b) Actor
c) Accountant

a) Teacher
b) Electrician
c) Accountant

Appendix H. Diagnosis of the Control Group

Appendix I. Diagnosis of the Experimental Group

Appendix J. Teaching the Control Group Through Translation Method.

Appendix K. Teaching the Experimental Group Through the VLO Google Slides.

Appendix L. Control Group Completing Activities in the Notebook

Appendix M. Experimental group engaging in the VLO Quizzis.com

Appendix N. Experimental Group Using the VLO Liveworsheet.com

Appendix O. Experimental Group Learning Vocabulary by Genially

Appendix P. English Vocabulary Test for the Control Group

Appendix Q. English Vocabulary Test for the Experimental Group