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Minecraft and vocabulary learning among superior basic education students at an education institution in Loja, school year 2023-2024

Minecraft y el aprendizaje de vocabulario entre estudiantes de educación básica superior en una institución educativa en Loja, año escolar 2023-2024.

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Dedication

This research project is dedicated to my beloved mother, whose unconditional support and dedication to my academic growth and personal development have guided my journey. Her unwavering belief in me and her passion for my success have been a constant source of inspiration, motivating me to stay on the right path and strive for excellence. Lastly, to my friends and colleagues whose friendship and camaraderie have been fundamental to getting to the end of this journey.

Daniel Alejandro Calva Carrión

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1. Title

Minecraft and vocabulary learning among superior basic education students at an education institution in Loja, school year 2023-2024

2. Resumen

En el mundo globalizado de hoy, dominar el idioma inglés es indispensable para los estudiantes, y un amplio rango de vocabulario es fundamental para una comunicación y comprensión efectivas. Sin embargo, faltan estrategias innovadoras que aumenten la motivación de los estudiantes y creen conocimientos duraderos. Este estudio explora la efectividad de Minecraft como herramienta para mejorar el aprendizaje de vocabulario en inglés entre estudiantes de una institución pública en Loja durante el período académico 2023-2024. Se empleó un enfoque mixto que incluyó evaluaciones de pretest y postest, cuestionarios y observaciones de campo. Los participantes fueron 12 estudiantes de una institución educativa privada en Loja, Ecuador. La recolección de datos incluyó evaluaciones de pretest y postest para medir la competencia en vocabulario, encuestas para recopilar las percepciones de los estudiantes y notas de campo para observar la implementación de la estrategia. Los resultados mostraron una mejora moderada en la competencia de vocabulario de los estudiantes, con cambios significativos en los niveles de dominio y actitudes positivas hacia el uso de Minecraft para el aprendizaje. El estudio también destaca la necesidad de capacitación integral para los educadores y estrategias para abordar las limitaciones económicas y tecnológicas. Estos hallazgos sugieren que, si bien Minecraft puede ser una herramienta educativa efectiva para el aprendizaje de vocabulario, su éxito depende de las preferencias individuales de los estudiantes y la forma en que se integre en el aula.

Palabras clave: *aprendizaje basado en juegos, tecnología en la educación, aprendizaje con Minecraft, mejora del vocabulario.*

2.1. Abstract

In today's globalized world, mastering English language is indispensable for students, and a wide range of vocabulary is critical for effective communication and comprehension. However, innovative strategies are lacking to enhance student motivation and create lasting knowledge. This study explores the effectiveness of Minecraft as a tool for enhancing English vocabulary learning among students at a public institution in Loja during the 2023-2024 academic period. A mixed-method approach was employed, including pre-test and post-test assessments, questionnaires, and field observations. The participants were 14 students from a private education institution in Loja, Ecuador. Data collection involved pre-test and post-test evaluations to measure vocabulary proficiency, surveys to gather student perceptions, and field notes to observe the implementation of the strategy. Results showed a modest improvement in students' vocabulary proficiency, with significant shifts in proficiency levels and positive attitudes toward using Minecraft for learning. The study also highlights the need for comprehensive training for educators and strategies to address economic and technological constraints. These findings suggest that while Minecraft can be an effective educational tool for vocabulary learning, its success depends on individual student preferences and the manner of its integration into the classroom.

Keywords: Game-based learning, technology in education, Minecraft learning, vocabulary improvement.

3. Introduction

In the second language acquisition field, vocabulary learning plays a pivotal role in enabling learners to communicate effectively through both spoken and written language. However, traditional methods of vocabulary instruction have often fallen short in engaging students and meeting the evolving needs of learners in our rapidly changing technological landscape (Afzal, 2019). As society undergoes constant digital transformation, there is a pressing need to explore innovative strategies that align with the sophisticated learning requirements of the new era (Zhihong Bai, 2018). One such strategy involves reassessing the role of video games in education, particularly their potential impact on vocabulary acquisition.

Historically, video games have been predominantly viewed as sources of entertainment and leisure, with their educational value often overlooked or dismissed (Penny, 2023). However, the dynamic nature of the gaming industry has led to a paradigm shift, with game developers increasingly recognizing and capitalizing on the educational potential of their products (Zimmer Garret, n.d.). This evolution is exemplified by the emergence of educational versions of popular games, such as Minecraft Education, which aim to bridge the gap between entertainment and learning.

In the Ecuadorian context, where video games are still largely perceived as hurting students, this study seeks to challenge prevailing notions and explore the educational potential of gaming. By doing so, it aims to not only change the perception of video games in education but also to provide the educational community with an innovative strategy that transcends traditional methodologies currently dominant in the Ecuadorian education system.

Moreover, this research addresses the lack of engagement often associated with traditional vocabulary teaching methods. As new generations become increasingly immersed in technology and video games, it is crucial to adapt curriculum and teaching strategies to align with these new realities. By leveraging the familiarity and appeal of video games, this study seeks to enhance vocabulary learning, making it more accessible and engaging for students who find technology-based learning more relatable and intuitive.

Importantly, this investigation challenges the prevailing notion that video games are detrimental to children's development. Instead, it posits that video games, when properly harnessed, can enhance children's learning across various domains. Previous research has suggested that video games can contribute to the development of critical thinking skills, observational capacities, and creativity (Sălceanu, 2014; Angamarca Alexander, 2022). By

exploring the educational potential of Minecraft in vocabulary acquisition, this study aims to contribute to the growing body of evidence supporting the positive role of video games in education. With that set, this investigation seeks to answer the research question of How to improve the English vocabulary learning of basic education students at a public institution in Loja through the Minecraft game experience, during the academic period 2023-2024?

To fulfill the purpose of this investigation two specific research questions arise: What is the effectiveness of using Minecraft features to enhance the form, meaning, and use aspects of the English vocabulary? What are the students' attitudes towards using Minecraft for learning vocabulary? By addressing this question, the study aims to provide insights into innovative approaches to vocabulary instruction and contribute to the broader conversation about the role of technology in education.

Therefore, this research addresses a significant gap in the literature by examining the effectiveness of Minecraft in vocabulary instruction within the Ecuadorian educational context. While studies on game-based learning are abundant globally, there is a dearth of research exploring its application in Ecuador's basic education system, particularly in English language instruction and how effective is in improving the learning of its different aspects. This study aims to bridge this knowledge gap and provide empirical evidence on the viability of using Minecraft as an educational tool and its adaptability to the curriculum.

Additionally, the potential benefits of this research for the educational sector in Ecuador are multifaceted. By exploring innovative teaching methodologies, this study could contribute to enhancing student engagement and improving vocabulary retention rates. Moreover, it may help shift perceptions about the educational value of video games among educators and policymakers, potentially leading to more technology-integrated curricula.

However, there are limitations to this study, including accessibility and affordability issues associated with Minecraft licenses, which may hinder widespread implementation in diverse educational contexts. Additionally, the study's scope is limited to specific educational settings and age groups, which may affect the generalizability of the findings.

4. Theoretical Framework

4.1. Minecraft.

4.1.1. Game-based learning

Diverse studies suggest that videogames are useful tools in the task of learning a new language, due to most of the current popular videogames being in a different idiom from the players' mother tongue usually English, there is a necessity to learn to play, also, videogames have instruction, guides, tutorials with didactic interactions for online players to learn, additionally, online multiplayer communication help students to practice with other speakers around the world, moreover, it is useful to learn words from context and also learn new slangs, acronyms and some new meanings of words (e.g. lol, camping, bait), the speaking in the game is fast so, learners must be thinking fast responses and there is this need of use abbreviation of words. For that reason, researchers are more interested in how to use video games to learn vocabulary (Bytheway, 2015)

Additionally, some researchers highlight that video games due to the influence that they have in youth life, have a big impact on language acquisition, vocabulary, and pronunciation are the most helpful areas, also videogames are highly rewarding time and create a comfortable and stimulating learning environment because of their interesting dialogues and storylines. Finally, video game language structures are more sophisticated than the structures taught in schools. They can help students acquire knowledge well with the help of images included in the games as puzzles and cues elicit students to know what is going on in the game and learn through the process of understanding it (Winaldo & Oktaviani, 2022).

4.1.2. Minecraft definition

According to BitDegree, n.d. Minecraft is a 3D video game based on breaking and creating various blocks to survive and build. It was first released in 2011 and became popular in 2019 thanks to famous YouTubers. Also, Minecraft has two standard game modes, the creative mode, and the survival mode (Per Landin, 2023), in the creative mode, your character is immortal and can fly and destroy the blocks instantly, this game mode is for those who want to explore their creativity just by creating things with blocks. On the other hand, the survival mode is about exploring, crafting, fighting against monsters, and gaining experience points. (Per Landin, 2023) Additionally, Minecraft has unique content created by different players from the Minecraft community such as minigames, adventure maps, mash-up packs, and much more (Per Landin, 2023).

For that reason, Minecraft is a game where any kind of player can have fun, like a peaceful gamer who wants only to chill and explore creativity or those players who want some exciting adventure (Schrier et al., 2023). Furthermore, Minecraft is a virtual world that relies on its players' creativity and problem-solving skills; thus, it's a virtual world that elicits from learners the language needed for problem-solving, creativity, and collaboration (Schrier et al., 2023).

4.1.3. Minecraft in Education

Minecraft Education Edition serves as an educational tool centered on gaming, fostering STEM competencies, encouraging creativity, and promoting collaborative problem-solving among students (Stuckey Bron et al., n.d.). This platform enables educators to connect with students on their level, facilitating profound learning experiences across various disciplines. Utilized globally, educators employ Minecraft: Education Edition to deliver lessons, cultivate STEM and social-emotional proficiencies, and ignite project-based learning initiatives. It includes tailored features for educational purposes, such as assessment utilities and classroom multiplayer functionality, fostering teamwork within the immersive gaming setting (Stuckey Bron et al., n.d.).

Minecraft as an educational tool has been in researchers' interest a lot in the current times due to its possible applications to teach math, science, languages, art, and social studies. Some studies highlight how Minecraft can support the development of spatial abilities in science, technology, engineering, and math education or information literacy (Andersen & Rustad, 2022).

Additionally, based on the research conducted by Steinbeiß et al. (2017), it has been highlighted the advantages of using Minecraft gamified learning environments can serve as a source of motivation in both formal and informal learning stages, and the introduction of the teacher as an online facilitator was found to contribute to the achievement of learning goals. Steinbeiß et al. (2017) determined that spatially divided designs in learning environments can enhance formal learning, while the provision of content in designing a learning environment stimulates informal learning. Furthermore, the creation of an online community within Minecraft through specific designs offers possibilities for establishing social connections, and the incorporation of self-regulated learning elements contributes positively to the overall learning outcome.

4.1.4. Minecraft strategies

According to Ekaputra et al. (2013), the main feature of Minecraft is that players can create, destroy, collect, and place almost every object in the game, this crucial feature makes Minecraft a potential tool for being used in the educational field. Also, some features of Minecraft, such as survival mode, creative mode, and adventure mode can help to adapt the different lessons to the different language approaches, taking advantage of that in Minecraft any situation can be simulated to design any kind of activity (Gallagher et al., 2014).

Furthermore, the potential of its sandbox features has been recognized by educators, evident in the launch of Minecraft Education Edition in 2016 and its extensive library of more than 600 publicly accessible lessons, showcasing its worth (Miguel & Monteiro, 2022). Also, the reading comprehension learning journey can be improved through Minecraft, as in Minecraft orders can be given to be replicated into the game (Miguel & Monteiro, 2022).

Additionally, another important Minecraft feature for learning is the creation of "Mods", the term "mod" is identified as a custom-modified package of Minecraft, introducing new ways of using Minecraft for educational purposes (Miguel & Monteiro, 2022)

For that reason, based on the research conducted by (Bar-El & Ringland, 2020), what teachers teach with Minecraft mods for education is related to math, science and technology, and social sciences, to the humanities in a similar range. Also, the same study highlights that teachers work on skills such as creativity, collaboration, critical thinking, project-based learning, communication, citizenship, and character. Besides, teachers can create their worlds with different activities within the world such as including NPCs (Non-Playable Characters) within the world with included dialogues to interact with the students and make their in-game activities to be developed or complete quests (Bar-El & Ringland, 2020).

Also, according to the lesson developed by Cambridge & Minecraft Education. (n.d), two types of activities can help students to learn the different vocabulary aspects, these activity types are:

Letter-based activities: These kinds of activities deal specifically with letters that are dialogue charts with specific instructions inside the game, these letter-based activities include activities such as Combination Lock, which is about moving letter dials to spell a word, Steppingstones; which is about walk across the letters to spell a word, and, Place the blocks; which is about find, dig up, and place letters to complete the words or phrase (Cambridge & Minecraft Education, n.d.). Due to this letter-based activities are focused on the spelling of words

and forming phrases in context, they could help students learn the form and meaning of vocabulary aspects.

Also, according to (Castillo-Cuesta, 2020) using these kinds of digital games like crossword puzzles or matching games which are included in Minecraft, helped students enhance a better performance regarding the grammar and vocabulary aspects.

Dialogue-based activities: These activities are based on dialogues with the characters from the game, the students need to talk with these characters, and the activities are found within the dialogue itself. These activities are about following instructions for example go right or go left, or bring the right object, answering the questions for a short quiz, using an object for example using a watering can to water a plant, and understanding descriptions, for example finding a person or object based on their description. These activities are focused on listening and reading comprehension as well as practicing giving responses in short quizzes with the options provided in the dialogue to respond (Cambridge & Minecraft Education, n.d.). Due to the nature of this kind of activity, it could help the students to practice the use and meaning of words.

Furthermore, Minecraft NPCs can be used in diverse ways to help learners learn English vocabulary, taking as an example in the study conducted by Youngkyun Baek et al. (2022), using these non-playable characters provided the students with significant dialogues that can simulate real-life conversations and activities such as puzzles, fill in the gaps, jumbled words, or alphabet soups, etc. All these activities were focused on specific language skills, and following a story gave the player a highly contextual environment to learn.

Finally, the best way of taking advantage of using the implementation of this kind of activities (i.e. letter-based activities and dialogue-based activities), is by having all the students develop the activities, but it is known that it could be difficult to have all the students in an English lab, so, there are different ways of implementing Minecraft into the classroom, such as having the teacher playing the game and solving the puzzles while using a projector and generating a discussion about the activities or making the students develop the activities and generating dialogue while it is projected in the classroom (Golob Manca, 2022).

5.1.4.1. Game-based lesson planning with Minecraft. The successful development of game-based lesson planning takes the students from the state of "I need to learn for the grade" to "I am having fun exploring my learning" (Zimmer Garret, n.d.). Minecraft has the potential to be a tool for the classroom because it is a game with the potential to make students

volunteer to participate, develop critical thinking, and participate in the classroom, without any forced motivation. Also, Minecraft and its game design engine have the potential to be the platform for game-based design lessons, lessons that even having fun learning can be serious and curricular moldable (Zimmer Garret, n.d.).

Additionally, digital, and online learning are using digital and online games to communicate in various evolving situations, which is essential for developing new skills in reading and writing. (Penny, 2023) Furthermore, a lot of scholars support the idea that digital game literacy practice is based on the complexities of digital gameplay, also known as 'ludology', which requires a thorough understanding of gameplay to comprehend the advanced interactions between player and game (Marcon Nerissa, 2013).

Furthermore, Minecraft education edition staff had created a community where teachers around the world can access different lesson plans that teachers can explore based on their subject area, and each area features individual lessons to be used or collections of lessons based on a particular theme (Kuhn Jeff, 2021). Also, one advantage of this is that the teacher can click on the lesson, and it will directly open in the game, making it easy to handle even for the most novice Minecraft teachers (Kuhn Jeff, 2021).

For instance, the lesson implemented for this research is the one developed by Cambridge, named English Adventures with Cambridge, where the learners can practice English through activities such as letter-based activities (i.e. steppingstones, placing blocks), curiosity bonus activities (i.e. optional puzzles and hidden dialogues), and dialogue-based activities (i.e. follow instructions and answer the questions), these activities are organized within various lesson stages that are the hub world, the book of treasure and the book of snow, every of this lesson stages have different aims such as review previous vocabulary or learn vocabulary in context and skill practice such as matching objects description, following instructions, spelling and listening comprehension (Cambridge, et al., n.d.).

5.1.4.2. Implementation of Minecraft in the classroom. Minecraft education is a very useful tool to implement in our lessons to make a more engaging classroom but is difficult to find effective ways to implement it in the classroom. According to Cambridge & Minecraft Education. (n.d.). The best way of implementing Minecraft into the classroom is to have all the students playing by themselves the pre-designed lessons, but for classrooms that cannot provide every student with a device to interact in Minecraft, there are different alternatives such as projecting the game in the classroom while asking students questions as what to do next? This

approach lets students practice their speaking abilities, pronunciation, and vocabulary, and the teacher also corrects students' stress patterns, grammar, and language.

Additionally, another way of using Minecraft with only one computer available is by projecting the game and leading a discussion with the students, the teacher can personalize different topics in the Minecraft world, if the topic is nature, the teacher can import, create or edit a world with mountains, lakes, rivers, hills and talk about their characteristics, usage, and importance for the humanity, the lesson can be incorporated with questions such as according to the topic, the aim is that the student participates as much as possible despite the fact they are not playing the game itself (Golob Manca, 2022).

5.1.4.3. Minecraft and Vocabulary Learning. In the study conducted by Al-Haqbani. (2022) says that when implementing Minecraft as a tool for vocabulary learning, outperformed those who experienced traditional teaching methods. This outcome is expected, given that many students consider games a regular part of their daily activities. The motivation aspect is particularly noteworthy, the students using Minecraft felt more involved compared to those using conventional methods. Students who used Minecraft expressed enthusiasm, valuing the exposure to it and affirming its positive impact on their cognitive engagement (Al-Haqbani, 2022).

Additionally, according to the research conducted by Sudarmaji I et al. (2021), it could be said that the utilization of Minecraft outperforms the traditional methods due to the results of his investigation, also, the investigation highlights that the use of Minecraft makes the learning process easier, faster, and more enjoyable.

Also, Chien & Chien. (2019) suggests that due to the lack of real speaking activities and interactions that students receive in traditional education, Minecraft is a good alternative for students to practice speaking in a virtual environment with different kids from any part of the world. On the other hand, Minecraft provides learning of technical words from the game that do not function for daily speaking, but it provides enough vocabulary from interacting with other players and watching YouTube videos enough number of words for learning to communicate in English (Chien & Chien, 2019).

Finally, understanding how the gamers use the vocabulary to communicate in Minecraft is important for educators, especially concerning game-based learning with a pedagogical approach. Coyle (2012) cited by Chien & Chien (2019), proposed a language triptych to enhance awareness of three essential types of language crucial for a successful CLIL (Content and

Language Integrated Learning) lesson. This triptych encompasses three language concepts—namely, language of, for, and through learning. Coyle's perspective delineates that language of learning focuses on understanding the subject matter, language for learning involves functional language for executing language tasks, and language through learning is the new language acquired through the learning process.

Language of gaming: It includes the language necessary to complete tasks and play the game and the names of the structures, items, and actions that can be performed in the game, such as crafting, buildings, mining, smelting, and enchanting. (Chien & Chien, 2019).

Language for gaming: This is the language needed for communication during the game to complete tasks and quests and have a better performance during the gameplay, due to all the activities within the game needing collaboration among players, it fosters the development of communicative and problem-solving skills. (Chien & Chien, 2019).

Language through gaming: Minecraft opens the possibility of learning new vocabulary and collocations through exposure to the native community of speakers around the world, thanks to online playing and thanks to the need for communication within the game to complete tasks (Chien & Chien, 2019).

4.2. Vocabulary learning

The term "vocabulary" encompasses various meanings, reflecting the intricate and diverse nature of the English language. It can denote the words known by an individual or a larger community. Additionally, it refers to specialized terms within a particular field, such as the vocabulary of science. The term can also describe a physical object like a book containing alphabetized word definitions. Beyond words, it extends to encompass things like lists of terms or codes, nonverbal symbols like marine alphabet flag signals, and expressive forms in art, such as the vocabulary of dance. The term "vocabulary" encapsulates various meanings and applications in different contexts. (Merriam-Webster, n.d.)

Also, according to the definition of the Cambridge Dictionary (Cambridge, n.d.), vocabulary is all the words known and used by a particular person, and all the words that exist in a particular language or subject. Regarding vocabulary knowledge, Webb (2012) refers to the fact of how well we know a word in terms of how to use it and when to use it, that is why to study different forms of how to improve vocabulary knowledge some concepts are implied, such as the depth of vocabulary, depth of vocabulary refers to a branch of vocabulary knowledge in where is measured how well words are known. Enhancing vocabulary depth

commonly requires acquiring knowledge by encountering and employing words across diverse contexts. This process aids in comprehending the forms, meanings, and applications of words. To fully grasp a word, one must possess information about its spelling, pronunciation, derivations, inflections, various meanings, semantic connections, word pairings, collocations, grammatical functions, and the appropriateness of its usage in different situations.

Also, vocabulary knowledge can be measured by the breadth of vocabulary, the breadth of vocabulary refers to how many words are known, and it is measured through a test of vocabulary size, breadth is commonly assessed by the extent to which learners can connect the structure of language with its intended meaning. Establishing this connection is a crucial stage in vocabulary development, as it enhances the chances of comprehending and utilizing words effectively (Webb, 2012).

4.2.1. Vocabulary Aspects

There are different aspects of how vocabulary is learned depending on what is focused on, for example, when the focus is on listening and reading, receptive knowledge is the kind of knowledge needed, on the other hand, when the focus is knowledge on speaking and writing, productive knowledge is the kind of knowledge needed, however, the kind of knowledge needed should match the kind of learning wanted, in other words, what is learned is what is focused on and learning should be focused on what is wanted. (Stuart Web, 2019)

So, to know a word is necessary to know the three aspects that are form, meaning, and use, these aspects are divided into different points such as form, which is the knowledge of the spoken word, how the word sounds, and how it is pronounced. knowledge about the written form, what the word looks like, and how it is written and spelled? and the word parts, what parts are recognizable in this word? What word parts are needed to express the meaning? For meaning the aspects are: the form and meaning, what meaning does the word signal? What word form can be used to express meaning? The concepts and referents, what is included in the concept? What items can the concept refer to? And associations, what other words does this make us think of? What other words could be used instead of this one? Then there is the use of words with grammatical functions, in what patterns does the word occur? In what patterns must we use this word? Collocations, what words or types of words occur with this one? What words or types of words must we use with this one? Constraints on use, where when, and how often would we expect to meet this word? Where, when, and how often can we use this word? (Stuart Web, 2019). Besides it is important to explore the form, meaning, and use more deeply.

Form.- It refers to the "overt morphological and lexical forms that tell us to grammar structure is constructed and how it is sequenced with other structures in a sentence or text" (Larsen-Freeman, 2001, p. 252, as cited in Yılmaz, 2018) For that reason, the form includes, pronunciation, spelling, and word parts, and for a correct study of this students should know what the word sounds like, looks like, and what recognizable parts are included, such as prefixes, suffixes, and root words (Rebecca Eller-Molitas, 2022). For teaching word parts, some strategies such as daily review, where the teacher sets a list of words that are going to look for in the lectures of the day, will help students understand complicated words, another strategy is to directly teach word parts, and give students strategies for breaking words apart, and another strategy is the generalization that is when a student uses the word parts to figure out the meaning of a word (Carnine et al., 2004).

Meaning.- The meaning is about the meaning of the linguistic structure, and it varies from two different patterns, the lexical or grammatical, being lexical the actual definition provided by the dictionary, and grammatical the meaning that a whole grammatical structure acquires (Yılmaz, 2018). For instance, meaning is the concept that a word or phrase acquires, and for a better understanding, the students should learn the association between concepts, for that reason, students should learn when a word can only be used in a certain context, what other words are related, and what words or tense express intended meaning (Rebecca Eller-Molitas, 2022). For a better learning of meaning aspects, it is advisable to use total physical response, to help understand students understand the meaning and word associations of new words, also, the teacher could use images or flashcards and by using new words in making sentences (Kuehn Paul Richard, 2024).

Use. - The definition by Larsen-Freeman, (2001), as cited in, Yılmaz, (2018), tells us that the use refers to pragmatics, as all aspects of meaning do not deal with semantics, those relations between language and context that are coded in the structure of a language, understanding context as the social context formed by interlocutors, time and place or to the presuppositions that the ones involved has. For instance, to master use, students should know when to use a word outside the classroom, in the real world, and the patterns needed. (Rebecca Eller-Molitas, 2022). To teach vocabulary use, it is important the expose of the different words in different contexts, also, students could learn extensive vocabulary by exposure of rich oral-language experiences at home or at school (Diamond & Gutlohn, 2009).

4.2.2. Vocabulary learning strategies.

Different vocabulary learning strategies may affect different aspects of vocabulary learning as many learning strategies could be more effective on the learning of depth of vocabulary while other learning strategies could be more useful to learn breadth of vocabulary, strategies emphasizing the acquisition of word forms and their associated meanings play a crucial role in predicting both the breadth and depth of vocabulary knowledge (ZHANG & LU, 2015).

Additionally, some studies suggest that requiring students to have a journal of the strategies they use when they want to study new vocabulary is also useful for them to learn, in the same study, some of the strategies chosen by the students were cognitive strategies such as verbal repetition, placing new words in different contexts, written repetitions and translating, also metacognitive strategies such as: testing oneself, continuing to study a word over time, setting goals and objectives, and Mnemonic strategies such as: studying the word with a pictorial representation, sound association, morphological associations, connecting the word with synonyms and antonyms, semantic maps, grouping words. Finally, discovery strategies such as: using a dictionary, inferring meaning from context, and asking for clarification from the teacher, are the strategies used by some students and the most popular are the cognitive strategies, these findings still being consistent in different studies of vocabulary learning strategies, Moreover, the most used metacognitive strategy is written repetition (Byon, 2012)

Talking about strategies to learn the different aspects of vocabulary such as form, meaning, and use, different authors such as (Pan et al., 2021) tell us that currently the traditional strategies to teach the form scope of vocabulary focused on the spelling of words, are being obsolete due to the advances of technology and the spawn of different spelling tools such as the auto corrector, the author also mentions the explicit and implicit method to teach spelling, one is based in directly taught, repetition and memorization as the traditional method suggest, the other the implicit method suggests that using reading and writing activities indirectly teach induce learning the correct spelling of words.

Furthermore, form, meaning, and use could be approached as receptive vocabulary skills as Webb (2020), tells us Receptive knowledge represents the ability to recognize the form, meaning, and use of a vocabulary item, whereas productive knowledge enables the learner to use the item in the right form, meaning, and context. In natural language acquisition situations, most words are learned receptively through extensive exposure. Some strategies to teach vocabulary effectively are:

Visual aids and Mnemonics: help to remember concepts by encoding and recalling information through the association of these concepts to familiar things or already known concepts images, or things, also, it helps to build vocabulary by this association of unknown concepts or things with easy-to-remember rhymes or stories or linking it with familiar concepts (Braunsdorf Anna, 2023). This strategy supports the use of Minecraft in the way that it uses every kind of visual aid and creates a significant environment that students can recall when learning new words.

Contextual learning: is a useful way for the learner to retain the meaning of a word and be able to use it in future opportunities, using context clues, the learner can infer new words' meanings and understand the contextual use of the words (Apa Innaci & Sam, 2017). This strategy supports the use of Minecraft because, with Minecraft is possible to create context-rich environments with different context clues to solve activities, having a rich context environment to learn.

4.3. Previous Studies

Using Minecraft for educational purposes has been calling for the focus of researchers' attention for recent years in different subject areas such as mathematics, science history, and language study. This study has the aim of verifying its effectiveness in vocabulary learning. For instance, some previous studies related to the use of Minecraft for vocabulary learning were collected.

The first study is the one by Steinbeiß, Gregor-Jan Hermann which title is Minecraft as a learning and teaching tool designing integrated game experiences for formal and informal learning activities, developed with 120 students from two secondary schools in Finland, one public and one private. The students were aged between 12 and 15 and were in grades 7, 8, and 9. Students used Minecraft as a gamification tool to create and evaluate project-based learning activities in various subjects. The main objective of this research was to use Minecraft as a learning and teaching tool. Its findings show that learning with Minecraft benefits both formal and informal student learning experiences. The document finds that gamified learning environments in Minecraft enhance motivation, participation, collaboration, the creation of authentic activities, and the achievement of learning outcomes. The document also reveals some limitations and challenges, such as a lack of time, resources, and training, adapting to new learning environments, and the validity and reliability of the collected data.

Another research conducted by Imam Sudarmaji titled The Effect of Minecraft Video Game on Students' English Vocabulary Mastery, developed with Fifth-Grade Elementary Students: The participants consisted of 63 fifth-grade elementary students who were divided into an experimental group (n=31) and a control group (n=32). These students used Minecraft as a gamification tool to create and evaluate English vocabulary learning activities. The study results highlighted that the experimental group, which used Minecraft as a learning medium, had a higher mean score, higher minimum criteria mastery achievement, and higher gain score than the control group, which used the conventional method. The researchers also observed that the experimental group showed better response, enthusiasm, and participation behavior than the control group. The researchers concluded that Minecraft had a positive and significant effect on students' vocabulary mastery and perceptions. They also suggested some limitations and implications of their study.

The next study conducted by Eka Bilanti, Endang Susilawati, Luwandi Suhartono, Urai Salam, and Yanti Sri Rezeki, titled Developing a Minecraft Adventure Map to Support Eleventh-Grade Senior High School Students' Vocabulary Learning, developed with English teachers of eleventh grade. Highlights that the Minecraft adventure map proved to be an effective tool for supporting eleventh-grade students' vocabulary learning. The internal evaluations with English teachers indicated the appropriateness of the content, language, and presentation of the product. The students' responses towards the product were positive, highlighting its potential as a supplementary learning source. The researchers recommend several suggestions for future research; firstly, for teachers interested in using Minecraft for educational purposes, it is advised to familiarize themselves with the student's prior experience with video games, particularly Minecraft. Secondly, further research on the developed product is encouraged, including expert validation to ensure its effectiveness and suitability, and lastly, considering the limitations of the study, such as the restricted research period and technological constraints.

The fourth investigation related to this research is the one by Nghi Nguyen. (2022), titled Minecraft as a Learning Tool for Classroom Activities and Extramural English Learning, this research investigates Minecraft and discusses its affordances for English learning. The author found that Minecraft is a versatile, accessible, and creative game that facilitates the creation of flexible and engaging activities for English learning. Also, the author found that Minecraft can provide visual, interactive, and collaborative environments that support language acquisition and production. The author also has some suggestions for further research to explore the use of

Minecraft in specific linguistic contexts, such as grammar, interaction, or other target languages besides English, and to compare the effects of Minecraft with other games on different ages, groups, and learning outcomes.

Finally, the study conducted by Nur Hafezah Hussein and Nor Hanim Mustafa, titled Using English Minecraft Module to Enhance University Students' Motivation in Learning English, developed with 50 university students, who were learning English 1 at University Malaysia Kelantan (UMK). The authors found that the use of the English Minecraft module enhanced the students' motivation to learn English, as evidenced by their high scores on the attention, relevance, satisfaction, and other skills subscales of the modified questionnaire. The authors also found that there was no significant difference between genders in their motivation to learn English, suggesting that the game was equally appealing and beneficial for both male and female students. The authors suggested some possible directions for future research, such as conducting interviews with the students, investigating students' learning styles and personalities, and comparing Minecraft with other games in terms of learning outcomes.

5. Methodology

5.1. Research design

This research employed a mixed-method approach, it means that qualitative and quantitative data was gathered and analyzed within the same study (Shorten & Smith, 2017). Quantitative data is used when the researcher tries to quantify a problem or seek the answer to what or how many aspects of the research question. On the other hand, qualitative data describes qualities or characteristics, and the information appears in narrative form (Malacaster college Library, 2024).

Moreover, this study employed Kurt Lewin's action research model which is a problem-solving approach that involves interaction between researchers and practitioners to identify, analyze, and address real-world issues, it employs a cycling model about planning, acting, observing, and reflecting (Onkar Manoj, 2023).

5.2. Data collection sources and techniques

For the collection of quantitative data, the testing technique was used with its instruments a pre-test (see Annex 1) and a post-test (see Annex 2). Pre-test and post-test according to White (2019), is that a pretest-posttest design is a kind of experiment in which a group is tested/studied before and after the experiment or activity is administered. In this way, it is possible to determine what changes if any have taken place and thereby judge the effect or value of the experiment. For that reason, a pre-test will be applied before using Minecraft to teach vocabulary to see the students' level and the post-test will be used to measure if any improvement arises after the application of the strategy.

Moreover, using a questionnaire, the survey technique was employed for the qualitative data about the perception and influence of the strategy (see annex 3). According to Busayo Longe. (2023), a survey method is a process, tool, or technique that you can use to gather information in research by asking questions to a predefined group of people. Typically, it facilitates the exchange of information between the research participants and the person or organization carrying out the research. A questionnaire serves as a research instrument designed for conducting surveys, featuring a series of targeted questions aimed at comprehending a particular topic from the respondents' perspective. These inquiries in questionnaires can take various forms, including closed-ended, open-ended, short-form, and long-form questions, providing a versatile means of gathering information (Swetha Amaresan, 2023).

Lastly, the observation technique using field notes (see Annex 5) was implemented for this research; field notes are the researcher's documentation of events, conversations, and behaviors observed in the field, and the reflections on it (University of Nottingham, n.d.).

5.3. Data analysis

After applying the pre-test and post-test, a descriptive quantitative analysis was applied to analyze the collected data, the quantitative analysis is implemented to evaluate the quantitative data to make sense of the numerical data (Hotjar, 2023).

As this research contains qualitative data that was obtained from the questionnaire and field notes, a thematic analysis was employed, to analyze qualitative data and identify common themes, topics, patterns, and ideas that come up repeatedly (Caulfield Jack, 2019).

5.4. Research participants

In this research, the participants were 9th-grade superior basic education students from Unidad Educative Particular "Juan Montalvo" whose English corresponds to the A1 level according to "Ministerio de Educación" of Ecuador.

5.5. Timing

The intervention plan lasted 6 weeks, with 2 hours of English classes per week. Additionally, the classes were scheduled for the morning session during the 2023-2024 school year.

5.6. Procedure

This action research followed the action research cycle proposed by Lewin (1946) this research model is a cyclical, iterative approach to research involving planning, acting, observing, and reflecting.

- Planning: in this step, the researcher should include the plan of action, the plan should include the objectives, research questions and data collection methods and strategies for addressing the problem.
- Action: In this stage the action plan is implemented, making any adjustments during the development of it.
- Observing: the researcher gathers information during the implementation of the action plan to evaluate and monitor its effectiveness.
- Reflection, with the information gathered, the researcher shares it with stakeholders and uses it to improve the strategies and interventions.

Additionally, for the implementation of the intervention proposal, the 4A model will be applied to the lesson plans which focuses on four components, activate, acquire, apply, and asses.

5.7. Intervention Proposal

Week	Topic	Objective	Resources	Intervention
1	Introduction	- To introduce the teacher, presentation of the students, and the intervention plan. - To apply the pre-test.	The teacher and students' participation, projector, internet, pre-test, and informed consent sheets.	- The teacher presents himself and asks the students to present themselves. - The teacher explains what he wants to do with his projects and the resources to be used (PC, laptop, cellphone, or any device where Minecraft can be run). - The teacher explains about how is going to work the game, explain how they are going to join to the Minecraft lesson. - Pre-test application. - The teacher gives informed consent sheet which students will have to be signed by their parents.
2	Part 1: The beginning	- To review familiar vocabulary (sports,	Minecraft Computer, cellphones, or any device that	**Activate:** The teacher introduces briefly what is Minecraft and how they need to work with it.

#	Title	Objectives / Language focus	Resources	Methodology
		nature, jobs, greetings) - To acquire new vocabulary. - To introduce the game, follow the instructions. **Language focus:** form and meaning with letter-based activities: move the dial to make the correct word.	runs Minecraft, a projector. Minecraft quests and puzzles.	**Acquire:** The teacher gives a tutorial about how to play Minecraft, how to develop the lesson how it consists of and what is the objective of using the game to learn. **Apply:** The students will solve a worksheet about this section of the Minecraft map. **Asses:** The teacher assesses the student's work.
3	The book of treasure (Part 1)	- To practice familiar words. - To acquire new vocabulary in context. **Language focus:** meaning and use with dialogue-based activities: talk to the librarian and complete the tasks she asks.	Minecraft Computer, cellphones, or any device that runs Minecraft, a projector.	**Activate:** The teacher activates the prior knowledge by a lead-in activity. **Acquire:** The teacher introduces the gameplay of this book and introduces some new vocabulary. **Apply:** The students will solve a worksheet about this section of the Minecraft map. **Asses:** The teacher asses the students' work.
4	The book of treasure (Part 2)	- To practice familiar words (adjectives, adverbs of frequency, verbs) - To learn new vocabulary in context. **Language focus:** meaning and use with letter-based activities: find the letters to complete the words from the room.	Minecraft Computer, cellphones, or any device that runs Minecraft, a projector.	**Activate:** The teacher activates the prior knowledge by a lead-in activity. **Acquire:** The teacher introduces the gameplay of this book and introduces some new vocabulary. **Apply:** The students will solve a worksheet about this section of the Minecraft map. **Asses:** The teacher asses the students' work.
5	The book of snow (Part 1)	- To consolidate	Minecraft	**Activate:** The teacher introduces some of the

	the vocabulary in written and spoken forms. - To practice understanding descriptions of people and places. **Language focus:** meaning and use with dialogue-based activities: talk to the villagers and complete their tasks.	Computer, cellphones, or any device that runs Minecraft, a projector.	characters and topics that are going to be covered in this part of the lesson. **Acquire:** The teacher starts the gameplay to help understand what the students need to do within the game. **Apply:** The students will solve a worksheet about this section of the Minecraft map. **Asses:** The teacher asses the students' work.
6	The book of snow (Part 2)	- To consolidate the vocabulary in written and spoken forms. - To practice understanding descriptions of people and places. **Language focus:** meaning and use with letter-based activities: complete the tasks about finding letters to form the correct words.	Minecraft Computer, cellphones, or any device that runs Minecraft, a projector.	**Activate:** The teacher introduces briefly what is Minecraft and how they need to work with it. **Acquire:** The teacher gives a tutorial about how to play Minecraft, how to develop the lesson how it consists of and what is the objective of using the game to learn. **Apply:** The students will solve a worksheet about this section of the Minecraft map. **Asses:** The teacher asses the students' work.
7	Return to the Librarian (Part 1)	- To listen and complete simple instructions. - To speak about things the students have or haven't got. - To review previous vocabulary. **Language focus:** form and meaning	Minecraft Computer, cellphones, or any device that runs Minecraft, a projector.	**Activate:** The teacher makes the lead-in activity. **Acquire:** The teacher makes the gameplay about this part of the lesson and introduces the concepts that are going to be covered. **Apply:** The students solve the worksheet about this part of the lesson.

		with dialogue-based activities: talk to the pirate captain and complete his tasks.		**Asses:** The teacher asses the students' work.
8	Finalization of the intervention plan	- To apply the post-test. - To apply the questionnaire.	Post-test and questionnaire.	The teacher will apply the questionnaire and post-test. The teacher thanks the students and the institution's authorities for the opportunity to work with them also, the teacher says goodbye to the students.

6. Results

This section presents the research findings on the effectiveness of using Minecraft to learn vocabulary. The findings are organized according to the study's specific objectives. In addition, this section includes data collected through pre-test and post-test, questionnaire, and field notes. This information, analyzed using descriptive and thematic examination, is displayed in tables and figures, accompanied by explanations of their significance.

6.1. Pre-test and Post-test results

Objective 1: To verify the effectiveness of the Minecraft didactic resources to enhance the form, meaning, and use aspects of the English language vocabulary.

Sub-question 1: What is the effectiveness of using Minecraft features to enhance the form, meaning, and use aspects of the English vocabulary?

Figure 1
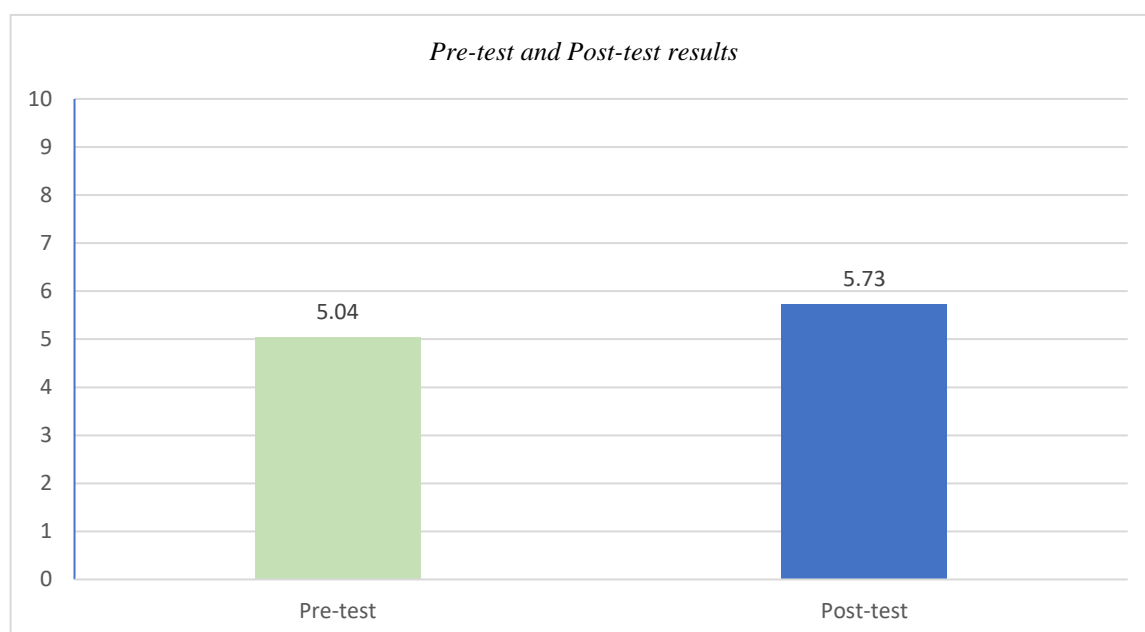
This figure compares the results of the pre-test and post-test, showing a small increase in the average score from 5.04 to 5.74, a difference of 0.70 points. Although there is a slight improvement, it is not significant. The variation in scores suggests that Minecraft may be more beneficial for some students than others, possibly due to differing levels of interest in video games among the students.

Table 1

	Aspects of vocabulary		
	Meaning	**Form**	**Use**
Pre-test	1.9	1.8	1.4
Post-test	2.2	2.3	1.4
Difference	**0.3**	**0.5**	**0.0**

Figure 2
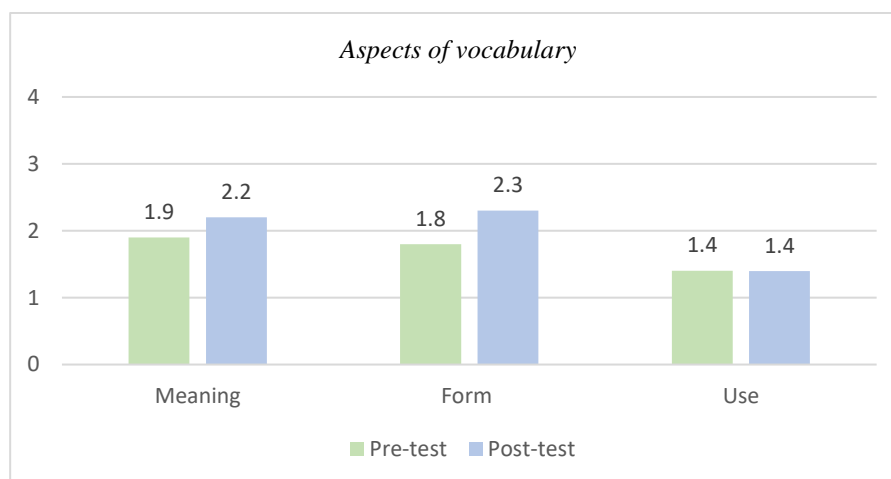
Figure 2 shows the scores in every aspect of vocabulary. In the 'meaning' aspect, students show a moderate increase in their scores, being an average pre-test score of 1.9, while the post-test score increased to 2.2, resulting in a positive difference of 0.3 points. This suggests that students have gained a better understanding of the meanings of vocabulary words after the intervention with Minecraft.

The 'form' aspect exhibited the most significant improvement. Students' average pre-test score was 1.8, which increased to 2.3 in the post-test. This change of 0.5 points indicates a notable enhancement in students' knowledge of the structure and form of vocabulary words. These results imply that Minecraft is particularly effective in teaching the form of words, possibly due to the interaction with NPCs, and the different activities such as puzzles, and looking for letters that some Minecraft lessons had.

In contrast, the 'use' aspect did not show any improvement, because the average score remained the same at 1.4 in the pre and post-test. This result suggests that while students may have improved their understanding of meanings and forms, their ability to use the vocabulary words appropriately in context needed more focus during the lesson. This aligns with the

observations made by the researcher, who noted that various factors such as time constraints and other issues impacted the integration of vocabulary use in the Minecraft lessons. Consequently, this aspect was not fully addressed.

Overall, the data indicates that Minecraft is an emerging tool for learning specific vocabulary needs, particularly in the aspects of meaning, form, and use. However, more research is needed to fully understand and optimize its effectiveness in this area.

Table 2

	Comparison of the results with the grading scale							
	Beginner (0-3)		Intermediate (3,1-6)		Proficient (6,1-8,0)		Expert (8,1-10)	
	f	%	f	%	f	%	f	%
Pre-test	3	25%	5	42%	2	17%	2	17%
Post-test	1	8%	7	58%	3	25%	1	8%

Figure 3
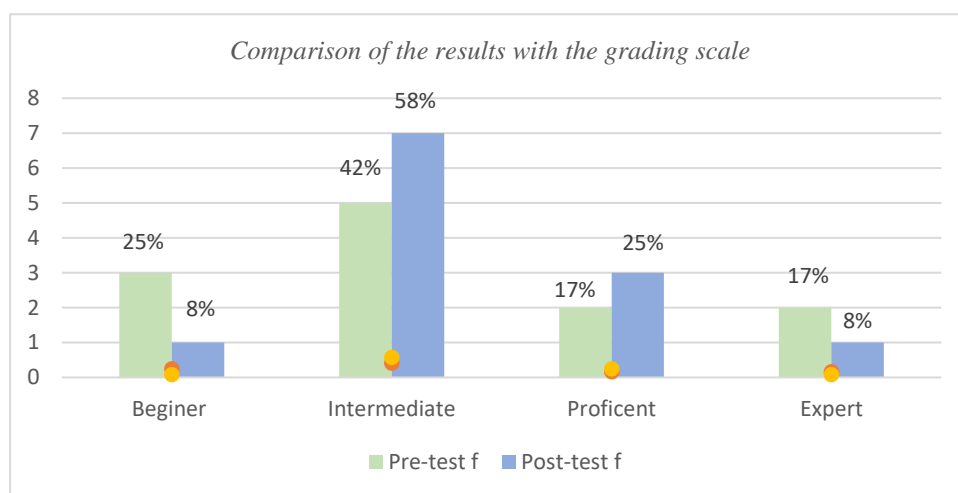
Figure 3 shows the contrast of the results of the pre and post-test, by comparing them across different proficiency levels (Beginner, Intermediate, Proficient, and Expert), based on a defined grading scale created by the researcher to identify students' improvement after using Minecraft, in this sense. In the pre-test, 25% of the students were classified as Beginners, indicating limited recognition of basic meanings, frequent incorrect or inappropriate attempts to use vocabulary, and frequent spelling errors. In the post-test, this percentage decreased significantly to 8%, suggesting that many students initially at the Beginner level had improved and advanced to higher proficiency levels.

The Intermediate category, which included 42% of students in the pre-test, saw the largest shift in the post-test, increasing to 67%. This suggests that a substantial number of students improved their vocabulary proficiency, showing partial understanding of basic meanings, and moderate ability with occasional errors in usage, and occasional spelling errors.

The Proficiency level remained constant at 17% in both the pre-test and post-test, indicating steady performance among these students. The Expert level, however, saw a slight decrease from 17% in the pre-test to 8% in the post-test, suggesting that while some students improved, the highest level of vocabulary mastery was challenging to maintain or achieve.

This comparative analysis of pre-test and post-test results demonstrates an overall improvement in students' vocabulary proficiency after the intervention. The reduction in the percentage of Beginners and the increase in Intermediates highlight the positive impact of the instructional approach. However, the stable percentage of Proficient students and the slight decrease in Expert students suggest that while progress was made, further efforts are needed to help students achieve higher proficiency levels, particularly in transitioning from Proficient to Expert.

6.2. Questionnaire Results

Objective 2: To analyze students' attitudes regarding the experience of learning vocabulary through Minecraft.

Sub-Question 1: How did you feel about using Minecraft to learn new vocabulary?

Table 3

How did you feel about using Minecraft to learn new vocabulary?

Students' attitude toward Minecraft		
Answer	**f**	**%**
Motivated	11	92%
Slightly motivated	1	8%
Unmotivated	0	0%
Total	12	100%

Figure 4
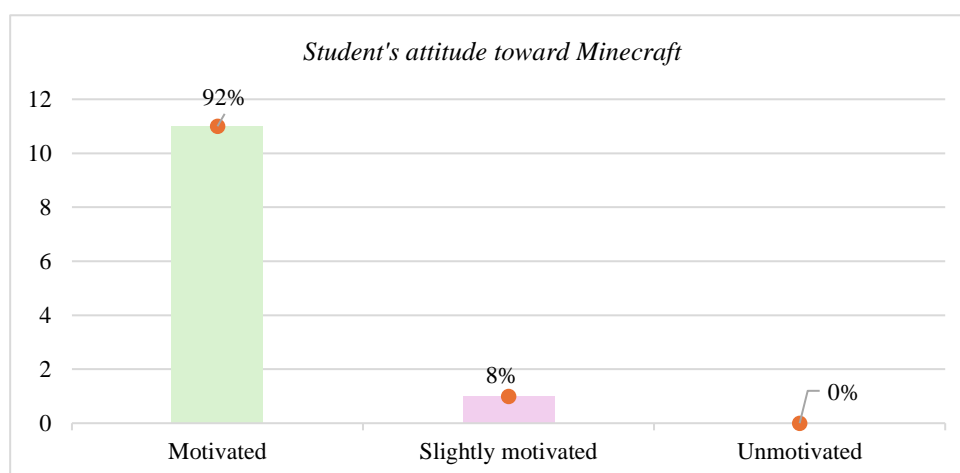
The results from this question which aimed to measure the students' motivation to learn vocabulary using Minecraft were very positive as an overwhelming majority of students, 92%, reported feeling motivated by the experience. This suggests that Minecraft was effective in engaging students and fostering a positive learning environment for vocabulary acquisition.

Only one student, representing 8% of the total respondents, reported feeling slightly motivated. This indicates that a significant majority did find it engaging to some degree.

Importantly, none of the students reported feeling unmotivated, which suggests that the use of Minecraft did not harm student motivation. The absence of negative responses further underscores the overall positive reception of Minecraft as a tool for vocabulary learning among the students.

Additionally, these results are corroborated by the researcher's observations during the intervention classes, which were recorded through the field notes, those show students felt motivated and their interest increased in learning vocabulary using Minecraft. Also, some responses to the open answer to this question reported the positiveness of using Minecraft such response like, learn with Minecraft is beautiful, learning with Minecraft is funny and not a boring obligation.

Table 4

Did you find it interesting learning new vocabulary through the Minecraft game?

Students' interest in learning with Minecraft		
	f	**%**
Yes	11	92%
No	1	8%
Total	12	100%

Figure 5

Student's interest in Minecraft
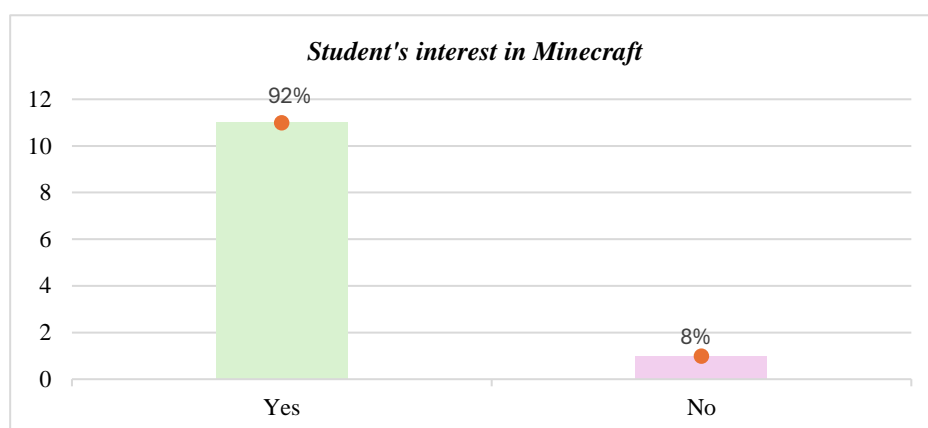
According to Figure 5, a substantial majority of students found learning new vocabulary through Minecraft to be interesting. Specifically, 92% of the students responded "Yes," demonstrating a high level of engagement and interest in the vocabulary learning process when using the Minecraft game. This positive response suggests that the interactive and immersive nature of Minecraft makes the learning experience more enjoyable and motivating for students. Only 8% of the total respondents, answered "No," indicating that a very small minority did not find the method interesting.

Additionally, the open answers and the field notes about this question support the results, responses such as that Minecraft helps them to learn not as an obligation and the learning happens unconsciously and Minecraft helps me learn in a way that is now boring and while I am having fun is beautiful. This reflects the positivity that students found using Minecraft to learn.

Table 5

Do you think that you could implement Minecraft as a study strategy to learn English vocabulary outside the classroom?

Motivation to learn outside the classroom		
	f	**%**
Yes	10	83%
No	2	17%
Total	12	100%

Figure 6

Motivation to learn outside the classroom
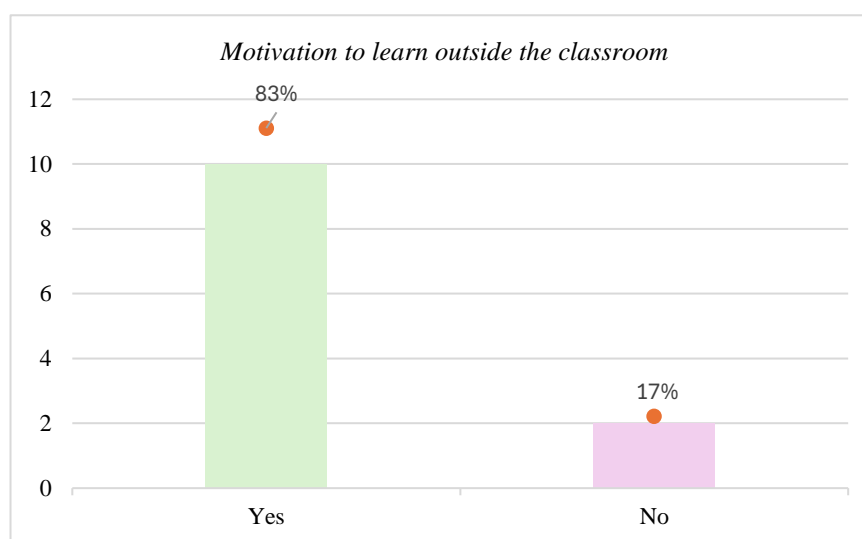
Figure 6 indicates a strong willingness among students to use Minecraft as a study strategy for learning English vocabulary outside the classroom. Specifically, 83% of the students responded "Yes," suggesting that the majority found the game not only effective but also enjoyable and practical enough to consider continuing its use independently.

However, 17% of the students responded "No," indicating that a small portion did not see Minecraft as a viable study strategy outside the classroom. This could be due to various reasons such as individual learning preferences, access to the game outside the school environment, or different levels of engagement with the game.

Additionally, the researcher observed that students were very interested in acquiring the game to do by themselves the lessons, also some students responded that showed that they were aware of the importance of learning the language by playing but also using it in the classroom in a correct way, also some students responded that they could use it to learn while playing one hour a day at home.

Table 6

Which letter and dialogue-based activity do you think helped you to understand the meaning of words?

Letter and dialogue-based activities preference in meaning		
	f	**%**
Completing the sentence	6	50%
Looking for letters	3	25%
Bringing the right object	3	25%
Total	12	100%

Figure 7
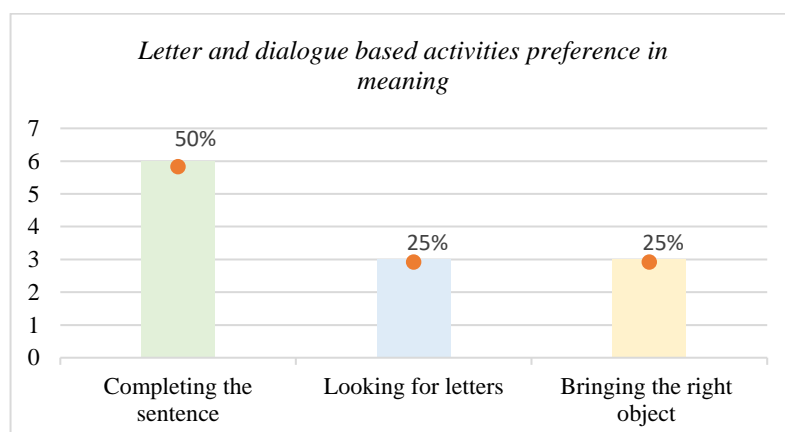
This figure indicates that students had varying preferences regarding the activities that helped them understand the meanings of words (50%) and identified "Completing the sentence" as the most helpful activity. This suggests that many students found contextualizing vocabulary within sentences to be an effective method for learning word meanings.

25% of students found "Looking for letters" to be the most helpful activity. This activity likely involved identifying letters around the Minecraft map to form a word, which can enhance recognition and recall of vocabulary.

Another 25% of the students reported that "Bringing the right object" was the activity that helped them the most. This activity likely involved associating words with their corresponding objects, which can help in solidifying the understanding of word meanings through visual connections.

Table 7

Which dialogue-based activities helped you to use the words in context?

Dialogue-based activities preferences to use words in context		
	f	**%**
Completing tasks	4	31%
Talking to characters	5	38%
Following instructions	3	31%
Total	12	100%

Figure 8

Dialogue-based activities preferences for use
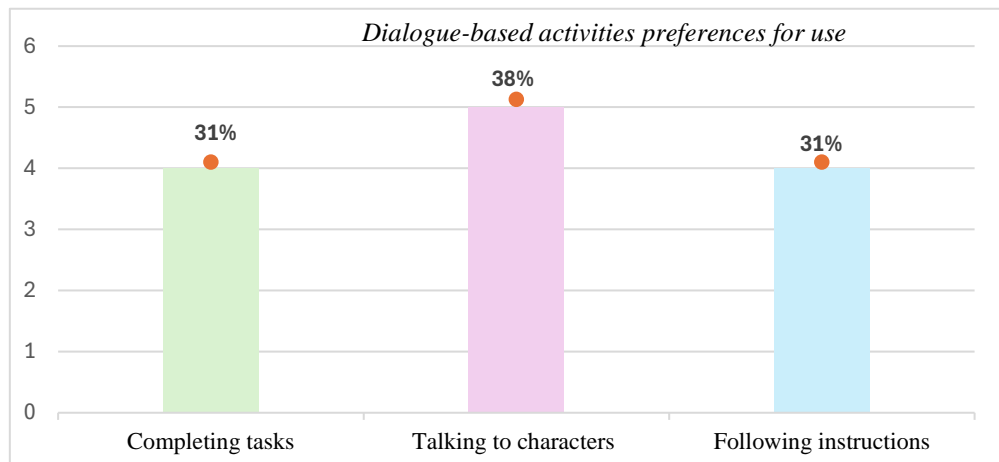
Based on Figure 8 different dialogue-based activities were helpful for using vocabulary words in context. The activity "Talking to characters" was identified by the largest proportion of students, with 38% indicating it helped them use words in context. This suggests that engaging in dialogues with characters within the game provided meaningful practice in applying vocabulary in conversational settings.

Both "Completing tasks" and "Following instructions" were identified by 31% of the students as helpful activities. These activities likely involved using vocabulary to accomplish specific objectives and adhere to directives within the game, providing practical application of words in varied contexts.

Additionally, the field notes indicate some concordance with the results showing that students' participation in solving these kinds of activities increased and were very effective to implement because the students were very interested in resolving these activities.

Table 8

Which letter-based activities helped you to improve the form of words?

Letter-based activities to improve the form of words		
	f	**%**
Completing words	4	38%
Looking for letters	6	46%
Steppingstones	2	15%
Combination lock	2	15%
Total	12	100%

Figure 9
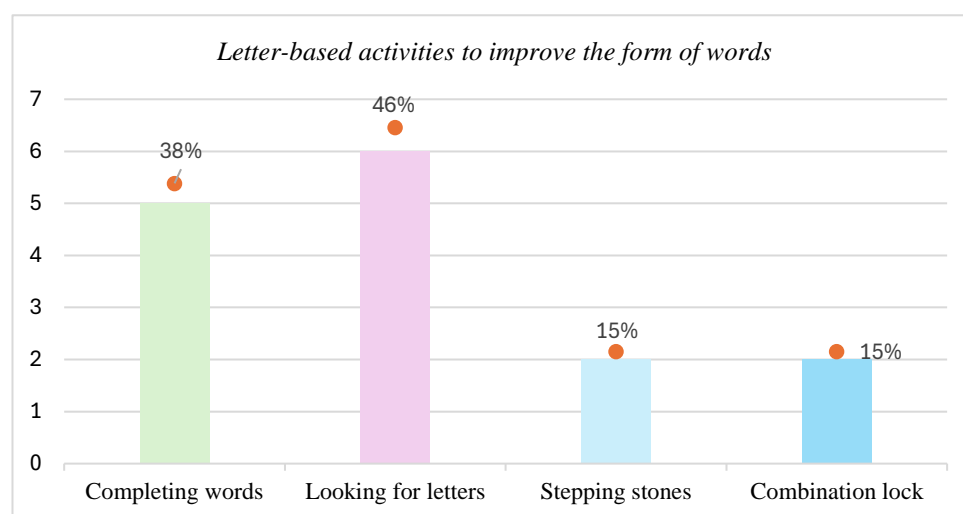
The figure shows which letter-based activity focusing in the form of the words were more efficient. The activity "Looking for letters" was identified by the largest proportion of students, with 46% indicating it helped them improve their word form. This suggests that activities involving looking for the right block that contains the right letter was useful to improve the form of words.

"Completing words" was the second most favored activity, with 38% of students finding it helpful. This activity likely involved filling in missing letters to complete a task or passing to the next level can reinforce correct spelling and word structure.

Both "Steppingstones" and "Combination lock" were identified by 15% of the students as helpful activities. These activities might have involved interactive and engaging methods to practice spelling and form, such as navigating through letter sequences or solving puzzles that require correct word formation. Also, this affirmation aligns with the field notes of the researcher which identifies an increase in the students' interest in solving this kind of activity.

Table 9

Do you think that the themes of the Minecraft game (E.g.: pirates, snow librarian, etc.) help you to use words in different contexts, and in addition to understanding the meaning and form of new vocabulary?

Thematic elements		
	f	**%**
Yes	11	92%
No	1	8%
Total	12	100%

Figure 10
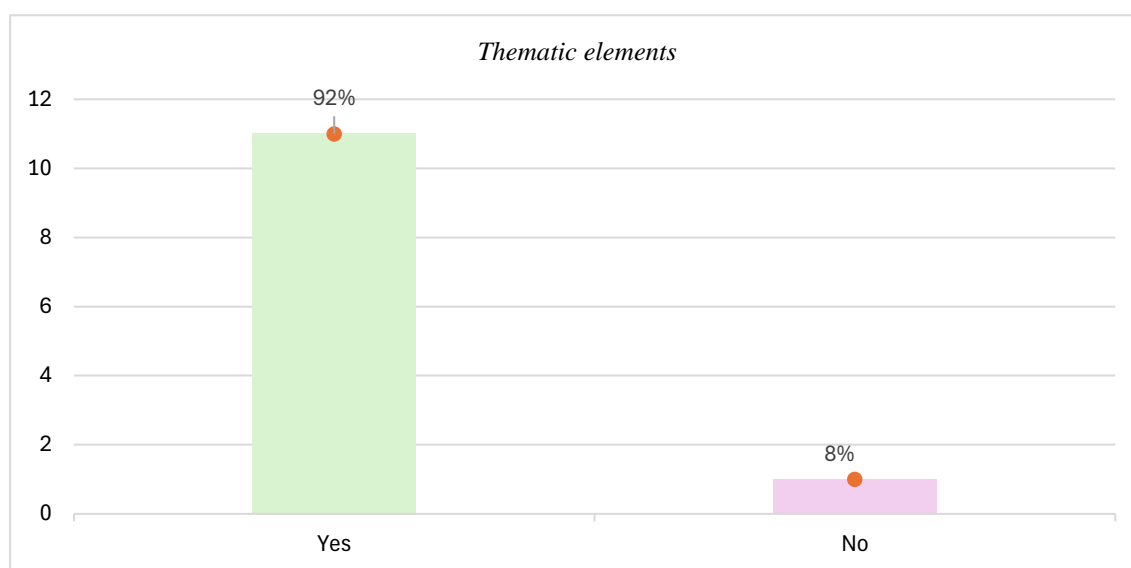
Figure 10 shows the students' perception of the theme used in the game helped in the form, meaning, and use aspects of vocabulary. An overwhelming majority of students, 92%, responded "Yes," indicating that they felt the themes within the game helped them use words in different contexts and aided in understanding the meaning and form of new vocabulary. This suggests that thematic elements in Minecraft provide a rich and engaging context that enhances the learning experience by making vocabulary usage more relevant and memorable.

Only one student, representing 8% of the total respondents, answered "No," suggesting that a very small minority did not find the themes helpful in this regard. This indicates that while most students benefited from the thematic approach, there may be individual differences in how effectively these themes support vocabulary learning.

Additionally, these results are supported by the field notes where the researcher highlights the engagement that the maps produce in the students. Also, the response from the open answer "How?" aligns with these results as some answers highlight that the thematic helps them to learn in a more significant way.

7. Discussion

This section compares the main findings of this research with those of earlier research previously mentioned. Additionally, this section provides crucial information aimed at addressing each research question and describes the limitations and offers some suggestions for carrying out further research.

The main question of this research was, "How can the English vocabulary learning of basic education students at a public institution in Loja be improved through the Minecraft game experience during the academic period 2023-2024?" This was answered by applying the pre-test and post-test regarding the Minecraft features that are used in the lessons, and the effectiveness of employing them in the classroom. There was not a significant improvement in the tests. However, more research is needed to prove the effectiveness of the activities because it may be influenced by individual student preferences and the manner of its integration into the curriculum particularly with specific classroom topics. Minecraft is a game that is still developing its educational mode, and there are not enough lessons already proven for every educational need of the curriculum. This is like the challenges encountered by Baek et al. (2020) in which he mentions that Minecraft lacks focused learning objectives and an inflexible curriculum. Nevertheless, students find that Minecraft provides a very effective learning environment and motivates students to learn not by obligation but by their own will and have fun in the process as the findings by (Al-Haqbani, 2022) where highlights the positive attitude of the students toward learning vocabulary with Minecraft.

The first sub-question in this study was "What is the effectiveness of using Minecraft features to enhance the form, meaning, and use aspects of the English vocabulary?" The study found that students showed a moderate improvement, with the average score increasing from 1.9 to 2.2, finding that the intervention helped students better understand the meanings of vocabulary words. The most significant improvement was observed in the form aspect, where the average score rose from 1.8 to 2.3, suggesting that Minecraft interactive activities, such as puzzles and letter hunts, were slightly effective in enhancing students' knowledge of word structures. However, the use category did not show any improvement, with the average score remaining at 1.4. The lack of significant improvements in these areas could be attributed to the lack of flexibility to adapt to the classroom topics, which was a problem at the moment of developing proper lessons for these specific aspects. Similar to the findings by Sajben et al. (2020), where they mentioned some curriculum incompatibilities in meeting the curriculum requirements. Also, the limited time and focus on contextual usage in the Minecraft lessons.

These findings suggest that there is more research needed in the lessons for specific purposes in vocabulary learning in terms of meaning, form, use, and alignment with the curriculum. Future research should integrate individual activities to maximize Minecraft's educational individual benefits and align lessons with class topics. The comparison with the grading scale shows many students advanced from Beginner to Intermediate levels, but additional support is needed to help students reach higher proficiency tiers. The stability in the Proficient category and the decline in the Expert category indicate the need for targeted strategies to facilitate the transition from Proficient to Expert. Overall, these results highlight Minecraft's potential as a valuable educational tool for vocabulary learning while underscoring areas for further optimization to enhance its effectiveness across all proficiency levels.

The data revealed that various activities in Minecraft significantly supported students in developing their vocabulary skills, including understanding word meanings, usage, and forms. Contextual learning proved particularly effective, as seen in activities like "completing the sentence," which stood out as a key method for grasping word meanings. Dialogue-based tasks, such as "talking to characters," emphasized the value of interactive practice for applying vocabulary in meaningful ways. Activities focused on letter exploration, like "looking for letters," also demonstrated their effectiveness in improving students' understanding of word forms. Additionally, most students recognized the thematic elements of Minecraft as a valuable tool for learning and using new vocabulary across different contexts. Observational data and student feedback further confirmed that these engaging, thematic activities fostered active participation and enhanced vocabulary acquisition. These findings align with research by Baek et al. (2020), who highlighted Minecraft's adaptability as an educational tool, and Chien & Chien (2019), who emphasized its ability to create an enriching environment for language learning.

The second sub-question in this study was: "What are the students' attitudes towards using Minecraft for learning vocabulary?" The findings of the study throw a generally positive response toward the use of Minecraft for vocabulary learning leading us to find out that Minecraft can improve the vocabulary learning attitude of students with the different types of activities that can be created in the game and the attractiveness that the videogame offers. Additionally, the researcher's observation corroborated these outcomes, aligning with Angamarca Alexander (2022), who observed that students were motivated before and during the Minecraft lessons and willingly participated in the activities. Overall, the evidence strongly supports the effectiveness of Minecraft in fostering a positive learning environment for vocabulary acquisition.

Furthermore, as well as this research offers some valuable insights into its findings, several limitations were encountered. Firstly, this research used a mixed method approach, which facilitated the analysis of both qualitative data from a questionnaire and field notes as quantitative data from the testing technique. Also, the researcher's preparation for using and creating Minecraft lessons was insufficient to provide significant learning outcomes due to unexpected difficulties in developing these lessons within the game and the unexpected time that takes the participants to complete all the activities in the game was unexpected too. Additionally, the lack of economic resources to purchase licenses posed a challenge; in a larger classroom setting, this could become a significant issue if the goal is to allow students to play independently. Furthermore, the internet connection proved to be problematic, though this issue was not so relevant in this case.

Future research should incorporate additional data collection methods, such as in-depth interviews or focus groups, to provide a deeper understanding of students' experiences and attitudes towards using Minecraft for learning vocabulary. This would complement the mixed-method approach and offer more comprehensive insights. Adequate training and preparation for teachers and researchers in using and creating Minecraft lessons are crucial. Developing comprehensive training programs could help overcome unexpected difficulties in lesson development and ensure more effective implementation of the game-based learning strategy. Additionally, ensuring ample time for students to complete all activities within the game is essential. Extending the duration of the intervention could capture more significant learning outcomes and provide a better assessment of Minecraft's effectiveness in enhancing vocabulary.

Addressing the lack of economic resources for purchasing licenses is also vital. Seeking additional funding or exploring alternative solutions, such as applying for educational grants or partnering with organizations that support digital learning initiatives, can ensure that all students have access to the necessary resources. Improving the technological infrastructure to ensure a stable internet connection is crucial for the seamless use of Minecraft in educational settings.

8. Conclusions

The study revealed a modest overall improvement in students' vocabulary scores following the use of Minecraft. This improvement suggests that Minecraft has potential as a supplementary tool for enhancing vocabulary acquisition in the English language classroom.

However, the effectiveness of Minecraft in improving vocabulary learning varied among students. This variability indicates that while Minecraft can contribute to vocabulary development, its impact may be influenced by factors such as individual learning preferences and the specific implementation strategies employed in the classroom. The study's findings suggest that Minecraft can serve as a valuable addition to traditional vocabulary teaching methods, but its use should be carefully tailored to meet the diverse needs of students and to align with classroom requirements.

Therefore, fully realizing Minecraft's potential as a vocabulary learning tool may require refining teaching strategies and integrating the game more comprehensively into the curriculum. Developing targeted lessons within the game that align with specific vocabulary objectives and ensuring consistent classroom implementation could further enhance its effectiveness. By addressing these aspects, Minecraft can become an even more powerful resource for improving English vocabulary learning across diverse student groups.

Students' attitudes towards using Minecraft for vocabulary learning were generally positive. Responses and observations indicated that students were motivated and by their own will in the activities. This suggests that Minecraft can create an attractive and effective learning environment, fostering a positive attitude towards English vocabulary acquisition.

9. Recommendations

Given the observed gap in improving vocabulary usage, it's crucial to create Minecraft lessons that closely align with the curriculum and specific vocabulary learning objectives. This involves designing activities within Minecraft that not only focus on word forms and meanings but also emphasize contextual usage of vocabulary. By doing so, educators can address all aspects of vocabulary learning more effectively, ensuring a more comprehensive approach to language acquisition through the game.

To overcome the challenges encountered in lesson development and implementation, it's essential to provide training for teachers on effectively using and creating lessons within Minecraft. This training should cover technical aspects of the game, pedagogical strategies for integrating Minecraft into vocabulary instruction, and methods for aligning game activities with curriculum requirements. Such comprehensive preparation will enable teachers to maximize the educational potential of Minecraft in their classrooms.

The modest improvements observed suggest that longer and more consistent exposure to Minecraft-based learning could yield better results. Extending the duration of the intervention and increasing the frequency of Minecraft sessions would allow students more time to engage with the vocabulary activities, potentially leading to more significant learning outcomes. This extended engagement could help solidify vocabulary knowledge and improve students' ability to use new words in various contexts.

Given the variability in student outcomes, it's important to design Minecraft activities that cater to different learning preferences and proficiency levels. This could involve creating tiered activities within the game that adapt to individual student progress, allowing for personalized learning experiences. Such an approach can help students advance from Intermediate to higher proficiency levels, addressing the need for strategies to support progression to more advanced vocabulary skills.

To ensure broader and more effective implementation, it's crucial to address the technical challenges encountered. This includes exploring funding options or partnerships to overcome licensing costs and improving the technological infrastructure to ensure stable internet connections. By removing these barriers, more students can consistently engage with Minecraft, potentially leading to better learning outcomes. Addressing these resource constraints will help create a more equitable and accessible learning environment for all students.

10. Timeline

Activity	MAR 1	MAR 2	MAR 3	MAR 4	APR 1	APR 2	APR 3	APR 4	MAY 1	MAY 2	MAY 3	MAY 4	JUN 1	JUN 2	JUN 3	JUN 4	JUL 1	JUL 2	JUL 3	JUL 4	AUG 1	AUG 2	AUG 3	AUG 4	SEP 1	SEP 2	SEP 3	SEP 4	OCT 1	OCT 2	OCT 3	OCT 4	NOV 1	NOV 2	NOV 3	NOV 4	DEC 1	DEC 2	DEC 3	DEC 4
Phase 1. Research Project																																								
Presentation of the project	X																																							
Report of Structure, Pertinence and Coherence		X	X	X																																				
Requesting the Thesis Director						X																																		
Designation of the Thesis Director						X																																		
Phase II: Intervention Plan																																								
Application of the Intervention Plan							X	X	X	X	X	X	X	X																										
Application of Data Collection Instruments							X	X	X	X	X	X	X	X																										
Phase III: Thesis Work																																								
1. Title							X																																	
2. Abstract																					X																			
2.1 Resumen																						X																		
3. Introduction							X	X																																
4. Theoretical framework										X	X	X																												
5. Methodology													X	X																										
6. Results																	X																							
7. Discussion																		X	X																					
8. Conclusions																				X																				
9. Recommendations																					X																			
10. Bibliography																						X																		
11. Annexes																						X																		
Phase IV: Thesis Approval																																								
Thesis Presentation																									X	X														
Thesis Certification (Approval)																											X	X												
Phase V: Graduation																																								
Presentation of the Legal Documents																															X	X	X							
Public Dissertation and Graduation																																	X	X	X					

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11. Budget and Financing

For the present research project some resources will be implemented, for that reason a budget for the intervention proposal has been developed.

Budget for the intervention proposal

Resources	Cost
Laptop	500$
Microsoft membership	20$
Worksheet prints	30$
Transportation	30$
Unexpected expenses	60$
Total	640$

All the costs related to the research will be fully covered by the researcher carrying out the investigation, including the unexpected expenses: For that reason, it is important to carefully plan all the expenses.

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Annex 1. Pretest

UNIVERSIDAD NACIONAL DE LOJA
DEPARTMENT OF PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS
DATA COLLECTION INSTRUMENT: PRETEST

Dear student, answer the following questionnaire with sincerity and honesty. Your answers will be anonymous and confidential.

Student's code. ……………………………………………..

Date: ………………………………………….

Vocabulary A1 English level

Meaning (4 points)

1) **Match the words with their antonyms. (2 Points/0.5 for each item)**
    1. Shy   a. Lazy
    2. Nervous   b. Quiet
    3. Noisy   c. Outgoing
    4. Sporty   d. Relaxed

2) **Complete the sentences using words from the previous exercise. (2 Points/0.5 for each item)**
    1. My brother is really_____. He plays his heavy metal music all day.
    2. My father is an _____ person. He is very sociable and has many friends.
    3. Our new classmate is_____. She doesn't talk to others. Her face goes red when you talk to her.
    4. Joe's sister is_____. She doesn't like noisy people and prefers to read in silent places.

Use (3 points)

3) **Complete the following sentences by filling in the blanks with the appropriate expression from the box. (1.5 points/0.25 for each item)**

    | Christmas   Halloween   Thanksgiving   Easter. |
    | New year eve's   Father's day |

    1. During_____, my family and I enjoy a hearty brunch together before heading out for an egg hunt in the garden. It's a joyful holiday filled with laughter and good food.
    2. _____is a time for new beginnings and fresh starts. I like to make resolutions and set goals for the upcoming year during this holiday.
    3. On _____, I love to dress up in elaborate costumes and roam the neighborhood collecting candy with friends. It's the one holiday where I can unleash my creativity.

4. _____ is a time for reflection and gratitude. I always make sure to express my appreciation for my loved ones during this holiday.

5. Every_____, my family gathers around the fireplace to exchange gifts and share stories of the year. It's our cherished holiday tradition.

6. _____ is a special occasion dedicated to honoring and appreciating the dads in our lives. It's a time to express gratitude for their love, guidance, and sacrifices throughout the year.

4) Choose the correct option for each gap. (1.5 points/0.5 for each one)

1. I _____ at the desk in my bedroom after school.
   a) Get up
   b) Do my homework
   c) Finish work
   d) Go shopping

2. I sometimes _____ at a café on my way to work.
   a) Get up
   b) Have a shower
   c) Have breakfast
   d) Go running

3. As soon as I _____ , I get out of bed.
   a) Wake up
   b) Have a shower
   c) Have dinner
   d) Brush my teeth

Form (3 points)

5) Circle the word with the correct spelling. (1.5 points/0.5 for each item)

a.	frend	friend	freind
b.	**ship**	**shop**	**shape**
c.	**brakefast**	**brakafast**	**breakfast**

6) Choose the correct spelling of the missing word in each sentence. (1.5 points/0.5 for each item)

1. The _____ shows all the public holidays.
   a) Calendar
   b) Calender

2. Have you ever been to a _____ country?
   a) Foreign
   b) Foriegn

3. She looks _____ , but I don't know her.
    a) Familiar
    b) Familiar

Thanks for your collaboration

Annex 2. Posttest

UNIVERSIDAD NACIONAL DE LOJA
DEPARTMENT OF PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS
DATA COLLECTION INSTRUMENT: POST-TEST

Dear student, answer the following questionnaire with sincerity and honesty. Your answers will be anonymous and confidential.

Student's code. …………………………………………………..

Date: …………………………………………………………..

Vocabulary A1 English level

Meaning (4 points)

1) **Match the words with their antonyms. (2 points/0.5 for each item)**
   1. Amazing
   2. Funny
   3. Good
   4. Scary

   a. Comforting
   b. Ordinary
   c. Boring
   d. Terrible

2) **Complete the sentences using words from the previous exercise. (2 points/0.5 for each one)**
   1. The experience with my brother's heavy metal music was _____, making it unforgettable.
   2. In the past, family gatherings were always _____, filled with laughter and joy.
   3. Our former classmate turned out to be quite _____, as she rarely interacted with others.
   4. The haunted house we visited last Halloween was truly _____, giving us a scary and thrilling adventure.

Use (3 points)

3) **Complete the following sentences by filling in the blanks with the appropriate colloquial expressions from the box. (1.5 points/0.25 for each one)**

   | Have permission | Have a taste | Get worried | Wakes up |
   | Take off | Find out | | |

   a) You need to _____ before leaving the house.
   b) Would you like to _____ of this delicious cake?
   c) The parents _____ when their child didn't come home on time.
   d) He _____ early to catch the train.
   e) You need to_____ your shoes before entering my house.
   f) I need to_____ who is my father.

4) Choose the correct option for each gap. (1.5 points/0.5 for each one)

1. Would you_____my dog for me this weekend?
   a) Look after
   b) Look
   c) Look up
2. Could you _____ the music while I'm on the phone?
   a) Turn around
   b) Turn off
   c) Turn
3. She was_____from the exam because she was trying to cheat.
   a) Kick out
   b) Kick after
   c) Kick in

Form (3 points)

5) Order the words to make sentences. (1.5 points/0.5 for each item)

a.	axe	exe	oxo	
b.	**strang**	**string**	**strong**	
c.	**happy**	**hapy**	**happi**	

6) Choose the correct spelling of the missing word in each sentence. (1.5 points/0.5 for each item)

4. I can't_____his name.
   a) Remember
   b) Remeber
5. Did the doctor give you some_____?
   a) Medecine
   b) Medicine
6. Maria's got a really good _____ of humour.
   a) Sence
   b) Sense

THANKS FOR YOUR COLLABORATION!

Annex 3. Questionnaire

UNIVERSIDAD NACIONAL DE LOJA
DEPARTMENT OF PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS
DATA COLLECTION INSTRUMENT: QUESTIONNAIRE

Dear student, answer the following questionnaire with sincerity and honesty, which results will only help to carry out a research study related to the improvement of vocabulary through the Minecraft video game. Your answers will be anonymous and confidential.

Student`s code. …………………………………………..

Date: …………………………………………………..

1. **How did you feel about using Minecraft to learn new vocabulary?**

   Motivated   ( )

   Slightly motivated   ( )

   Unmotivated   ( )

   Why?...
   ....

2. **Which letter and dialogue-based activity do you think helped you to understand the meaning of words?**

   Completing the sentence   ( )

   Looking for letters   ( )

   Bringing the right object ( )

3. **Which dialogue-based activities helped you to use the words in context?**

   Completing tasks   ( )

   Talking to characters   ( )

   Following instructions   ( )

4. **Which letter-based activities helped you to improve the form of words?**

   Completing words   ( )

   Looking for letters   ( )

   Steppingstones   ( )

   Combination Locks   ( )

5. **Do you think that the themes of the Minecraft game (E.g.: pirates, snow librarian, etc.) help you to use words in different contexts, and in addition to understand the meaning and form of new vocabulary?**

Yes   ( )

No   ( )

How?...
....

6. **Did you find it interesting learning new vocabulary through the Minecraft game?**

Yes   ( )

No   ( )

Why?...
....

7. **Do you think that you could implement Minecraft as a study strategy to learn English vocabulary outside the classroom?**

Yes   ( )

No   ( )

How?...
....

THANKS FOR YOUR COLLABORATION

Annex 4. Scoring guide

UNIVERSIDAD NACIONAL DE LOJA
DEPARTMENT OF PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS
DATA COLLECTION INSTRUMENT: SCORING GUIDE

PRE-TEST SCORING GUIDE

Nº	Question	Indicator	Score
1	Match the words with their antonyms.	Meaning	2->0.5 each answer 1c 2d 3b 4a
2	Complete the sentences using words from the previous exercise.	Meaning	2->0.5 each answer 1. Noisy 2. Outgoing 3. Shy 4. Quiet
3	Complete the following sentences by filling in the blanks with the appropriate colloquial expressions from the box:	Use	1.5-> 0.25 each answer 1. coach potato 2. early bird 3. No way 4. Night owl 5. take care 6. work out
4	Choose the correct option for each gap.	Use	1.5->0.5 each answer 1a 2c 3a
5	Circle the correct spelled word	Form	1.5-> (0.5) each answer 1. friend 2. ship 3. breakfast
6	Choose the correct spelling of the missing word in each sentence.	Form	1.5->0.5 each answer 1a 2a 3a
TOTAL			10 points

POST TEST-SCORING GUIDE

Nº	Question	Indicator	Score
1	Match the words with their antonyms.	Meaning	2->0.5 each answer 1b 2c 3d 4a
2	Complete the sentences using words from the previous exercise.	Meaning	2->0.5 each answer 1. awesome 2. funny 3. scary 4. amazing
3	Complete the following sentences by filling in the blanks with the appropriate colloquial expressions from the box.	Use	1.5-> 0.5 each answer a. Have permission b. Have a taste c. Get worried d. Wakes up e. Take off f. Find out
4	Choose the correct option for each gap.	Use	1.5->0.5 each answer 1a 2b 3a
5	Circle the correct spelled word	form	1.5->0.5 each answer a. axe b. string c. happy
6	Choose the correct spelling of the missing word in each sentence.	Form	1.5->0.5 each answer Remember Medicine Sense
TOTAL			10 points

Annex 5. Vocabulary Grading Scale

Rating	Meaning	Use	Form
Beginner (0-3)	The student does not Recognize basic meanings	Attempts to use but often incorrect or inappropriate	Makes frequent spelling errors
Intermediate (3.1-6)	The student understands partially the basic meanings.	Moderate ability; occasional errors	Occasional spelling errors
Proficient (6.1-8)	The student understands the meanings with accuracy.	Effectively integrates the words with few errors in simple sentences.	Rarely makes spelling errors
Expert (8.1-10)	The student comprehends an extensive repertoire of terms in different contexts	Skillfully integrates the words in different contexts with precision and sophistication	Virtually error-free in the spelling of words

Annex 6. Field Notes

UNIVERSIDAD NACIONAL DE LOJA
DEPARTMENT OF PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS
DATA COLLECTION INSTRUMENT: FIELD NOTES

Researcher:	
Observation #:	
Institution:	
Topic:	**Class Observed:**
Date:	**Number of students:**
Class duration:	**Students' level:**

THEMES	DESCRIPTION OF THE CLASS
Do Minecraft activities raise the student's motivation to learn during the lesson?	
Do the use of completing the sentence, looking for letters, and bringing the right object activities help students understand the words?	
Do the use of completing tasks, talking to characters, and following instructions help students to use words in context?	
Do the activities about combination locks, steppingstones, looking for letters, and completing words help students to improve the form of words?	
Does the thematic about pirates, snow, or the library, help students to use words in context and understand the form and meaning of new vocabulary?	
Do the students find it interesting to learn vocabulary with Minecraft?	

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Researcher: Daniel Calva	
Observation #:1	
Institution: Unidad Educativa Particular "Juan Montalvo"	
Topic: Holidays	**Class Observed: 9th grade**
Date: May 1st, 2024	**Number of students: 14**
Class duration: 90 minutes	**Students' level: A1**

THEMES	DESCRIPTION OF THE CLASS
Do Minecraft activities raise the student's motivation to learn during the lesson?	Yes, the students seemed very motivated about using Minecraft in the classroom.
Do the use of completing the sentence, looking for letters, and bringing the right object activities help students understand the words?	For this lesson, bringing the right object and looking for letters' activities were implemented and they were well received as the students participated actively in the resolution of that.
Do the use of completing tasks, talking to characters, and following instructions help students to use words in context?	Yes, the students were interested in the characters, they were asking for their names and identifying them.
Do the activities about combination locks, steppingstones, looking for letters, and completing words help students to improve the form of words?	Yes, as they were asked to write a glossary about the new words they were finding and most of the words were written well.
Does the thematic about pirates, snow, or the library, help students to use words in context and understand the form and meaning of new vocabulary?	Yes, as there were some students that ask the meanings of words and immediately could be represented using the context of the game.
Do the students find it interesting to learn vocabulary with Minecraft?	Yes, they were actively participating, except for some students that were in the back because the InFocus didn't have enough bright to visualize enough from the back.

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Researcher: Daniel Calva	
Observation #:2	
Institution: Unidad Educativa Particular "Juan Montalvo"	
Topic: Holidays	**Class Observed: 9th grade**
Date: May 23rd, 2024	**Number of students: 14**
Class duration: 90 minutes	**Students' level: A1**

THEMES	DESCRIPTION OF THE CLASS
Do Minecraft activities raise the student's motivation to learn during the lesson?	Yes, most of the students were excited to do the Minecraft lesson, some students didn't show interest though.
Do the use of completing the sentence, looking for letters, and bringing the right object activities help students understand the words?	For this lesson, these kinds of activities didn't were implemented.
Do the use of completing tasks, talking to characters, and following instructions help students to use words in context?	Some of the students lose track of the activity for moments and they started to do other things in the game.
Do the activities about combination locks, steppingstones, looking for letters, and completing words help students to improve the form of words?	This kind of activity wasn't implemented in the lesson.
Does the thematic about pirates, snow, or the library, help students to use words in context and understand the form and meaning of new vocabulary?	Yes, it was useful to maintain students' interest in the game, but even though they were still more interested in doing other activities in the game, those were the ones who had more experience playing Minecraft
Do the students find it interesting to learn vocabulary with Minecraft?	Yes, they were interested but, the ones who were more experienced in playing this game started to bother the other players.

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DATA COLLECTION INSTRUMENT: FIELD NOTES

Researcher: Daniel Calva	
Observation #:3	
Institution: Unidad Educativa Particular "Juan Montalvo"	
Topic: Holidays	**Class Observed: 9th grade**
Date: May 15th, 2024	**Number of students: 14**
Class duration: 90 minutes	**Students' level: A1**

THEMES	DESCRIPTION OF THE CLASS
Do Minecraft activities raise the student's motivation to learn during the lesson?	Yes, the students seemed very motivated, this motivation didn't last all the lessons though because as the lesson was in groups and only one could use the computer to play the others started to lose interest in the lesson.
Do the use of completing the sentence, looking for letters, and bringing the right object activities help students understand the words?	For this lesson, the completing sentences and bringing the right object activity were implemented and it was very useful to implement a lesson in the game about the modal verb can.
Do the use of completing tasks, talking to characters, and following instructions help students to use words in context?	The talking-to-characters activities were useful in the development of the lesson because it seemed to be funny and challenging to complete the tasks of the characters.
Do the activities about combination locks, steppingstones, looking for letters, and completing words help students to improve the form of words?	These types of activities weren't implemented in this lesson.
Does the thematic about levels and platforms help students to use words in context and understand the form and meaning of new vocabulary?	Yes, because every time they complete a task a new scenario like a new level opened, and that seemed to interest the students and they enjoyed doing that lesson.
Do the students find it interesting to learn vocabulary with Minecraft?	Yes, as they were very involved in completing the assigned tasks.

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DATA COLLECTION INSTRUMENT: FIELD NOTES

Researcher: Daniel Calva	
Observation #: 4	
Institution: Unidad Educativa Particular "Juan Montalvo"	
Topic: Holidays	**Class Observed: 9th grade**
Date: May 22nd, 2024	**Number of students: 14**
Class duration: 90 minutes	**Students' level: A1**

THEMES	DESCRIPTION OF THE CLASS
Do Minecraft activities raise the student's motivation to learn during the lesson?	Yes, the students seemed very motivated, although they seemed like the activity was not so funny.
Do the activity about constructions in Minecraft help them to understand the words?	Yes, as the teacher showed them some examples of some holidays activities, so they learned more using the context of the activities.
Do the use of completing tasks, talking to characters, and following instructions help students to use words in context?	Yes, these activities were useful because it helped to convey the vocabulary already learned and use it.
Do the activities about combination locks, steppingstones, looking for letters, and completing words help students to improve the form of words?	These types of activities weren't implemented in this lesson.
Does the thematic about national holiday representations help students to use words in context and understand the form and meaning of new vocabulary?	Yes, because the activity was about describing their creations, for that reason they were able to use the new vocabulary they learned and create a paragraph describing the constructions they made about holidays.
Do the students find it interesting to learn vocabulary with Minecraft?	Yes, they seemed interested, there were sometimes that were observed that some students were not involved in the activity because only one was able to play during the creation of the construction.

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EXTRANJEROS
DATA COLLECTION INSTRUMENT: FIELD NOTES

Researcher: Daniel Calva	
Observation #: 5	
Institution: Unidad Educativa Particular "Juan Montalvo"	
Topic: Holidays	Class Observed: 9th grade
Date: May 29th, 2024	Number of students: 14
Class duration: 90 minutes	Students' level: A1

THEMES	DESCRIPTION OF THE CLASS
Do Minecraft activities raise the student's motivation to learn during the lesson?	Yes, as they were very involved in using Minecraft to construct a visual representation of a holiday celebration.
Do the activity about constructions in Minecraft help them to understand the words?	Yes, as they describe their constructions in worksheets and in the elements from the game like the chalkboards.
Do the use of completing tasks, talking to characters, and following instructions help students to use words in context?	The time for completing this lesson wasn't enough due to some complications so, it couldn't be observed enough to affirm that the activity helped them to use the words in context.
Do the activities about combination locks, steppingstones, looking for letters, and completing words help students to improve the form of words?	These types of activities weren't implemented in this lesson.
Does the themematic about holiday celebrations in the Minecraft map help students to use words in context and understand the form and meaning of new vocabulary?	This couldn't be observed due to the time because the activity was not finished.
Do the students find it interesting to learn vocabulary with Minecraft?	They were very interested in the development of the activity because first they needed to fill a worksheet before start playing and they did it in less time than previous times they were asked to fill a worksheet.

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DATA COLLECTION INSTRUMENT: FIELD NOTES

Researcher: Daniel Calva	
Observation #: 6	
Institution: Unidad Educativa Particular "Juan Montalvo"	
Topic: Holidays	**Class Observed: 9th grade**
Date: June 4th, 2024	**Number of students: 14**
Class duration: 90 minutes	**Students' level: A1**

THEMES	DESCRIPTION OF THE CLASS
Do Minecraft activities raise the student's motivation to learn during the lesson?	Yes, as they were very involved in using Minecraft to construct a visual representation of the original holiday
Does the activity about constructions in Minecraft help them to understand the words?	This couldn't be observed due to the time wasn't enough for them to complete their constructions and have a significant representation to talk about.
Do the use of completing tasks, talking to characters, and following instructions help students to use words in context?	This time the students weren't interested in following the instructions because the activity was already clear because it was similar to the previous one.
Do the activities about describing the construction of the original holiday help them with the form of words?	This couldn't be visualized due to the lack of time.
Does the thematic about holiday celebrations in the Minecraft map help students to use words in context and understand the form and meaning of new vocabulary?	This time some of them were bothered because in this map there were restrictions to move, because in previous lessons they were very unfocused so, the map was delimited by the teacher to make them focus only on the task they needed to do.
Do the students find it interesting to learn vocabulary with Minecraft?	Yes, they were interested even though the limitations imposed by the teacher in the game, they still were interested in creating a nice construction related to their original holiday, some of them achieved it but there was not enough time for the explanation.

Annex 7. Lesson plans

	Universidad Nacional de Loja		Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros

LESSON PLAN #1

Institution Name:	Unidad Educativa Particular "Juan Montalvo"		
Date:	May 1st, 2024	School Year:	2023-2024
Type of Instituttion	Public ( ) Private (x) Fisco-Misional ( ) Municipal (.)		
Institutional Tutor:	Lic. María Eduarda Ludeña		
Academic Tutor/Thesis Director:	Mgtr. Edgar Mariano Castillo Cuesta		
Preservice Teacher:	Daniel Alejandro Calva Carrión		
Schedule/No. of students	9no Wednesday 8:00-9:30 / 13 students		
Time per lesson:	90	Language level:	A1
Topic:	Holidays		
Contents:	Letter's structure Greetings		
Lesson Objectives:	• To identify the English vocabulary level of the student through the application of the pre-test. • To instruct the students of how the Minecraft lessons are going to be develop and what is the purpose of these lessons. • To improve the use of words through identifying greetings from Minecraft dialogues.		
Materials	• Pre-tests • Computer • Projector • Worksheets • Minecraft		

Starter (warmer, lead-in, review)	Time
Warm-up: The Librarian's Assistant, this warm-up is about asking students to bring any object to the classroom and when they do that, the teacher replies "Thank you, you are my assistant" Then, they choose another student and when they bring the requested object, you tell them "thank you are my assistant too" After that, the teacher elicit the students to remember what question did you ask and writes it on the board, tell the students that an assistant is someone who help people when they are asked politely. **Review:** an introduction to some of the vocabulary that is going to be used in the lesson is provided through the warm-up.	5 min

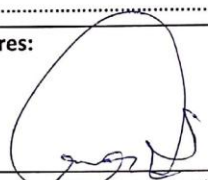| Presentation	Time
• In this phase, the teacher explains what the purpose of this project is. • Also, the teacher presents the pre-test and gives it to the students to be developed.	30 min

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Practice	Time
• In this phase is going to be developed the gaming phase is about playing for the first time Minecraft, the first activities are about completing 3 letter-based activities and 2 dialogue-based activities that are in the first chapter of the game. • As there is only one computer available, the teacher will project the game and generate a dialogue with the activities.	30 min

Production	Time
• In this phase the students will develop a worksheet where some characters from the gameplay phase are, and the students will have to remember the names of the characters and group the images that are related.	15 min

Assessment	Time
• The assessment will be through the development of the worksheet. • Also, the teacher will ask questions about what they think about the game,	5 min

Feedback / Closure	Time
• The feedback will be about how they were behaving during the development of the lesson and with that the teacher finishes the class.	5 min

Observations

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Signatures:

Mgtr. Edgar Mariano Castillo Cuesta
(Academic Tutor/Thesis Tutor)

Lic. María Eduarda Ludeña
(Institutional tutor)

Daniel Alejandro Calva Carrión
(Pre-service teacher)

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LESSON PLAN #2			
Institution Name:	Unidad Educativa Particular "Juan Montalvo"		
Date:	May 23rd, 2024	**School Year:**	2023-2024
Type of Instituttion	Public ( ) Private (x) Fisco-Misional ( ) Municipal (.)		
Institutional Tutor:	Lic. María Eduarda Ludeña		
Academic Tutor/Thesis Director:	Mgtr. Edgar Mariano Castillo Cuesta		
Preservice Teacher:	Daniel Alejandro Calva Carrión		
Schedule/No. of students	9no Wednesday 8:00-9:30 / 13 students		
Time per lesson:	45	**Language level:**	A1
Topic:	Holidays		
Contents:	Vocabulary about holidays		
Lesson Objectives:	• To improve the use and meaning of words to talk about holidays with Minecraft characters dialogues.		
Materials	• Computer • Projector • Worksheet • Minecraft		

Starter (warmer, lead-in, review)	Time
Warm-up: The teacher starts the class with a game from the website https://wordwall.net/es/resource/37083403/minecraft. **Review:** This is done through the warm-up where the students review some words from the game.	5 min

Presentation	Time
• The teacher plays the game and generates a dialogue with the students where the teacher asks questions such as Where do I go now or What do I do now, also the teacher explains how the students need to answer those questions. • The students need to answer the questions with instructions like go right and go left, go straight or go back.	20 min

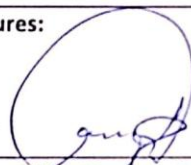| Practice	Time
• The gameplay phase is developed, and the students will need to take notes of the new words they find in the gameplay to complete a chart with the new word and the meaning.	

Production	Time

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• The students will need to create sentences related to the current topic "Holidays" using the vocabulary learned in this class.	15 min
Assessment	**Time**
• The assessment will be through the development of the chart and the worksheet, the students will have to correctly write the sentences in their chart and in the worksheets.	5 min
Feedback / Closure	**Time**
• The feedback will be during the development of the class correcting students' mistakes in the act. • Then the teacher finishes the class by asking what their thought about this format of lesson are. • Also, as homework teacher gives a worksheet with a puzzle about finding the words that they saw this lesson.	

Observations

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Signatures:

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Mgtr. Edgar Mariano Castillo Cuesta
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Daniel Alejandro Calva Carrión
(Pre-service teacher)

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LESSON PLAN #3

Institution Name:	Unidad Educativa Particular "Juan Montalvo"		
Date:	May 15th, 2024	School Year:	2023-2024
Type of Instituttion	Public ( )　　Private (x)　　Fisco-Misional ( )　Municipal (.)		
Institutional Tutor:	Lic. María Eduarda Ludeña		
Academic Tutor/Thesis Director:	Mgtr. Edgar Mariano Castillo Cuesta		
Preservice Teacher:	Daniel Alejandro Calva Carrión		
Schedule/No. of students	9th Wednesday 8:00-9:30 / 13 students		
Time per lesson:	90	Language level:	A1
Topic:	National Holidays		
Contents:	The modal verb can.		
Lesson Objectives:	• To evaluate the use of can through a Minecraft lesson to improve the form and meaning of these words.		
Materials	• Computer • Projector • Worksheets • Minecraft		

Starter (warmer, lead-in, review)	Time
Warm-up: The teacher starts the class with a game from the website https://wordwall.net/es/resource/57044413/minecraft-questions-2 **Lead-in:** The teacher asks some questions about what they remember about the last time we used Minecraft. **Review:** Activation of prior knowledge through the lead-in and warm-up.	5 min

Presentation	Time
• The teacher starts the lesson with a review of the uses of can, where the teacher also includes the negative for of can.	30 min

Practice	Time
• The students work on the activities from Minecraft where they will need to complete the tasks of the characters about the different uses of can.	20 min

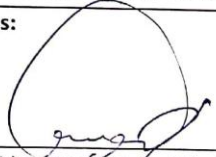| Production	Time

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• Then the students work on their worksheets where there are activities to complete about the use of can.	30 min
Assessment	**Time**
• The assessment will need to take pictures as a proof of their work in the game. • Also, the worksheet will have a qualification.	5 mins
Feedback / Closure	**Time**
• The feedback will be during the development of the class correcting students' mistakes in the act. • Then the teacher finishes the class by asking what their thought about this format of lesson are.	

Observations

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Signatures:

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Mgtr. Edgar Mariano Castillo Cuesta
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Daniel Alejandro Calva Carrión
(Pre-service teacher)

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LESSON PLAN #4

Institution Name:	Unidad Educativa Particular "Juan Montalvo"		
Date:	May 20th-24th	School Year:	2023-2024
Type of Instituttion	Public ( )　　Private (x)　Fisco-Misional ( )　Municipal ( )		
Institutional Tutor:	Lic. María Eduarda Ludeña		
Academic Tutor:	Mgtr. Edgar M. Castillo C.		
Preservice Teacher:	Daniel Alejandro Calva Carrión		
Schedule:	9th – Thursday – 10:50-12:20	Practice hours:	2
Time per lesson:	90	Language level:	A1
Class / Number of Students:	16		
Topic:	Iconic characters of culture		
Contents:	• Vocabulary to talk about iconic characters. • The modal verb can • Past simple tense		
Lesson Objectives:	• To describe an iconic character and its role on a national holiday of Ecuador using can and past simple tense. • To construct something representative about an Ecuadorian famous character through following instructions in Minecraft Education in order to practice the use and meaning of words.		
Materials	• Internet • Minecraft		

Starter (warmer, lead-in, review)	Time
Warm-up: The teacher starts the class with a bingo game of famous Ecuadorian people. **Review:** The review is with the warm-up where the topic about famous characters will be discussed.	10 mins

Presentation	Time
• The teacher leads a discussion about why are iconic some Ecuadorian characters and why they are influencers in the Ecuadorian culture.	15 mins

Practice	Time

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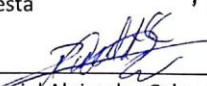|	Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros

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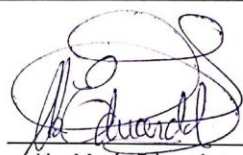
• The students work in their presentations using Minecraft to create a house or a representation related to an iconic character using the NPCs instructions, then they explain why they create that and how it is related with the character.	30 mins
Production	**Time**
• The students construct the iconic representations of his famous character, in order to describe it to the class. • The students prepare the descriptions of his construction, where they will need to use simple past tense.	30 nibs
Assessment	**Time**
• The assessment will be through the progress of their work. • Also, their constructions will have a score. • Additionally, the students will need to take a picture of the game as a proof of their work.	5 mins
Feedback / Closure	**Time**
• The teacher ends the class by congratulating students for their work and remembering them to prepare to present their projects next week. • The teacher continually will be aware of the students work in order to control the organization of the groups and their progress.	

Observations

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Signatures:

_____
Mgtr. Edgar Mariano Castillo Cuesta
(Academic/Thesis Tutor)

_____
Lic. María Eduarda Ludeña
(Institutional tutor)

_____
Daniel Alejandro Calva Carrión
(Pre-service teacher)

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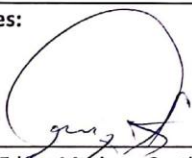
LESSON PLAN #6

Institution Name:	Unidad Educativa Particular "Juan Montalvo"

Date:	June 3rd -7th	**School Year:**	2023-2024

Type of Instituttion	Public ( ) Private (x) Fisco-Misional ( ) Municipal ( )
Institutional Tutor:	Lic. María Eduarda Ludeña
Thesis Director:	Mgtr. Edgar M. Castillo C.
Preservice Teacher:	Daniel Alejandro Calva Carrión
Schedule:	9th – Thursday – 10:50-12:20

Time per lesson:	90	**Language level:**	A1

Class / Number of Students:	16
Topic/Contents:	Holidays
Lesson Objectives:	• To enhance the use of vocabulary to talk about holidays by creating an original holiday and representing it using Minecraft visual representation. • To create an original holiday using the vocabulary to talk about holidays.
Materials	• Internet • Minecraft • English book

Starter (warmer, lead-in, review)	**Time**
Warm-up: The teacher starts the class with a word association game where the teacher gives one word, and all the students will need to say a word related, for example, words vacation, beach, travel, family, dinner, and Christmas. **Review:** The review is with the warm-up, where the topic of holiday activities will be covered.	5 mins

Presentation	**Time**
• The teacher briefly summarizes the knowledge (the modal verb can, past and present simple, adverbs of frequency) about discussing holidays and holiday activities using a PowerPoint presentation.	10 mins

Practice	**Time**
• The students work on brainstorming about what makes a holiday unforgettable, what they would like to have in a holiday celebration, and what they would like to celebrate that already doesn't exist a celebration about. • For that, they will fill out a sheet where they will need to brainstorm ideas about what date it will be celebrated, what activities people will do on that holiday, etc.	20 mins

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Production	Time
• The students work on creating their holiday world in Minecraft, where they will need to include an original name for the holiday and some visual constructions about the activities that will be celebrated with that holiday of their authorship.	35 nibs
Assessment	**Time**
• The assessment will be through the progress of their holiday world and the expressions they use to describe the activities that will exist on that holiday; they will need to use adverbs and the modal verb can. • Also, the worksheet will be taken into account for the assessment, and they will need to fill it out with the information required.	15 mins
Feedback / Closure	**Time**
• The teacher will provide feedback on the student's progress and correct their descriptions of the holiday activities. • To finish the class, the teacher briefly asks the students what their favorite holiday activities are and if they will employ them in Minecraft.	5

Observations

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Signatures:

Mgtr. Edgar Mariano Castillo Cuesta
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Lic. María Eduarda Ludeña
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(Pre-service teacher)

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LESSON PLAN #7			
Institution Name:	Unidad Educativa Particular "Juan Montalvo"		
Date:	June 10th -14th	**School Year:**	2023-2024
Type of Instituttion	Public ( ) Private (x) Fisco-Misional ( ) Municipal ( )		
Institutional Tutor:	Lic. María Eduarda Ludeña		
Thesis Director:	Mgtr. Edgar M. Castillo C.		
Preservice Teacher:	Daniel Alejandro Calva Carrión		
Schedule:	9th – Thursday – 10:50-12:20		
Time per lesson:	90	**Language level:**	A1
Class / Number of Students:	16		
Topic/Contents:	Holidays		
Contents:	• Holidays vocabulary.		
Lesson Objectives:	• To determine the impact of Minecraft on the students' vocabulary learning through the application of the post-test. • To determine the students' perceptions of using Minecraft to learn vocabulary through the questionnaire application.		
Materials	• Minecraft • Post-test • Questionnaire		

Starter (warmer, lead-in, review)	Time
Warm-up: The teacher starts the class with a summer holiday activities game https://www.baamboozle.com/game/518378, which is about summer holiday activities. **Review:** The review is during the warm-up, during which students remember holiday activities.	5 mins

Presentation	Time
• The teacher explains the questions from the questionnaire about how they need to answer and some meanings of expressions like letter-based activities and dialogue-based activities to clarify their meaning. • Also, the teacher explains some questions about the questionnaire, such as the meaning, form, and use of words, to give them clarity on what is needed to answer.	25 mins

Practice	Time
• The students develop the post-test, where they must answer some questions about holiday vocabulary.	20 mins
	Time

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Production	
• The students will work on answering the questionnaire and need to answer the questions related to their perceptions of using Minecraft to learn vocabulary.	20 nibs
Assessment	**Time**
• The teacher asks questions in general about their experience using Minecraft for educational purposes to have a better understanding of the use of Minecraft in the educational field.	15 mins
Feedback / Closure	**Time**
• The teacher ends the class by briefly talking with the students about all the experiences during this month working with them and saying thank you for their time and predisposition to work with him.	5

Observations

....

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Signatures:

_____
Mgtr. Edgar Mariano Castillo Cuesta
(Academic Tutor/Thesis Director)

_____
Lic. María Eduarda Ludeña
(Institutional tutor)

_____
Daniel Alejandro Calva Carrión
(Pre-service teacher)

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Annex 8. Informed consent

**UNIVERSIDAD NACIONAL DE LOJA
DEPARTMENT OF PEDAGOGÍA DE LOS IDIOMAS
NACIONALES Y EXTRANJEROS**

DECLARACIÓN DE CONSENTIMIENTO INFORMADO

Señor/a

PADRE/MADRE DE FAMILIA

De la Unidad Educativa Fiscomisional "Daniel Álvarez Burneo"

Reciban un cordial saludo.

Por medio de la presente me permito solicitar su autorización y consentimiento para la participación de su hijo/hija en la realización del proyecto de investigación: "Minecraft ye el aprendizaje de vocabulario en estudiantes de educación básica superior.", el cual tiene como objetivo estrictamente académico, lo cual servirá al estudiante practicante a realizar su trabajo de investigación, como requisito para su titulación.

Yo, _____, con cédula de identidad

_____, representante de la/el estudiante

_____ he leído este documento de

consentimiento informado que me ha sido entregado, he comprendido el tema y el objetivo del proyecto que se va a realizar.

También he sido informado/a de que mis datos personales y de mi representada/o, serán protegidos y manejados bajo confidencialidad por parte del investigador.

En conocimiento pleno me sirvo consentir y autorizar la participación de mi hijo/hija en la realización del proyecto a cargo del estudiante de la Universidad Nacional de Loja con fines investigativos y de aprendizaje.

En la ciudad de Loja, del………………………………….………… (días, mes y año)

Firma:

Nombres y Apellidos:

C.I.:

REPRESENTANTE

Annex 9. Research matrix

Title:	Minecraft and vocabulary learning among superior basic education students at an education institution in Loja, school year 2023-2024				
Problem	**Objectives**	**Theoretical Framework**	**Methodological design**	**Techniques/ Instruments**
General problem • How to improve the English vocabulary learning of basic education students at a public institution in Loja through the Minecraft game experience, during the academic period 2023-2024?	**General Objective** • To improve the learning of English language vocabulary of basic education students from an educational institution in Loja through the Minecraft game learning experience, during the academic period 2023-2024.	**Independent variable** 5.1. Minecraft. 5.1.1. Game-based learning 5.1.2. Minecraft definition 5.1.3. Minecraft in Education 5.1.4. Minecraft strategies **Dependent Variable** 5.2. Vocabulary learning 5.2.1. Vocabulary Aspects 5.2.2. Vocabulary learning strategies.	**Research design** Action research, mixed method	**Testing technique** Pre-test Post-test **Indicators** **Vocabulary:** - Form - Use - Meaning **4 points for meaning, 3 points for form and 3 points for use**

Subproblems	To verify the effectiveness of the Minecraft <u>didactic resources</u> to enhance the form, meaning, and use aspects of the English language vocabulary with basic education students in an educational institution in Loja.		**Intervention** Intervention proposal, 6 weeks Lesson plan (ESA model)	**Survey Technique** Questionnaire **Indicators** **Letter-based activities and dialogue-based activities.**
• What is the effectiveness of using Minecraft features to enhance the form, meaning and use aspects of the English vocabulary?				
• What are the students' attitudes towards using Minecraft for learning vocabulary?	• To analyze students' attitudes regarding the experience of learning vocabulary through Minecraft in an education institution in Loja.			