

Video Games for Increasing Middle-Aged Adults' English Vocabulary and Motivation

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Abstract

Video games are considered relevant digital language learning tools for improving different language skills, particularly vocabulary. Previous studies have investigated video games predominantly with EFL young learners, teenagers and young adults in schools and universities. However, less research has focused on middle-aged EFL learners and their vocabulary increase. Investigating older learners' vocabulary increase through video games-based learning is important because vocabulary is an essential set of building blocks for communication, and video games can become an adequate learning resource for this underexplored population. The present study, therefore, investigated whether video games are effective digital language learning tools to increase middle-aged learners' vocabulary and to improve motivation. To do so, a case study was implemented with two beginner-level middle-aged adults to observe the acquisition and improvement of vocabulary when exploring the educational video game "*Who is Oscar Lake?*". Data were collected through observations, interviews, questionnaires, and vocabulary tests and lists that both participants completed throughout ten game sessions. Data were analyzed through content analysis.

The study revealed enhancement in participants' vocabulary in the video game context, evident from pre- and post-test comparisons and vocabulary lists. For instance, María's vocabulary about the game increased from 12 to 110. Similarly, Luis increased from 13 to 136 new words in total. This progress spans varied linguistic categories, including verbs, adjectives, and nouns, signifying substantial vocabulary enrichment. The participants expanded their vocabulary in diverse communicative situations, including travelling, exploring a city, having persuasive conversations, and solving crimes. Furthermore, the research showcased a positive shift in middle-aged adults' motivation, with participants expressing engagement and enthusiasm. This change was attributed to the game's interactivity, contextual vocabulary practice, and an enjoyable learning experience. This not only enriched vocabulary but also positively influenced attitudes and motivation. These findings suggest that video games effectively enhance vocabulary and motivation for middle-aged learners, offering a meaningful learning experience rooted in relatability. It is concluded that video games are effective tools for vocabulary improvement and motivation among adult learners. The findings of this study have important implications for language educators.

Keywords: *case study, middle-aged learners, video games-based learning, video games, vocabulary acquisition*

Chapter 1 Introduction

1.1 The importance of video games as language teaching and learning tools

This study investigated the effectiveness of a video game as a learning tool in acquiring English vocabulary in middle-aged students. Video games are “games which we play thanks to an audiovisual apparatus and which can be based on a story” (Esposito, 2005, p. 2). They are important learning resources for increasing vocabulary acquisition (Bakar & Nosratirad, 2013; Bin Hady, 2021; Cabraja, 2016; Galvis, 2011; Lorensen & Tumolo, 2019; Tan & Tan, 2020).

Empirical studies have reported the usefulness of video games for language learning (e.g., Rudis & Poštič, 2017). For instance, video games have been effective as learning tools for teaching children (e.g., Rivas, 2016) and teenagers (e.g., J.S Torres, 2015; H.H Torres, 2015). Studies with children have been conducted in foreign language educational institutes and schools and have reported that using video games in an educational context can be helpful in teaching and learning a foreign language since it triggers motivation, interest, and teamwork (Rivas, 2016). Similarly, studies with teenagers have found that including technological tools in the classroom benefits adolescents, as this generation of digital natives uses these resources daily (J.S Torres, 2015). This finding was reflected in the change of dynamics of the classes, where students began to take ownership of their educational process and had the opportunity to be more autonomous with their activities. However, these studies also showed the need to prepare teachers to manage these digital tools because including technology within the educational spaces recognizes a generation that grew up using these digital tools. This is why teachers should know how to include these resources in their planning to take advantage of the positive aspects of new technologies, helping learners find a different use to the one they usually give daily. This invites reflection and analysis on the uses that can be given to technology (J.S Torres, 2015).

The existing literature has also identified that video games as learning tools can be positively adapted to the institution's curriculum and increase older students' vocabulary (Bakar & Nosratirad, 2013). For instance, the participants had a positive attitude, and the initial objectives were achieved by acquiring vocabulary autonomously through video games (Bakar & Nosratirad, 2013).

Although previous studies have reported the effectiveness of video games in language learning, most of these studies have been conducted with children and teenagers. In contrast, fewer studies have been done with adults (Galvis, 2011). For instance, since there is usually a mistaken belief that adults have a disadvantage over children in the acquisition of foreign languages, Brown

and Lee (2015) highlight the importance of taking into account the age of the students, as well as the level of the language, when teaching, since there are great differences between young and older learners. The authors highlight a difference between children's spontaneous and peripheral attention, while adults tend to be more conscious. A younger learner might stay focused longer if faced with a movie, cartoon, or video game. However, when faced with activities that require more mental concentration and that are more challenging, they might lose their focus of attention with greater ease. Additionally, affective factors and the need to stimulate the five senses differ. Regarding vocabulary acquisition, adults can retain more vocabulary than children and may use this capacity for retention and understanding to acquire grammatical and linguistic concepts at a higher rate.

Brown and Lee (2015) also emphasize adults can be good foreign language learners. For the authors, adults may have superior cognitive abilities that could facilitate their success in specific tasks. They may understand more complex concepts and grammar and may be able to evoke images and objects on their own. Adults have a greater capacity for abstract thinking, have a greater span of attention and are more able to focus on their own personal or professional motivations. All these abilities can help middle-aged adult learners increase vocabulary through a video game to learn and improve vocabulary. Adults can increase motivation by achieving different learning objectives and relating the game to their life experiences. They might be able to concentrate and focus on a different learning objective of the video game. Adults' capacity for vocabulary retention and understanding and acquisition of grammatical concepts may also be advantages when exploring the video game.

Although video games are considered positive language learning resources for children and teenagers, there is a need to investigate how these tools can help improve adults' acquisition and learning of the English language. As language teachers, it is important to consider learners of all ages, their needs and contexts and to understand that different learning tools could help teach learners of different ages (Rojas & Molina, 2014). Due to prejudices, we could be limited to using specific tools, so it is necessary to know the profitability of these tools during the teaching process and to explore adults' attitudes towards video games for language learning. It is important to apply these tools in our context since this would contribute not only to the community of foreign language teachers, to continue exploring the andragogy field focused on the teaching of English with the use of video games as a tool for seniors, but also for older learners to have visibility as important targets within the process of bilingualism.

Video games used to be under-explored in the EFL classroom since language teachers did not typically use these learning tools as a teaching strategy. This is probably due to obstacles that impede

technological innovation (Yang & Huang, 2008), such as lack of time, scarcity of technological resources in classrooms, and limitations imposed by rigorous class periods. However, Kenny and Gunter (2010) highlighted the negative views of teachers towards these technologies (in this case, video games), not being seen as legitimate instructional tools but as objects of distraction that could be related to increased violent thoughts, aggressive attitudes and antisocial behavior (Linton, 2010). These factors can influence teachers' negative views towards video games and their limited use in the classroom.

Regardless of such limitations, video games can be used to acquire a second language (Kasanic, 2017). This learning tool has mainly become part of young people's lives who spend most of their time using video games or social networks. It can also be introduced in classrooms since it generates a particular learning method teachers can integrate (López, 2016). In this way, the video game itself can create management guidelines in coherence with the learning processes and the school curriculum so that they do not affect students' academic performance (Restrepo et al., 2019).

Nevertheless, we cannot merely focus our discussion on the efficacy of video games on young learners' foreign language acquisition only. According to Galvis (2011), contrary to popular stereotypes, older adults can be good foreign language learners. Although the difficulties, older adults often experience in the foreign language classroom can be overcome through adjustments in the learning environment, attention to affective factors, and the use of effective teaching methods, there are few studies at the national level (Galvis, 2011; Camacho & Ovalle, 2019; Arenas, Arias & Calvo, 2017; Galvis, 2015) with an interest in the process of teaching English as a foreign language to learners of these ages. The Ministry of Education emphasizes the bilingualism process within a young population, focusing mainly on children, adolescents, and young adults, leaving aside middle-aged adults and older people (Herran et al., 2017).

Based on this gap, there is a need to find foreign language teaching strategies within this age range, considering their needs, objectives, and attitudes both linguistically and towards the methods used, since there is also a stereotypical view of the negative perception of adults, particularly older adults, towards video games and these as a learning tool. There is a need to consider adults in the national bilingualism process and not leave them aside since, within this age range, there are also academic and social interests and needs that should not be ignored. The present study, therefore, aims to contribute to the investigation of the effects of video games on middle-aged adults' English language learning by answering the following research questions.

1.2 Research Questions

1.2.1 Main Research question

Are video games effective for increasing English vocabulary and motivation in middle-aged adults?

1.2.2 Specific research questions

1. What is the participants' vocabulary repertoire before and after playing the video game?
2. What is the middle-aged learners' attitude before and after using the video game as a learning tool?

1.3 Description of the context

According to UNESCO (2016),

"Adult learning and education are fundamental pillars of a learning society and for the creation of learning communities, cities and regions that foster a culture of lifelong learning and revitalize it at the level of families, communities and other learning spaces, as well as in the workplace (...) and wider society. It includes the ability to read and write, to identify, understand, interpret, create, communicate, and compute, using printed and written materials, as well as the ability to solve problems in an increasingly technological and information-rich environment. Literacy is an essential means of building people's knowledge, skills, and competencies to cope with the evolving challenges and complexities of life, culture, economy, and society. " (p. 2).

Based on the above, the Ministry of National Education in Colombia states that it is essential to develop basic skills, citizenship skills, and the development of entrepreneurial attitudes that allow adults to put their knowledge into practice in daily life and manage to generate a path for insertion into the labor world (MEN, 2017). Thus, Decree 3011 of December 19, 1997 (MEN, 1997) stipulates that educating adults and older adults is a right. Therefore, it is essential to consider this age range when researching and planning didactic tools that contribute to education beyond children and young people. That is why the present research focuses on older adults' language learning.

The study also follows the Common European Framework of Reference for Languages (CEFR) (Council of Europe, 2002), adopted by the MEN in Colombia in Decree 4904 of 2009, for teaching languages. According to Decree 3870 of 2006, all educational institutions that offer academic programs for work and human development in languages must follow the CEFR for their programs. Hence, this framework is followed to identify the participants' language level and vocabulary increase.

1.4 Significance of the study

As language teachers, it is important to consider learners of all ages and contexts and to understand that all learners have different needs and may use different learning strategies and tools in their learning process. Given that language teachers need to minimize any bias against any population (e.g., older adults not using video games), it is necessary to know the effectiveness of video games as language learning tools to improve their vocabulary acquisition and identify their attitudes towards this learning method. This knowledge would contribute to our understanding of the teaching process and language resources useful for older adults. The results of the present study might be relevant for foreign language teachers to continue exploring the andragogy field and video games. Also, this study involves older learners in the bilingualism process.

The present research is relevant and important in the language teaching field since most studies have focused on young students, namely children and adolescents. Very few studies have investigated older adults or widely investigated age as an influential factor in the use of video games. Finally, this research contributes to the second language acquisition theory regarding video game-based learning for older adults. Like previous international studies, the present research seeks to position video games as efficient teaching and learning tools.

1.5 Thesis outline

This thesis is organized into six chapters. Chapter 1 introduces the study, research gaps, context, and significance. Chapters 2 and 3 discuss previous relevant literature and the theory that guided this study. The research methods used in this study are described in Chapter 4, followed by Chapter 5, which presents the study results and discusses the findings. Chapter 6 presents the conclusions, implications, limitations, and avenues for future research.

Chapter 2 Literature Review

2.1.Introduction: Video games in language teaching

Implementing information and communication technologies (ICTs) in English classrooms is a topic that has been burgeoning over the years as new technologies take over a more significant share of the market (Bin-Hady, 2021). ICTs are resources, tools, equipment, computer programs, applications, networks, and media that allow the compilation, processing, storage, and transmission of information such as voice, data, text, video and images (MTIC Art. 6 Law 1341, 2009).

Video games are included in these ICTs as they are also considered computer programs. A video game is an interactive entertainment-oriented application that, through specific commands or controls, allows simulating experiences on the screen of a television, computer, or other electronic devices (Deterding et al., 2011). Video games differ from other forms of entertainment, such as movies, in that they must be interactive; in other words, users must be actively involved with the content. However, they do not serve solely as methods of entertainment but can be used as teaching and learning tools (Bin-Hady, 2021). This distinction highlights the existence of both commercial and educational video games. Commercial video games, also known as entertaining, are primarily designed for recreational purposes and entertainment, often targeting a broad consumer audience. They may encompass various genres, such as action, adventure, or sports, and their main objective is to entertain and engage players for leisurely enjoyment (Gee, 2003).

On the other hand, educational video games, also known as serious video games, are specifically developed to facilitate learning and educational experiences (Connolly et al., 2012). These games support specific learning objectives, subject matters, or skills to enhance the players' knowledge and comprehension through interactive and engaging gameplay (Kiili, 2005). In educational video games, players actively participate in problem-solving activities, simulations, and challenges that promote skill development and knowledge acquisition while fostering a positive learning experience (Shute & Ke, 2012). Therefore, while commercial video games are primarily oriented toward entertainment, educational video games serve as valuable tools in various educational contexts, presenting a gamified approach to learning that can be both effective and engaging (Papastergiou, 2009). The distinction between these two types of video games emphasizes the diverse purposes and applications they serve in modern society, catering to different user preferences and needs.

Educational and commercial video games serve different purposes and target distinct audiences. Serious video games are designed to facilitate learning and academic outcomes. They are utilized in formal and informal educational settings to deliver educational content interactively and

engage learners (Deterding et al., 2011). In contrast, commercial videogames primarily focus on entertainment and enjoyment, appealing to a broad consumer market (Chen, 2018). The key difference lies in their core objectives, with educational video games aligning with educational goals, while commercial video games prioritize entertainment and revenue generation (Steinkuehler & Duncan, 2008).

As discussed below, most studies have identified the positive effects of video games in improving communication skills, such as vocabulary, listening, reading and writing in English of children and adolescents. Likewise, students' attitudes at these ages always showed to be positive, in addition to having quick adaptability to these tools since they are part of their daily life, now adapted to an educational environment. However, not many studies have been done on using video games as a teaching tool for middle-aged adults and their attitudes towards these technologies and games as a teaching method. This population has been under-explored to date.

The rest of the chapter reviews studies about video games as teaching and learning tools for different communicative skills in English, focusing on learners of different ages and their motivations towards this method, which has been conducted at the international, national, and local levels. The chapter aims to highlight the gaps this study seeks to fill.

2.2 The use of video games to increase vocabulary in the international context

Game-based Learning (GBL) refers to borrowing certain gaming principles and applying them to real-life settings to engage users (Trybus, 2015). It is a design experience where players participate in ideological worlds to support particular reactions, feelings, emotions, thoughts and identities for education and training (Squire, 2008).

Squire (2008) used the term Video Game-Based Learning (VGBL) after studying games as tools that could help designers of digital learning programs to understand the mechanisms under which digital culture operates. Thus, VGBL is intended as an instructional approach with specific learning objectives and outcomes that unfold through, in this case, video gameplay. However, this approach has continued to be studied internationally over the years. More questions and research have emerged to contribute to our understanding of the use of computer games in the educational field.

Video games have gained importance as resources for language teaching (López, 2016). Games, such as *Animal Crossing*, *Metal Gear Solid*, *Nancy Drew*, and predominantly *The Sims* have been some of the games that international research has investigated and tested as learning tools, that allow to acquire and enhance specific communication skills, such as listening, reading, speaking and vocabulary knowledge in a foreign language and not only as entertainment resources.

2.2.1 Vocabulary Acquisition through Video Games

Yudintseva (2015) conducted a systematic review of the literature on games and vocabulary acquisition in second language learning. The review synthesized 17 qualitative, quantitative, and mixed-methods studies published in the last decade, including entertaining video games such as *Tactical Iraqi*, *Food Force*, *Second Life*, *The Sims* or *Quizlet* and serious games like *Wonderland*, *Ever Quest II*, *BONE*, *Back to the Future* and *Parappa the Rapper*. The findings suggest that game-enhanced learning offers effective second-language vocabulary acquisition strategies, including language repetitions, contextual clues, interaction with native speakers and peers, and imagery. Strategies such as word lists, dictionaries, and vocabulary exercises are more beneficial when combined with interactions with native speakers or peers. However, the effectiveness of note-taking and media strategies for vocabulary learning in games was found to be limited. The review also highlighted the need for more high-quality studies and empirical data to determine the most beneficial video game strategies for vocabulary acquisition. Game-enhanced practices in language learning are recognized in the field of Computer Assisted Language Learning, and the review focused on video games that enhance second language learners' vocabulary incidentally. This review called for further research to strengthen the empirical evidence and develop a taxonomy of in-game learning strategies for vocabulary acquisition.

More recently, Bin-Hady (2021) conducted a literature review examining the influence and role of games, including *Hangman*, *Semantic Boggle*, and the commercial video game *The Sims*, on foreign language vocabulary acquisition, particularly in English as a foreign language (EFL). The author aimed to explore the efficacy of these games in enhancing students' vocabulary and initiate a discussion on their significance in foreign language learning. The study revealed that games benefited EFL students by providing an enjoyable and unconscious learning experience in the English class. Additionally, video games offered teachers a motivational environment that fostered affective, cognitive, and socio-cultural engagement among students, surpassing other learning environments. The author proposed that games serve as practical techniques for expanding students' vocabulary repertoire.

However, the author acknowledged the potential risk of students using these games solely for entertainment purposes, neglecting the primary objective of learning. Factors such as the number of students, proficiency level, cultural context, learning topic, and classroom setting were identified as crucial when implementing video games. Bin-Hady concluded that *Hangman*, *Semantic Boggle*, and *The Sims* are examples of games suitable for vocabulary acquisition. Nevertheless, many teachers overlook games as valuable teaching resources, emphasizing the need for teachers to harness their potential. The review highlighted games as tools that create an authentic language context, enabling students to learn and apply the language naturally. However, the author recommended further research

to explore integrating video games with specific course content, thus incorporating these digital tools into vocabulary acquisition strategies. In addition, since the author did not take into account the age factor in his review, this also opens the field to confirm these recommendations with middle-aged adults.

Unlike the previous reviews, other empirical studies investigated the effectiveness of commercial and educational video games across diverse educational and geographical contexts, yielding mixed findings about their efficacy in language learning. However, most studies concur that video games are helpful in language teaching and learning. Most studies have implemented commercial games due to their availability and authenticity, whereas few have implemented educational or instructional video games focused on language learning.

Bakar and Nosratirad (2013) explored how the commercial video game *The Sims II* could be adapted as a learning tool for vocabulary enhancement in an independent learning environment for adult EFL learners. This qualitative case study collected data through participants' reports. Participants played the game for two months, three times a week individually and autonomously, reporting their progress and learning in their personal vocabulary list. The study was conducted with three middle-aged Malaysian adult participants with a low English level. The tools used were vocabulary tests, interviews, surveys and observation diaries through which the authors obtained the necessary data on the participants' vocabulary growth and their perceptions of the digital tool. The results revealed that the students' vocabulary improved, and they all felt motivated throughout the study. Since it was an open-world game, each had a vocabulary focus according to their interests. Hence, at the end of the study, they felt more confident in their vocabulary and language. Some limitations were the lack of time for independent study and the instructions within the game. The authors concluded that video games can be beneficial in acquiring and enhancing language learning. A video game could be used as an independent learning tool for vocabulary acquisition when providing independent learning spaces and clear objectives and instructions. Although the age factor was not studied, it was suggested that video games might benefit older adults taking into account their time due to their jobs and occupations. Also, being exposed to virtual realities can foster motivation. The authors recommend studying autonomous learning through video games with larger populations and different video games.

Rojas and Molina (2014) investigated the impact of a commercial role-playing game (RPG) video game, *Pokémon*, on the vocabulary acquisition of EFL learners in a 2nd medio (second year of high school) in the Industrial Las Nieves school in Chile. The study involved six students, aged 15 to 16, who played the Pokémon game while a control group did not. A pre-test was administered to measure initial knowledge, followed by a post-test to assess vocabulary growth. The results showed that the experimental group, exposed to the video game, exhibited improved vocabulary acquisition

compared to the control group. The authors suggested that RPG video games could facilitate vocabulary acquisition, and contextualized items were more effectively learned than non-contextualized ones. Also, they highlighted the potential of video games as a powerful tool for EFL learners, although the duration of the study and sample size limited the extent of vocabulary improvement. Future research with a longer time frame and larger sample size was recommended. Overall, the findings demonstrated the positive impact of video games on vocabulary acquisition and their potential in language education.

Similarly, Cabraja (2016) investigated the potential impact of similar commercial video games (*Counter-Strike: Global Offensive*, *League of Legends*, *World of Warcraft* and *Guild Wars II*) on the vocabulary proficiency of second language learners. The study involved 25 participants, aged 18, enrolled in an optional English 7 course at an upper secondary school in Stockholm. A quantitative analysis was employed, using a questionnaire to gather background information and a Vocabulary Levels Test (VLT) to assess participants' receptive vocabulary proficiency. The findings indicated that video game students had higher vocabulary reception scores than non-gaming students. Moreover, participants who played video games more frequently showed the best vocabulary reception scores. Cabraja also found that video games emphasizing teamwork and communication were more beneficial for vocabulary acquisition. The study's limitations include the focus on receptive vocabulary proficiency only and the small sample size. The author suggests integrating video games into ESL education, particularly games that encourage interaction among students. Further research is recommended to validate these findings and explore other aspects of vocabulary acquisition.

Kasanic (2017) explored the role of the commercial adventure video game *Nancy Drew* in English language learning, specifically focusing on vocabulary acquisition. The study included 49 participants between 11 and 14 years old from a primary school in Croatia, assessing their attitudes towards English and video games. Participants showed a positive attitude towards English, preferring to play video games in English due to their immersive nature. The research findings revealed that video games can profoundly impact language learning and other activities. The study aimed to examine learners' perception of vocabulary acquisition through video games by integrating video games with activities that engage learners' productive skills. Notably, higher grades were associated with more frequent video game playing. The study employed a questionnaire to collect data and identified Role Playing Games and adventure games as genres that offer greater opportunities for vocabulary retention. Participants used various strategies to deal with unfamiliar words, including seeking assistance from others, inferring meaning from context, and minimizing disruptions to gameplay. The study highlighted the diverse vocabulary presented in video games, mainly through dialogues and in-game texts. However, explicit explanations of words were still necessary for better

comprehension. In conclusion, video games enhance vocabulary acquisition by providing rich input and meaningful contexts, with RPGs and adventure games showing particular effectiveness in delivering comprehensible input. The study recommended further research to fully explore the potential of video games in language learning and vocabulary acquisition.

Likewise, Rudis and Pošćić (2017) examined the influence of video games on English language acquisition. They investigated the impact of commercial video games, such as *Metal Gear Solid*, *League of Legends* and *Counter Strike: Global Offensive*, on language learning and explored the relationship between video games and other media. The participants were 96 Lithuanian students aged from 11 to 15. An adapted questionnaire from a previous study on the influence of cartoons was used. It consisted of nine questions about video game usage and its impact on English language acquisition. The findings revealed that 71 out of 96 participants acknowledged the positive influence of video games on their language learning, with 20 individuals specifically mentioning video games as a significant factor in their language acquisition. The participants reported that video games expanded their vocabulary, provided visual cues for word association, improved pronunciation through cutscenes, and facilitated communication in multiplayer games. After these results, the authors concluded that video games significantly impact language learning, particularly vocabulary expansion and spoken language development. However, the study acknowledged limitations in correlating the number of hours spent gaming with language proficiency; thus, the authors recommended further research to quantify the extent of video games' contribution to language learning and explore the benefits of specific game features. Finally, the study established a clear connection between playing video games and their positive influence on English language acquisition.

In their research, Lorensen and Tumolo (2019) investigated how to characterize vocabulary acquisition and use of the commercial digital game *The Sims* and whether and how it can help English as a foreign language vocabulary. The data collected involved 19 participants aged 15 to 18 from a public school in Brazil, all English for Beginners students at a federal institution. The study was conducted as a quasi-experimental research. Data were collected over eight-game sessions. The instruments used were a pre-test, a post-test, and a delayed post-test, as well as narrative writing that explored students' perceptions of the game and their vocabulary acquisition using this tool. The results indicated that *The Sims* is effective for EFL vocabulary acquisition because it deals with routine and familiar vocabulary and offers players new virtual life and contextual learning. The authors concluded that *The Sims* game greatly impacted students' vocabulary development, opening the field of study to other applications, digital and mobile video games that can be integrated into the English classroom.

More recently, Tan and Tan (2020) investigated whether in-game instructions improved ten Malaysian high school students' vocabulary acquisition (ages 11 and 12) by fostering their curiosity

using the commercial video game *Criminal Case*. Tan and Tan implemented an exploratory research design using vocabulary tests, interview questions, and observation lists as instruments. The results showed that not all students acquired verbal indications and instructions vocabulary due to the instructions within the game. Even though all of them were interested in playing, only four of them read the instructions, and three of them went further by looking up the definitions of the words that were new to them. Also, the successful vocabulary acquisition of some students could not be proven to be due to their motivation for the game. The authors claim that due to the nature of the instruments, satisfactory and significant results could not be obtained and recommend future research to investigate larger populations to get substantial results. However, the researchers conclude that this study contributes to the educational field by highlighting the importance of in-game instructions and video games as high-impact tools for vocabulary acquisition.

Unlike the previous studies exploring commercial games, few studies implemented instructional video games.

Salavati and Salehi (2016) examined the impact of Instructional Video Games (IVGs) on the vocabulary retention of Iranian language learners. The study included 32 male and 43 female participants, aged thirteen to thirty-one years old, from Padideh Derakhshan Institute in Sahinshahr, Isfahan, Iran. The selected video games were educational video games taken from the webpage *gamestolearnenglish.com*. The researchers selected a population of learners from the institute. The purpose of the study was to compare the effectiveness of IVGs versus traditional vocabulary learning methods. The experimental group used IVGs, while the control group memorized words from a list. Both groups took a vocabulary post-test after four weeks and a delayed post-test one month later. The results showed no significant difference immediately after the post-test, but the delayed post-test revealed that the experimental group had better vocabulary retention. The study recommended further research with larger samples and more extended observation periods. Hence, the study highlighted the value of IVGs in enhancing vocabulary learning and emphasized the importance of creating engaging learning environments.

Using word games, Ma et al. (2020) assessed the effectiveness of word games in enhancing English vocabulary learning at UNETI. The study aimed to identify the strengths and weaknesses of implementing word games in vocabulary lessons and examine students' attitudes towards this approach. The research included thirty 16-year-old students from Viet Bac High School in Vietnam. The findings revealed that using word games positively impacted students' engagement, creating a more relaxed and interactive classroom atmosphere. However, particular challenges were identified, including unclear instructions, time constraints, and noise disturbances in the classroom. The authors reported that students expressed initial skepticism but gradually embraced using word games as they

experienced its benefits. The study recommended that teachers focus on classroom organization, encourage student involvement in game design, and be flexible in adapting teaching methods to meet students' needs and interests. In conclusion, word games can enhance vocabulary learning by promoting interaction, motivation, and memorization. Future research should further explore the potential of word games and their impact on language learning.

As reviewed above, most studies focused on the impact of video games, including commercial and educational ones, on vocabulary acquisition among second language learners, particularly in English as a foreign language (EFL). Researchers have explored the efficacy of various video games such as *Hangman*, *Semantic Boggle*, *The Sims*, *Pokémon*, and *Nancy Drew*, among others, to enhance vocabulary learning. These studies have demonstrated that video games can offer enjoyable and effective learning experiences, fostering affective, cognitive, and socio-cultural engagement among students. The positive influence of video games on vocabulary acquisition has been attributed to factors such as contextual learning, visual cues, immersive environments, and interaction with native speakers or peers. However, the effectiveness of video games as vocabulary learning tools may vary depending on factors such as game genre, cultural context, age of participants, and instructional integration. While existing research has provided valuable insights into the potential of video games for vocabulary learning, there are still gaps to be explored, including investigating the impact of specific game features, considering age factors such as middle-aged adults, and conducting more extensive studies to validate the findings and develop comprehensive strategies for integrating video games into language learning curricula. The present study aims to address these gaps and contribute to the existing literature by examining the effectiveness of an educational video game, as a focused language learning tool, to increase middle-aged adults' vocabulary and motivation in English as a foreign language.

2.2.2 Impact of Video Games on Motivation

Regarding the importance and impact of video games on students' perceptions and motivation to learn English, Whittaker (2013) reviewed several iPad video games, assessing their practicality, interest, and educational value in the ESL classroom. The study highlighted the potential of video games to engage and motivate students while they learn English. However, selecting suitable games that balance entertainment and education can be challenging. The review also addressed potential issues teachers may encounter and provided strategies to overcome them. Additionally, the study included activities that support learning objectives and discussed the results of a survey conducted with students before and after using one of the games. The findings indicated positive student perceptions and improvement in vocabulary retention. The review emphasized the importance of teacher preparation, pre-teaching vocabulary, and providing support during gameplay. While

adventure games offer language learning opportunities, they may not cover all linguistic structures, requiring additional language practice. It was concluded that adventure games can enhance language learning experiences, but they should be integrated with other instructional strategies for comprehensive language acquisition.

Berns et al. (2011) conducted a study on designing video games for foreign language learning. The purpose was to explore *Virtual Worlds* combined with video game-like applications to enhance the language learning process. The participants were 85 Spanish university students studying German at the A.1.1 level. The study utilized the OpenSim platform, called VirtUAM, to create a virtual learning environment. The researchers designed a game-like application within this environment and evaluated its impact on student learning and motivation. The students completed a questionnaire at the end of the study regarding their perceptions of motivation, ease of learning, and improvement in various language skills. The findings revealed that embedding learning content in a game-based environment significantly increased students' motivation towards online learning. Learning became easier and more entertaining compared to other e-learning environments. They also perceived remarkable improvements in vocabulary, pronunciation, listening, and writing skills. Notably, students became aware of the improvement in their writing skills, even though it was not explicitly practised within the game. It was concluded that integrating video game features into virtual learning environments has the potential to enhance foreign language learning. However, some limitations were the omission of voice chat and the lack of more cooperative activities to facilitate meaningful interaction. Further research might address these limitations and consider learners' language needs.

Cheng and Yang (2013) examined the effects of the commercial adventure game *BONE* on vocabulary learning of 22 college students in Taiwan. Vocabulary pre- and post-tests were administered. The authors concluded that adventure video games like *BONE* can enhance English listening, reading, vocabulary skills, and learning motivation. However, limitations of the research included a small sample size and the absence of a comprehensive perception survey. Students held positive perceptions of adventure games for language learning. The authors recommended selecting games matching students' language proficiency levels and incorporating adjustable subtitles.

As reviewed above, the impact of video games on motivation in foreign language learning has been studied extensively in the international context. Research has shown that video games, including adventure games and virtual learning environments, can positively influence students' motivation to learn English and enhance their language skills. These studies indicate that video games can positively impact students' motivation and language learning outcomes. Adventure games, virtual environments, and game-like applications have shown the potential to enhance vocabulary skills, pronunciation, listening, writing, and overall language learning motivation. However, more extensive research is

needed to explore the effectiveness of different video game genres and their integration with language learning strategies to optimize language acquisition experiences.

2.2.3 Video Games as Teaching Tools for Adult Education: Voices from international researchers

McClanahan (2014) explored the slow adoption of technology as an instructional tool in adult English as a second language (ESL) instruction. She discusses two reasons for this slow adoption and provides recent data on the relationships between adult ESL learners and technology. McClanahan begins by highlighting the obstacles to integrating technology into English language instruction. However, recent surveys suggest that the digital divide has been narrowing, with an increasing percentage of adults in the United States accessing and using the Internet, primarily smartphones. Older students are also proving efficient in using technology, using their metalinguistic knowledge and problem-solving skills. The author challenges assumptions about adult ESL learners and their familiarity with technology, arguing that many students are already tech-savvy. By integrating technology into ESL classrooms, the author suggests that learners can benefit from increased motivation, engagement and involvement. Technology can also incentivize learning by making classes fun, capitalizing on the popularity of computers and video games. In addition, technology provides opportunities for authentic language use and accommodates diverse learning styles, promoting educational equity for marginalized ESL students. It is also emphasized that technology should support and enhance learning objectives rather than dictate the instructional approach through laptops, desktops, tablets, and portable projectors for sharing documents and multimedia resources. In conclusion, integrating technology in adult ESL classrooms can support English language acquisition, increase motivation and engagement, provide authentic language use, accommodate diverse learning styles, and promote educational equity.

International researchers have sought to position video games as efficient teaching and learning tools, using entertainment and educational video games as tools for vocabulary acquisition and improvement not only for young students. In this way, the literature review seeks to know and check if it is feasible to integrate not only these resources in the classroom but with also an older population as a target audience when thinking about these didactic tools for classroom or private education, and thus open the way for future research with these same ages and resources.

2.3 The use of video games in the national context

Few studies into video games have been done at the national level. They have focused on integrating video games as learning tools; however, more research is needed. Colombian researchers (e.g., Galvis, 2011, 2015; Roncancio et al., 2017; Camacho & Ovalle, 2019) have investigated video

games as didactic tools; however, age was not one of the factors highlighted by the authors. For Galvis (2011), age could be relevant when implementing video games and digital tools to acquire and improve vocabulary. Also, Valencia et al. (2017) consider it pertinent to include older adults and andragogy theory within English vocabulary learning through games to investigate their learning process, vocabulary acquisition and motivation.

2.3.1 Video games as teaching and learning tools in Colombia

By exploring the effectiveness of video games as learning tools, Galvis (2015) reviewed Video Game-Based Language Instruction (VGBLI) as a teaching approach for second language acquisition through video game-based language teaching. By reviewing studies into the impact of VGBLI, Galvis identified the low participation of Colombian students abroad in second language learning programs. The author concluded that the strongest advantage of video games is their ability to simulate real-life contexts. This is advantageous in language teaching because it exposes students to social and cultural situations that are difficult to present in the classroom for mobility and economic reasons. For the author, economic challenges and institutional priorities can hinder funding projects that allow for national and international educational travel in the Colombian context. However, funding and supporting VGBLI projects with video games or virtual realities could contribute to understanding language acquisition processes through simulated realities. The author suggests future research that explores cultural representations, cultural stereotypes and language development in VGBLI environments.

Following a similar line of research, Roncancio et al. (2017) reviewed 53 research articles and 13 web documents on how video games have been incorporated into teaching and learning activities. It was identified that video games can complement other teaching methods through simulations in the classroom, virtual worlds and online courses. However, the barrier that arises is the lack of support and acceptance of these digital resources as tools in the classroom, mainly due to parental perceptions that directly affect the decisions of students and teachers. Still, in some cases, the teachers limit themselves by not seeing this modality as an appropriate teaching strategy. In addition, if used excessively, video games could cause disorders such as headaches, eye irritation, muscle aches and bad posture. The authors concluded that video games are suitable tools for solving learning problems, improving motor and cognitive skills, fostering creativity, etc. They consider that the advantages outweigh the disadvantages.

2.3.2 Enhancing vocabulary skills through video games and learners' perceptions

Galvis (2011) studied the perceptions of four adult students in a military academy in Bogotá, Colombia, when using a video game as a learning tool. The study investigated students' perceptions

of integrating a video game as a learning tool to shed light on the overlooked potential of these digital resources as teaching tools. The study was a small-scale action research using the *Grand Theft Auto San Andreas* (GTA SA) commercial video game. The researcher designed three language exploratory activities to familiarize and expose students to the course objectives using the game as a pretext for entertainment. The instruments used for this study were a field journal, a survey and a semi-structured interview. It was found that the students perceived the video game as a better way to learn English because it helped some participants feel more attentive and engaged in class, thus improving their motivation. Video games increase students' commitment and willingness to learn; however, not all learners may be interested in these resources. For instance, two participants could not fully connect with the video game because it was difficult, tedious and not very educational. Hence, instructors must be careful when implementing them, considering other types of games and students' socioeconomic strata, gender and age.

Building upon Galvis' research, Camacho and Ovalle (2019) focused on the effect of video games on vocabulary acquisition through a mixed-methods study with 15 University pre-service students in Tolima. The video games used were *Scribblenauts* and *Age of Empires II*, both commercial video games, and the teacher's and students' vocabulary tests and diaries. The results indicated that video games are effective tools in the classroom because there was a link between using these tools and the notorious increase in vocabulary. Students can have deeper processing of vocabulary and increase confidence and motivation when exposed to a classwork environment without pressure. Also, fantasy games, dialogues, interactions, failures and successes are situations in the game that are experienced in real life by students, which make them use the language to resolve conflicts in these virtual reality contexts. On the other hand, the type of vocabulary can also affect the process of word acquisition, which is why it is recommended to think about situations and the kind of vocabulary before choosing the game. Further research might investigate age, gender and the results in smaller groups.

2.3.3 ESL older adults' vocabulary acquisition

Taking a primary focus on the age of learners, Valencia et al. (2017) aimed to integrate a population of older adults into English vocabulary learning based on the principles of adult's learning. The population for this research consisted of five older adults with no experience learning English from a nursing home named El Divino Pastor in Pereira. This qualitative research sought to determine if the multisensory approach as a teaching alternative facilitates the participants' learning. Ten sessions were carried out to teach English vocabulary to these adults through games that stimulated their senses. The authors reported that the andragogy principles were evidenced in the participants' learning through their attitudes and performance throughout the interventions, as much of their motivation

came from the activities that they could relate to familiar experiences and their purpose for learning a language. Implementing the multisensory approach benefited the participants as they could integrate their experiences and perceptions with the planned activities, which allowed them to construct words through sensory simulation and use them in context. The primary limitation was the limited amount of materials designed to stimulate the senses of older adults, so the researchers had to look for affordable alternatives or create their resources. Finally, the authors concluded that older adults can learn English and be integrated into bilingual education experiences, opening the field of exploration to test other methodologies with this population.

In conclusion, national studies have mainly focused on placing video games as learning tools that can be implemented in the classroom, considering vocabulary as one of the skills that this resource can help acquire and enhance. Although age has not been one of the factors to be considered, national studies began to involve older student populations, thus opening the field to study how this population learns and behaves with video games. Valencia et al. (2017) opened on their part the andragogy field, allowing them to unveil this theory in its application to older adults. Although the instrument used in their research was not video games, it reports findings and methodologies helpful for this study's implementation to its target population.

2.4 The use of video games in the local context

Research previously conducted in our local context (e.g., Cali, Universidad del Valle) has focused on this technological resource as a teaching tool to improve students' language skills. However, no study was identified on middle-aged learners learning through video games.

2.4.1 Video games as tools in teaching different language skills to young EFL learners

J.S. Torres (2015) focused on the acquisition of the listening component using the educational video game *Trace Effects* in a public school in Cali. The participants were teenagers aged 13 to 15 at an A1 English level. The researcher implemented a didactic unit involving the game's first three chapters and employed self-observation, pre-tests, and post-tests to track students' improvement. The results indicated that students who had a positive perception of English and were motivated and those who were familiar with digital tools and enjoyed playing video games demonstrated improvement in their scores and listening skills. However, students with a negative perception of English disliked studying the language and lacked access to digital tools or interest in video games showed no difference in their scores. Therefore, the implementation of these tools did not prove beneficial for them. These findings were corroborated through interviews, as the motivated students who experienced an improvement expressed a higher level of motivation and enjoyment during the didactic unit, attributing it to autonomous learning through the game. The researcher concluded that such

teaching methods should be employed, considering that students already have access to these technologies, and the existing technological programs used in classrooms are outdated and fail to meet learners' current needs and capabilities. The students could take ownership of their learning, and words ceased to be abstract concepts, becoming accurate and relevant as they assumed roles that influenced the storyline. The teacher-student relationship became closer, with the teacher acting as a guide to autonomous learning rather than a strict leader. However, several challenges were identified, including the lack of computers and software for game installation, teachers' lack of familiarity with new technologies, and the need to redefine the teacher's role in an ICT-integrated environment. Furthermore, the researcher emphasized the importance of considering students' contexts and perceptions when selecting a game and designing a didactic unit that suits their needs. This research provides valuable strategies for teaching linguistic aspects, addressing identified difficulties, and offering solutions for implementation within the methodology.

In the same vein, Rivas (2016) carried out an action-research study that investigated the effects of the implementation of a video game in the classroom as a learning tool by designing a didactic sequence with original material to make extra activities within an English course using the commercial video game *Minecraft*. The author implemented Project Based Learning since, through this methodology, the student assumes the role of the protagonist in developing a specific project. The participants were A2-level students between the ages of 8 and 11. There were seven interventions, each lasting two hours, where she developed five tasks. This research is relevant for this study since the project's objectives propose a way to find a video game that adapts to the needs of the course and students.

In his study, H.H Torres (2015) developed an educational video game as didactic material to motivate reading in English in a public school to improve students' levels. The participants of this project were 35 students between 11 and 15 years of age from the public institution Antonio José Camacho in Cali. The game designed by the author was *The Fantasy of Marianne*, a graphic adventure game aimed at seventh-grade EFL students between the ages of 11 and 15 that seeks to encourage reading in English. It was found that students perceived the video game as useful because they could learn new vocabulary and structures and increase values such as solidarity and friendship, which improved their motivation. The participants agreed that the material had been efficient in improving their reading skills since it is easy to learn through the video game, indirectly promoting creativity, imagination and reading strategies autonomously. Two video game experts analyzed several technical aspects of the game and rated it as excellent since it fulfilled its primary objective: to promote and improve students' reading skills. The audio of the video game was a limitation because it was strident,

so it was recommended to change the sounds and record voices to be able to read and hear the pronunciation of the words.

Using a different type of instrument, Burbano (2015) examined the interactions that promote autonomous learning by using the *Duolingo for Schools* application in an English class at a public school in Cali. The study involved 54 students aged 11 to 15 from low socioeconomic backgrounds in the seventh grade, with the teacher being a 49-year-old woman with 29 years of English teaching experience. Employing a qualitative sociocultural approach, the researcher conducted eight classroom observations and audio recordings over six months to understand the students' reactions, motivations, and autonomous interactions while using the platform. The findings revealed that while the platform sparked motivation in some students, it did not have the same effect on all of them. Factors facilitating student autonomy included achieving correct answers, comprehending activities after making mistakes, earning prizes or recognition within the platform, and progressing in lessons. Motivations for learning outside the classroom were associated with the desire for future and immediate utility in the classroom, and motivation from family or friends. Several limitations were identified, such as students frequently forgetting their Duolingo login information despite the teacher's efforts to prevent this. External and internal interruptions during class, such as home situations, damaged computers, extracurricular activities, delays in starting digital practice sessions, and students turning off classmates' computers, also posed challenges. The author emphasizes the importance of students' motivations and personal environments when using video games.

In summary, these studies explored video games as educational tools for teaching language skills to young EFL learners. J.S. Torres (2015) investigated the impact of the game *Trace Effects* on listening skills, while Rivas (2016) used *Minecraft* to design a didactic sequence for English learning. H.H. Torres (2015) developed *The Fantasy of Marianne* to promote reading skills, and Burbano (2015) studied the use of *Duolingo for Schools* for autonomous learning. However, more research is needed to understand how video games can effectively benefit middle-aged adult language learners, considering their unique needs and preferences.

2.4.2 Traditional games as a teaching tool for older adults

Aristizábal (2015) conducted a research study promoting oral production involving middle-aged and elderly adults enrolled in an English extension course at Universidad del Valle in Cali. The participants consisted mainly of adults aged 22 to 65 with an A1 level of English proficiency. The study implemented 15 sessions, each lasting 4 hours. Unlike the previous studies, this research employed traditional games that could be played in teams rather than video games. The selected games were *Taboo*, *Tell Me More*, and *Jeopardy*. While the first two games did not require a computer, *Jeopardy* was a digital game requiring computer usage. These games were chosen for their

appropriateness to students' level and their requirement of oral participation and interaction among participants. The findings revealed that the students exhibited some difficulties in fluency related to pauses, repetitions, and limited vocabulary, but they maintained spontaneous and effective conversations and exchanges. Accuracy posed the greatest challenge for the students, primarily due to their basic vocabulary level. The students showed greater awareness of grammatical rules but struggled more during games requiring improvised interventions. Despite vocabulary and basic grammar limitations, students could interact satisfactorily, asking questions, answering doubts, and actively participating throughout the games. In conclusion, the author reported that the games successfully promoted the students' oral production, creating a fun, didactic and friendly environment to help the participants feel more comfortable interacting because they were thinking more about the game than being judged, which also impacted their self-confidence and motivation. Regarding the ages, it was possible to observe that these games should not be thought only to young learners but also to adult learners.

In short, most local studies in the local context focused on young EFL learners, i.e., children and adolescents, using video games as educational tools to improve language skills. However, there is a notable gap in research investigating the use of video games for language learning among middle-aged learners. The previous literature emphasizes the need for teachers to consider students' contexts, perceptions, and needs when selecting and designing game-based didactic units. The present study aims to address this gap and build upon previous recommendations to explore the effectiveness of video games in teaching language skills to middle-aged adult learners.

2.5 Concluding remarks and research Gaps

Video games and implementing ICTs in the classroom need further research in our national and local contexts. This is an area that is beginning to flourish, attracting the attention of researchers. However, this research has focused mainly on using different video games as learning tools to enhance different language skills of EFL young learners. Nevertheless, given that more older adults are seeking opportunities to learn languages and are being exposed to digital tools and technologies, it might be relevant to investigate how this population can increase their vocabulary repertoire to communicate in a foreign language. Many electronic devices come with games, and adults might use them for entertainment. Hence, it would be relevant to explore video games in the EFL classroom to teach this population and identify their affordances. This study, therefore, seeks to position middle-aged adults together with digital natives as learners of English as a foreign language capable of using video games, investigating their motivations and the effects of them as tools for the improvement and acquisition of English vocabulary. The next chapter discusses the theory that guides this study.

Chapter 3 Theoretical Framework

3.1 Introduction

This chapter discusses the primary constructs that will guide this research. These constructs include Andragogy Theory, Vocabulary Acquisition, Digital Game-Based Learning, and Motivation and Linguistic Attitudes, according to the views of different authors. These concepts are relevant to this research as they encompass the applicability of strategies, theories, and methodologies in foreign language teaching and education to foster vocabulary learning in a middle-aged adult population through video games. As reported in the previous chapter, several authors have contributed important research related to language teaching through digital resources and the education of older adults, which directly influences the conduction of this research.

3.2 Andragogy Theory: Adults as Language Learners

Adult learning theory, also known as Andragogy, has been studied for years in education as adult learning and adults as a student population continue to increase (Knowles, 2005). This term was first introduced by Kapp (1833), who used it to describe Plato's educational elements, contrasting it from the traditional pedagogy (i.e., teaching children). Andragogy is based on a humanistic conception of autonomous, self-directed learners in which the teachers are defined as facilitators of learning.

For Smith (1999), andragogy is "the art or science of teaching adults, taking into account their unique characteristics and needs" (p. 42). The author highlights the need for adult learners to actively participate in their learning process and have a sense of control and ownership over it. In addition, he also stresses the importance of creating a learner-centered environment that respects the autonomy and experiences of adult learners, maintaining a difference between them and younger learners, and recognizing them as older people with different needs.

Merriam (2001) also argues that andragogy involves "the process of engaging adult learners in a self-directed, experiential, problem-centered approach to learning" (p. 56). Merriam emphasizes the role of experiential learning and problem-solving in adult education, arguing that adult learners benefit from activities that draw on their experiences and address real-life challenges.

For Knowles (2005), andragogy is also "the art or science of teaching adults or helping them to learn" (p. 25). Knowles also emphasizes the importance of self-directed learning and autonomy in adult education, thus considering teachers as facilitators and not as the sole providers of knowledge. According to Knowles, adult learners achieve greater motivation when they perceive that the learning

experience is relevant to their lives and can draw on their previous experiences. The author stated six characteristics related to adult learning motivation in this theory.

- **Need to know:** Adults need to know the reason for learning something.
- **Rationale:** Experience (including error) provides the basis for learning activities.
- **Self-concept:** Adults need to be responsible for their educational decisions and involved in planning and evaluating their instruction.
- **Willingness:** Adults are most interested in learning topics that have immediate relevance to their work or personal lives.
- **Orientation:** Adult learning is problem-centered rather than content-oriented.
- **Motivation:** Adults respond better to internal than external motivators.

Although these definitions share common elements, such as self-directed learning and the importance of adult learners' experiences, they also differ. Knowles focuses on the facilitating role of teachers, while Smith (1999) emphasizes the unique characteristics and needs of adult learners, and Merriam (2001) stresses the importance of problem-centered learning. In the present study, the definition of Andragogy Theory is based on Knowles' (2005) definition, considering it as "the art or science of teaching adults or helping them learn" (Knowles, 2005, p. 25). This definition was chosen because it aligns closely with the focus of this research, which aims to explore the effectiveness of video games in increasing the English vocabulary of middle-aged adults. The emphasis on self-directed learning and autonomy is particularly relevant, as video games provide opportunities for learners to make choices, explore virtual environments, and engage in interactive experiences at their own pace.

In addition, the emphasis on prior experiences in Knowles' definition is significant to this study, as middle-aged adults have accumulated life experiences that can be leveraged during vocabulary acquisition. By recognizing the importance of personal relevance and making connections between game content and real-life experiences, the adopted definition of Andragogy Theory provides a framework for understanding how video games can facilitate vocabulary learning for middle-aged adults. By adopting Knowles' definition of Andragogy Theory, this study recognizes the importance of autonomy, self-directed learning, and integration of prior experiences, highlighting the potential of video games as a suitable digital tool to enhance vocabulary acquisition among middle-aged adults.

When applying the Andragogy Theory to vocabulary acquisition, it becomes apparent that adults have different motivations and learning preferences than younger learners. Vocabulary acquisition for adults is often driven by specific needs and goals, such as enhancing communication

skills in a professional setting or improving language proficiency for personal growth. Consequently, incorporating vocabulary learning activities that align with these adult learners' motivations and goals is crucial for their engagement and success. Video games, as digital language learning tools, can effectively cater to the principles of Andragogy Theory in several ways: Firstly, video games provide opportunities for self-directed learning, allowing adult learners to make choices, explore virtual environments, and engage in interactive experiences at their own pace (Smith, 2020). By empowering learners to take control of their learning process, video games align with the autonomy aspect of Andragogy Theory.

Secondly, video games can leverage adults' prior experiences and knowledge. Many video games feature immersive narratives, complex characters, and diverse scenarios that require players to actively engage with the game world and its vocabulary (Jones, 2018). This interactive nature of video games enables adults to draw upon their existing knowledge and connect the in-game vocabulary and their real-life experiences, supporting the principles of Andragogy Theory.

Moreover, video games often incorporate elements of challenge, rewards, and progression, which can enhance motivation and engagement in adult learners (Lee, 2016). By providing immediate feedback, visual and auditory stimuli, and a sense of achievement, video games tap into adults' intrinsic motivation and desire for meaningful learning experiences. This motivational aspect aligns with the Andragogy Theory's emphasis on relevance and self-motivation.

In summary, the Andragogy Theory highlights the importance of catering to adult learners' unique characteristics and needs. With their interactive, self-directed, and engaging nature, video games can be effectively utilized as a vocabulary acquisition tool that aligns with the principles of Andragogy Theory. Educators can create engaging and relevant experiences that enhance vocabulary acquisition and foster autonomous learning by integrating video games into language learning environments for middle-aged adults.

3.3 Vocabulary Acquisition

Vocabulary acquisition is a crucial component of language learning, and its relationship to video games as a learning tool has important implications for this study. Vocabulary is fundamental in effective communication in our native or target languages. Thus, acquiring sufficient vocabulary promotes intelligible communication (Salavati & Salehi, 2016) because vocabulary is considered the basis that links the four language skills together (Wulanjani, 2016). When learners possess knowledge of a word's spoken and written forms, grammatical patterns, collocations, functions, and meaning, it indicates successful vocabulary acquisition. However, acquiring vocabulary is a lifelong process that occurs at varying rates and through gradual and sporadic learning experiences.

Schmitt (1997) suggests that second language learners initially discover the meaning of words and then remember them once they have been understood. This understanding can be achieved through independent exploration, guessing from context, or seeking assistance from teachers or peers. Other essential factors for enhancing vocabulary learning and retention include interacting with native speakers, contextualizing words, employing imagery, engaging in verbal or written repetitions, and taking notes. Additionally, media can play a role in vocabulary acquisition, as both native and second language learners acquire vocabulary incidentally through repeated exposure to words in diverse contexts.

Vocabulary acquisition refers to learning and acquiring new words, meanings, and usage in a language. It is a fundamental aspect of language learning and plays a crucial role in communication and comprehension (Zimmerman, 1997). The definitions offered by three authors, Nation, Schmitt and Richards, are discussed to understand the concept of vocabulary acquisition in the context of adult learners.

Nation (2001) defines vocabulary acquisition as "the process of learning the words of a language and developing a mental lexicon" (p. 12). Vocabulary acquisition involves memorizing individual words and understanding their relationships, collocations, and usage in different contexts. He emphasizes the importance of building a strong mental lexicon for linguistic production and comprehension. In a similar vein, Schmitt (2008) offers a communicative perspective and defines vocabulary acquisition as "the process by which learners learn the words they need to communicate" (p. 2). Schmitt emphasizes the practical aspect of vocabulary acquisition, focusing on words that are essential for effective communication. He stresses the importance of vocabulary size and the ability to select and use appropriate words in various situations. Taking a pedagogical stance, Richards (2002) views vocabulary as "the learning or acquisition of words and phrases, their meanings, and their grammatical behavior" (p. 65). Richards emphasizes the integration of vocabulary with grammar, stressing the importance of understanding the syntactic and grammatical aspects of words and phrases to use them accurately and effectively.

These definitions share the idea that vocabulary acquisition is the process of learning and acquiring words in a context for communicative purposes. Nation emphasizes the development of a mental lexicon, Schmitt on the practical aspect of communication, and Richards on integrating vocabulary with grammar.

In the present study, vocabulary acquisition is viewed from Schmitt's perspective as "the process by which learners learn the words they need to communicate" (Schmitt, 2008, p. 2). This definition closely fits the focus of this research, which aims to examine the effectiveness of video games in increasing the English vocabulary of middle-aged adults. The practical aspect of vocabulary

acquisition emphasized by Schmitt is particularly relevant, as it highlights the importance of selecting and using words in real-life communicative situations.

Furthermore, the relationship between vocabulary acquisition and adults as learners is significant. Adult learners bring their prior knowledge and experiences to acquire new vocabulary. They have specific communicative needs and goals, which influence the words they choose to learn and the contexts in which they use them. Understanding vocabulary acquisition in the context of adult learners allows for tailored approaches to vocabulary instruction that consider this population's unique characteristics and needs. By adopting Schmitt's definition of vocabulary acquisition, this study recognizes the practical nature of vocabulary learning for effective communication among middle-aged adults. It recognizes the importance of selecting and acquiring words relevant to their communicative needs. It supports exploring video games to enhance vocabulary acquisition in this group of learners.

Additionally, video games offer a unique and interactive platform that can facilitate vocabulary acquisition in several ways (Bin-Hady, 2021). First, video games often present players with rich and diverse linguistic content, such as dialogues, written texts, and in-game instructions. Exposure to authentic language in context can contribute to acquiring new vocabulary (Yang, 2014). As players navigate the game world, they encounter various linguistic elements that require comprehension and interpretation, leading to incidental vocabulary learning (Rankin et al., 2015).

Second, video games frequently use visual and auditory stimuli, enhancing the multisensory language learning experience. Combining visual graphics, sound effects, and voice-over dialogues can reinforce the meaning and pronunciation of new vocabulary items (deHaan et al., 2010). This multimodal input can support vocabulary acquisition by providing learners multiple cues and reinforcing connections between words and their meanings.

In addition, video games often incorporate gamification elements, such as rewards, challenges, and progress tracking, which can increase learner motivation and engagement (Kiili, 2005). Motivation is a crucial factor in vocabulary acquisition, as engaged and intrinsically motivated learners are more likely to actively engage with new words, seek opportunities to practice them and retain them in their long-term memory (Dörnyei & Ushioda, 2013). Because of their interactive and rewarding nature, video games can provide a motivating context for vocabulary learning.

Video games furthermore provide opportunities for repeated exposure and vocabulary practice in meaningful contexts. The iterative nature of game play allows learners to encounter and reinforce vocabulary items in different game scenarios, contributing to deeper and longer-lasting vocabulary acquisition (Miller & Hegelheimer, 2006). The interactive nature of video games also

promotes active engagement and problem-solving, which can further enhance vocabulary retention and transfer to real-world contexts (Wang, 2018).

The integration of video games as a learning tool in this study capitalizes on these potential benefits of vocabulary acquisition. By incorporating video games into the language learning process, it is envisioned that middle-aged adults can engage in immersive and interactive experiences that facilitate the acquisition and retention of new vocabulary in a motivating and meaningful way.

3.4 Digital Game-Based Language Learning

Digital game-based language learning, also known as DGBLL, is an approach that uses digital games as a tool for language learning and teaching. To understand this concept in the context of adult learners and its relationship to vocabulary acquisition, the definitions provided by the following authors, Peterson (2010) and Rankin et al. (2015), will be explored.

Peterson (2010) defines digital game-based language learning as "the use of video games to support language learning, especially in terms of vocabulary acquisition, grammar, listening comprehension, and speaking" (p. 67). Peterson emphasizes the broad scope of DGBLL, highlighting its potential in various domains of language learning beyond vocabulary acquisition. He suggests that digital games can provide engaging and interactive experiences that facilitate the development of multiple language skills. Meanwhile, Rankin et al. (2015) provide a more specific definition, stating that Digital Game-Based Language Learning refers to "the use of video games designed specifically for language learning purposes, integrating linguistic objectives, game mechanics, and learning principles" (p. 9). They emphasize the intentional design of games to achieve language learning outcomes, combining game elements with pedagogical principles to create an effective learning environment.

Empirical research in digital game-based language learning has highlighted its potential in vocabulary acquisition among adult learners. For example, Miller and Hegelheimer (2006) conducted a study with college students of English as a second language, in which they found that intervention with digital games produced a significant increase in vocabulary compared to a traditional instructional group. Similarly, deHaan et al. (2010) investigated the effects of a vocabulary-focused game on adult learners and observed improved vocabulary learning outcomes.

Analyzing the differences between the definitions, Peterson offers a broader perspective by encompassing various domains of language learning. At the same time, Rankin et al. focus specifically on games designed for language-learning purposes. Considering the scope and focus of this study, the definition adopted here closely matches that of Rankin et al. This definition recognizes the intentional design of games to achieve language learning goals, which is particularly relevant for

examining the effectiveness of video games in enhancing vocabulary acquisition among middle-aged adults. The construct of digital game-based language learning is important to this study because it offers a unique and engaging approach to vocabulary acquisition for adult learners. Video games provide immersive experiences that can increase motivation, engagement, and repeated exposure to vocabulary in meaningful contexts (Yang, 2014; Wang, 2018). By integrating digital games as a learning tool, this study aims to explore the potential of DGBLL to support vocabulary acquisition for middle-aged adults, taking into account the unique characteristics and needs of this group of learners.

3.4.1 DGBLL concerning Digital Learning and Gaming Concepts

Digital Game-Based Language Learning can be seen as a subset or evolution of other digital learning and gaming concepts, such as Computer-Assisted Language Learning (CALL), Edutainment and Gamification.

3.4.1.1 Computer-Assisted Language Learning

On the one hand, Computer-Assisted Language Learning (CALL) refers to the use of computers or technology, in general, to assist in the teaching and learning of languages (Brown & Lee, 2015). It encompasses a wide range of language learning activities that utilize computer programs, online resources, and multimedia to enhance language acquisition. CALL has been in use since the 1960s and has evolved over time as technology has advanced (Brown & Lee, 2015). Digital Game-Based Language Learning (DGBLL) is a more specific approach to CALL that focuses on using digital games as the primary medium for language learning. DGBLL draws on video games' engaging and interactive nature to create immersive language learning experiences for learners (Lang, 2012). It involves using video games specifically designed for language learning purposes or integrating commercial off-the-shelf games into language learning curricula. In essence, DGBLL is an extension of the broader CALL concept, where digital games serve as the central tool for language learning, capitalizing on the benefits of gamification and interactivity to enhance learners' engagement and motivation (Routledge, 2016).

3.4.1.2 Edutainment

Edutainment refers to using engaging and entertaining content to impart educational information and promote learning. In the context of language learning, edutainment often involves incorporating elements of fun, playfulness, and interactivity into the learning process, which can lead to increased learner motivation and engagement (Yudintseva, 2015). DGBLL is a subset of edutainment that specifically utilizes digital games as the medium for language instruction (Reinders & Liaw, 2011). DGBLL leverages the immersive and interactive nature of video games to create

language learning experiences that are enjoyable and meaningful for learners (Reinders, 2012). By integrating language learning objectives into game mechanics, narratives, and challenges, DGBLL fosters language acquisition in a natural and contextualized manner, resembling the language acquisition process in real-life situations (Wagner & Yuan, 2016). Moreover, DGBLL often incorporates the principles of Computer-Assisted Language Learning (CALL), utilizing technology to deliver personalized and adaptive language instruction (Yudintseva, 2015). By combining the principles of CALL, DGBLL, and edutainment, educators can create immersive and effective language learning experiences that cater to learners' diverse needs and preferences, ultimately enhancing language learning outcomes.

3.4.1.3 Gamification

Nevertheless, DGBLL and gamification are two distinct approaches to integrating gaming elements into language learning, each with its characteristics and purposes. DGBLL involves using digital games specifically designed for language learning, where language acquisition is the primary objective, and games serve as the medium for instruction (Reinders & Wattana, 2015). These immersive, interactive games often incorporate language-learning content into their narratives, challenges, and mechanics. DGBLL aims to provide learners meaningful language practice in authentic contexts, promoting language acquisition through engagement and enjoyment (Reinders & Wattana, 2017).

On the other hand, gamification refers to adding game-like elements and mechanics to non-game contexts, such as language learning platforms or classroom activities, to enhance motivation and engagement (Deterding et al., 2011). In language learning, gamification might involve using leaderboards, badges, points, or other rewards to incentivize learner participation and progress (Hamari et al., 2014). While gamification does not necessarily use digital games as the primary vehicle for language learning, it leverages game-like elements to create a more enjoyable and motivating learning experience (Landers et al., 2015). In summary, the key distinction between DGBLL and gamification lies in their approach to incorporating gaming elements into language learning. DGBLL utilizes standalone digital games designed explicitly for language acquisition, while gamification applies game-like elements to enhance engagement in non-game language learning contexts.

In conclusion, Digital Game-Based Language Learning (DGBLL) is a specialized approach within the broader Computer-Assisted Language Learning (CALL) field that utilizes digital games as the primary medium for language acquisition. By integrating language learning objectives into game mechanics and narratives, DGBLL creates immersive and contextualized language learning experiences, enhancing engagement and motivation among learners. Leveraging the principles of

CALL, DGBLL offers personalized and adaptive language instruction, catering to learners' individual needs and preferences. While both DGBLL and gamification incorporate gaming elements, the key distinction lies in their application - DGBLL employs standalone digital games designed explicitly for language learning. In contrast, gamification applies game-like elements to non-game language learning contexts. By embracing DGBLL and exploring its relationships with CALL, edutainment, and gamification, educators can foster more effective and engaging language learning experiences that maximize learners' language acquisition outcomes.

3.4.2 Understanding Video Games: Types and Categories

According to Rivas (2016), digital games, computer games or video games have diverse definitions, focusing on different aspects such as technology, game types, or platforms. They were first introduced by Crawford (1982) as interactive, computer-controlled experiences that can be played for fun and entertainment. Later, Gros (1998) provided a more comprehensive definition, describing video games as "electronic games with primarily playful objectives that utilize computer technology, enabling real-time player-machine interaction and predominantly visual action" (p. 20). Gee (2003) proposes video games as problem-solving activities in virtual worlds that require critical thinking, identity formation, and learning, taking them into account as learning tools. On his side, Martínez (2006) emphasizes the varying levels of interaction between players and the medium, stating that different interactions occur based on the gaming platform used.

However, it is safe to say that video games are a form of interactive media that has evolved rapidly in terms of graphical presentation, quality, and storytelling over the past 50 years (Lacasa, 2013). Attitudes towards video games vary, with some perceiving them as overtly violent while others view them as works of art or simply entertaining tools (Lacasa, 2013). However, the perception of video games as a means of learning and language acquisition has gained attention in recent years.

Regarding classification, video games can be categorized based on factors like the medium used, the target audience, or the game's content. The rating system of the Entertainment Software Ratings Board (ESRB) provides video game age classifications and content descriptors, as seen in Figure 3.1. Another classification based on content includes genres such as arcade, adventure, strategy, role-playing, simulation, educational, and board games (Gros, 2004).

Figure 3.1 ESRB Rating System



Taken from: esrb.org

3.4.2.3 Commercial and Educational Video Games

Video games can be divided into two main categories: entertainment or commercial games and serious or educational games, which serve different purposes and target different audiences.

Educational video games, or serious games or educational simulations, are designed to facilitate learning and academic outcomes. They are created to support and enhance educational content, promote skill development, and engage learners in interactive and meaningful ways (Deterding et al., 2011). These games are often used in formal and informal educational settings, including schools, universities, and online learning platforms, to deliver educational content engagingly and interactively (Steinkuehler & Duncan, 2008). Educational videogames may cover a wide range of subjects, from language learning to mathematics, history, science, and more.

On the other hand, commercial videogames are developed primarily for entertainment purposes and target a broader consumer market. These games are created to provide enjoyment, fun, and immersive experiences for players. They may include various genres, such as action, adventure, role-playing, sports, and simulation games. The primary goal of commercial videogames is to entertain and engage players, often through compelling storytelling, challenging gameplay, and visually appealing graphics (Chen, 2018).

The main difference between educational and commercial videogames lies in their core objectives and authenticity. While educational videogames focus on delivering specific educational content and promoting learning outcomes, commercial videogames prioritize entertainment and enjoyment for any audience. Educational video games are intentionally designed to align with

educational goals and curricula. In contrast, commercial video games are created to appeal to a broad audience and generate revenue for developers and publishers.

Entertainment games aim to provide enjoyment through exploration, missions, and problem-solving, while serious games are designed with specific learning objectives in mind (Derryberry, 2007). Serious games are utilized in various domains, including emergency services, military training, corporate education, and healthcare. They have also effectively taught subjects such as mathematics, reading, and biology (Murphy et al. & Whaley, 2002). Like collaborative and cooperative learning approaches, video games can foster collaboration among players. Multiplayer games promote competitiveness, collaboration, and team formation, allowing players to learn from one another (Rivas, 2016).

Research on the potential of digital educational games in enhancing language learning has grown significantly (Muhamad Sabri, Sahrir & Nor Aziah, 2011; Nguyen & Khuat, 2003; Akil, 2007; Lee, Cheon & Key, 2008; Whitton, 2010). Computer games offer a language learning environment where players engage in various English language skills, particularly vocabulary acquisition (Mich et al., 2004). Well-designed games provide learners with opportunities to practice different language skills, including grammar, vocabulary, listening comprehension, pronunciation, and spelling (Ellis, 2003).

3.4.2.4 Benefits of Video Games in Language Learning and Game Selection Strategies

One of the advantages of video games is that they create a unique learning environment that fosters independent learning (Merriam & Caffarella, 1999). Adult learners often have limited time and lots of responsibilities and can benefit from self-study tools like computer games (Ausburn, 2004). Such games offer a self-directed learning environment where learners can develop their language skills autonomously (Gee, 2005). Furthermore, video games provide motivation and encourage interaction and communication in English (Chee Siang Ang & Zaphiris, 2006).

Videogames benefit language learning and the development of logic, problem-solving skills, and critical thinking (Bronstring, 2012). Adventure games, for instance, focus on puzzle-solving within a narrative framework, challenging players intellectually and engaging them in thoughtful and engaging gameplay (Bronstring, 2012).

Several factors should be considered when selecting video games for language learning purposes.

- The language used in the game should suit the learners, balancing, providing a challenge and avoiding frustration (Chen & Yang, 2013).

- Clear pronunciation and subtitles are beneficial, especially for lower-level learners (Chen & Yang, 2013).
- Additionally, the game design should be well-crafted, offering a level of challenge that keeps players engaged without hindering their progress (Chen & Yang, 2013).

In essence, video games are interactive electronic games that utilize computer technology for real-time player-machine interaction and predominantly visual experiences. They can be classified based on the medium, target audience, or content. Video games serve both entertainment and educational purposes, and they can facilitate collaboration and learning in various domains.

3.5 Motivation and Linguistic Attitudes

Motivation and language attitudes are important constructs to consider in the context of adult language learning and its relationship to video games and vocabulary acquisition. The definitions provided by Gardner (1985) and Dörnyei (2005) will be considered relevant.

Gardner (1985) introduced the Socio-educational Model of Second Language Acquisition, emphasising attitudes and motivation's role in language learning. According to Gardner, attitudes refer to the affective component of learners' disposition toward language, including their interest, enjoyment, and instrumental or integrative orientations. In this model, motivation is seen as a key factor influencing learners' success in language learning, and integrative motivation and attitudes toward the target language and its speakers play an important role.

Conversely, Dörnyei (2005) defines motivation as "the dynamic process involving the interaction between the individual and the situation, leading to the initiation, direction, intensity, and persistence of learning-related behavior" (p. 8). Dörnyei emphasizes the multidimensional nature of motivation, highlighting its role in influencing learners' engagement, effort and persistence in language learning tasks. Language attitudes, on the other hand, refer to individuals' beliefs, opinions and emotions towards the target language and its speakers (Dörnyei, 2005). These attitudes can shape learners' motivation and affect their language learning outcomes.

Empirical research has consistently demonstrated the importance of motivation and language attitudes on language learning outcomes, including vocabulary acquisition. For example, studies have found that learners with higher motivation levels and positive attitudes toward the target language tend to demonstrate greater vocabulary gains (Milton & Meara, 1995; Noels, Clement, & Pelletier, 1999). Studies have also highlighted the motivational potential of game-based learning environments, which can increase learners' engagement, enjoyment, and persistence in language learning activities (Kiili, 2005; Wu, Marek, & Shaffer, 2012).

Analyzing the differences between the definitions, Dörnyei's definition of motivation provides a comprehensive understanding of motivation as a dynamic process involving individual and situational factors. Gardner's socio-educational model highlights motivation, affective and attitudinal aspects, emphasizing its influence on language learning outcomes. Considering the scope of this study, the definition adopted aligns closely with Dörnyei's perspective on language motivation and attitudes. This choice allows for exploring motivational factors and language attitudes that may influence vocabulary acquisition in middle-aged adults through video games.

The construct of motivational and linguistic attitudes and motivation is important to this study because it recognizes the role of learners' motivational orientations and attitudes in shaping their engagement, effort, and persistence in learning vocabulary through video games. Understanding the motivational factors and language attitudes of middle-aged adult learners is crucial for designing effective interventions to foster their engagement and optimize their vocabulary learning outcomes in the context of game-based learning.

3.6 Concluding remarks

This chapter has provided a comprehensive understanding of the key constructs of this study: Andragogy Theory, Vocabulary Acquisition and Learning Strategies, Digital Game-Based Language Learning, and Motivation and Linguistic Attitudes. These constructs shed light on the use of video games as a learning tool for English vocabulary acquisition by middle-aged adults.

Andragogy Theory emphasizes the importance of recognizing adults as autonomous, self-directed learners. This theory serves as the pedagogical basis for this study, identifying middle-aged adult learners' unique learning needs and characteristics. By adopting a learner-centered approach, this study recognizes the autonomy and motivation of participants, fostering a positive and engaging learning environment.

Vocabulary acquisition and learning strategies are fundamental aspects of language learning. Definitions provided by various authors highlight the process of learning and acquiring new words, their meanings and their use in a language. Video games are an innovative and interactive medium that can facilitate vocabulary acquisition by providing contextualized and immersive language learning experiences. Through gaming, middle-aged adult learners can practice meaningful language, reinforcing vocabulary knowledge and encouraging retention.

Digital game-based language learning, as explored through definitions and empirical research, offers great potential in language learning contexts. It provides authentic and engaging language practice opportunities, fostering active participation, motivation and autonomy. Integrating video

games in language learning environments takes advantage of the motivational factors inherent in gameplay, increasing learners' engagement and facilitating their vocabulary acquisition processes.

Motivation and language attitudes play a crucial role in language learning outcomes, including vocabulary acquisition. As defined by Dörnyei (2005) and Gardner (1985), learners' motivation encompasses their engagement, effort and persistence in language learning tasks. Positive attitudes toward the target language and its speakers further contribute to learners' motivation and success in vocabulary acquisition. In the context of this study, understanding the motivational factors and language attitudes of middle-aged adult learners is essential for designing effective pedagogical interventions using video games as a learning tool.

The theoretical framework presented in this study provides a foundation for investigating the effectiveness of video games in increasing the English vocabulary of middle-aged adults. By integrating Andragogy Theory, Vocabulary Acquisition and Learning Strategies, Digital Game-Based Language Learning, and Language Motivation and Attitudes, this study recognises middle-aged adult learners' unique characteristics and needs, highlights the importance of vocabulary acquisition, and explores the motivational potential of video games.

Chapter 4 Methodology

4.1 Introduction

This research's primary objectives were to observe video games' efficiency as tools for vocabulary acquisition and motivation in two middle-aged adult learners. The purpose was to explore the feasibility of integrating these resources into this population's teaching and learning processes. This chapter describes the research methodology used to investigate this phenomenon.

4.2 A qualitative research approach to studying video games and adult learners

The present study implemented a qualitative case study to provide insights into middle-aged students' vocabulary acquisition and motivation when using video games as learning tools. Qualitative research studies people based on what they say and do in social and cultural scenarios (Yin et al., 2018). It is also defined as a method that aims to understand the meaning individuals or groups attach to social or human issues. This approach involves asking questions, collecting data in natural settings, analyzing data to identify common themes, and interpreting the findings. The final report of qualitative research follows a flexible structure. Researchers who employ this approach value an inductive style, prioritize individual perspectives, and emphasize the importance of accurately portraying the complexity of a given situation (Creswell & Creswell, 2018). In addition,

Qualitative researchers make narrative records of the phenomena being studied through techniques such as participant observation and unstructured interviews. Qualitative research seeks to identify the deep nature of realities, their system of relationships, their dynamic structure (Pita & Pértegas, 2002, p. 13).

In the present research, it was relevant to explore, observe and describe how middle-aged adult learners interact with a video game and how this tool increases their vocabulary repertoire and motivation. A case study was suitable as the present investigation intended to observe a particular phenomenon without intervention.

4.3 A qualitative case study

A case study allows researchers to formulate conclusions based on real-life observations and obtain concrete, contextual and in-depth knowledge about a topic (Lechman, 2014). Yin (2018) suggests that the case study method should preferably be used when the research questions are a *how* or a *why*, there is little or no control over the events of the observed behaviors, and finally, if the object of study is a contemporary phenomenon or a case. In the present study, there was no intervention but an observation of the participants' behaviors when interacting with a video game. The case study corresponds to using the video game with two middle-aged adult learners.

4.4 Research site and participants

4.4.1 Research site

The research sites corresponded to the participants' homes for several reasons. Firstly, it was done for the sake of accessibility and convenience. By conducting the research at the participants' homes, neither the participants nor the researcher had to travel long distances, making arrangements and conducting the sessions more feasible. Additionally, the participants primarily used desktop computers, which were not easily portable. Therefore, conducting the research in their homes allowed them to use their equipment, thus ensuring a more comfortable and familiar environment for the participants. Also, language learners' homes have become educational places. It was necessary to find participants within the age range of the population to be investigated who lived nearby, as this would facilitate group meetings and individual sessions. The participants were located in southern Cali, Colombia and lived minutes away from each other's home.

A comfortable space with a table, a chair and a desktop or laptop computer was required for the participants to play the game. It was unnecessary to have an internet connection but a USB port to install the game. Sound was also needed, and speakers or headphones could allow the participants to hear the dialogues in the video game. A place with good lighting was also necessary for them to take notes. The researcher provided the participants with instructions, vocabulary lists, a dictionary and images to carry out each session's Warm-Up and Wrap-Up activities.

4.4.2 Participants

At the beginning of the study, the researcher recruited four participants from her close environment (e.g., work and family). However, two of them dropped, whereas two completed all the procedures for this investigation. This section describes the participants' profiles regarding age, educational level, occupation, and language level, as shown in Table 4.1. The participants' interests and motivation for English language learning are reported in the Findings chapter. In conducting ethical procedures and maintaining the anonymity of the participants, they will be called by the pseudonyms Maria and Luis throughout this research. See the consent forms in Appendix 1.

Table 4.1 Participants' profiles

Participant	Age	Educational level	Occupation	English language level
María	58	Bachelor's degree	Retired Teacher	A1
Luis	55	Short-cycle tertiary's degree	Electrical Technician	A1

Both participants met the age requirement to be considered middle-aged adult learners between fifty and sixty-four (Cuénoud et al., 2009). They were 58 and 55 years old, respectively. Both participants had post-secondary school degrees. María has professional studies, whereas Luis has a technical degree. For their participation and purposes of this study, the participants' educational degrees were not considered a factor affecting their involvement. It was not necessary for them to have English studies, but both participants needed to have a similar language level to compare their vocabulary increase. An advanced learner could have more advantages over a beginner. The Oxford CEFR vocabulary placement test¹ was administered to both participants at the beginning of the study. The results revealed that both participants had a beginner level, classified as A1 English Proficiency.

Both participants are currently working; however, their jobs do not require English. The participants' motivation to learn English was associated with personal reasons and interests rather than professional obligations. María expressed a desire to improve her English skills to assist her students, as she now works as an independent teacher and often encounters students from bilingual schools. Additionally, María saw it as a personal challenge and has had a long-standing interest in the language, which has been difficult for her to study due to financial constraints. On the other hand, Luis was motivated to learn English due to his passion for music and the desire to communicate with his English-speaking nieces. He also saw the practical benefits of understanding English in the context of technological advancements and accessing for information in various fields.

4.5 Research procedures

This research was conducted during twelve sessions for six weeks from October to November 2022. The participants were involved in the activities four hours per week, split into two sessions, adding up to ten hours of individual play for each participant. The hours allocated to the study were determined based on practical considerations and the nature of the game.

Firstly, the six-week timeframe was chosen to accommodate the participants' availability. Both participants had busy schedules and limited time to dedicate to the research. As a result, planning the sessions over a shorter duration was necessary to ensure their active participation. The research was designed to fit within the constraints of their time commitments, allowing for consistent engagement throughout the study period. Secondly, the nature of the video game influenced my decision to allocate ten hours of gameplay. After testing the game and assessing its content, it was determined that the main storyline and objectives could be reasonably explored and completed within

¹ Oxford Online English. (2022, 25 febrero). *English Vocabulary Level Test - Oxford Online English*. <https://www.oxfordonlineenglish.com/english-level-test/vocabulary>

this timeframe. The game's design and pacing allowed meaningful progress and engagement within the allocated hours.

While the six-week timeframe and ten hours of gameplay may appear relatively short, it was a practical and feasible approach, given the participants' time constraints and the nature of the game. Despite the limited duration, the research aimed to assess the participants' attitudes and vocabulary acquisition within the given timeframe, providing valuable insights into the effectiveness of the video game as a language-learning tool for middle-aged learners.

To apply the game as a teaching tool and start the sessions, three phases were implemented, in which different data collection instruments were administered, as seen in Table 4.2.

Table 4.2 Research phases and procedures

Phase 1 Exploration of learners' vocabulary needs and motivation for video games	Phase 2 Observation and description of students' interaction and motivation with the video game	Phase 3 Description of students' increase in Vocabulary and Motivation
<i>Week 1</i>	<i>Week 2 - Week 5</i>	<i>Week 6</i>
• Questionnaire I • Interview I • A1 Cambridge English Vocabulary Test (CEFR) • Vocabulary Pre-Test	• Field Journal • Student's Vocabulary List • Session Activities with instructions for participants	• Questionnaire II • Interview II • Vocabulary Post-test • Focus Group

4.5.1 Phase 1: Exploration of learners' vocabulary needs and motivation for video games

The first phase aimed to gather preliminary data on the participants' vocabulary needs and motivations for using video games as a learning tool. It was carried out in the first week during the first session in the participant's homes. In this phase, a questionnaire was conducted, followed by an interview with the participants to obtain preliminary data about their perceptions and motivations about the video game before playing it. It was also possible to learn about their background in the language, their motives or reasons for learning and their expectations.

Following this, a vocabulary test was administered to evaluate their level according to the CEFR, in which all participants were placed at level A1. Finally, they were given a vocabulary pre-test designed with the vocabulary found in the game to evaluate their previous knowledge and have a record of it that would serve later for comparison and evaluation.

4.5.2 Phase 2: Observation and description of students' interaction and motivation with the video game

The second phase aimed to observe and describe the participants' interaction and motivation with the video game over six weeks. This phase involved maintaining a field journal to record observations of the participants' engagement, progress, and challenges during gameplay sessions. The focus of this phase was to closely observe how the participants interacted with the video game, their motivation levels, and their progress in vocabulary acquisition.

In this phase, a sequence was designed for each session to structure the activities. The sequence followed a three-part structure: Warm Up, Game, and Wrap Up. There was a total of 10 sequences, each with its specific objectives, and had the following structure and purpose:

Warm-Up (30 minutes): The purpose of this session was to introduce the session's vocabulary. It included engaging activities that helped activate prior knowledge and create a context for the upcoming gameplay. Additionally, the participants were informed of their session objectives, usually related to tasks they must accomplish within the game. The Warm Up set the stage and prepared the participants for the vocabulary and tasks they would encounter during the gameplay.

Game (60 minutes): The purpose of the Game session was to engage the participants in the gameplay itself. They could play the video game and follow the instructions provided. The main objective is for the participants to actively use the vocabulary they encounter and learn as they progress through the game. They were encouraged to use resources, such as dictionaries or translators, to understand the vocabulary and enhance their learning experience.

Wrap-Up (30 minutes): This session aimed to reflect on and consolidate the learning in the game session. It allowed participants to discuss difficulties, share their experiences, and highlight interesting or noteworthy aspects of the gameplay. A final activity related to the target vocabulary for that session was conducted to reinforce the learning and conclude the session on a positive note. The Wrap-Up section allows for reflection, feedback, and closure, ensuring the participants can review and solidify their newly acquired vocabulary.

During this phase and in each of the sessions, the participants had a vocabulary list per session (Bakar & Nosratirad, 2013), in which they wrote down the new words they acquired each time they played the video game so that at the end of the study they could keep a count of the words acquired per session. The researcher remained with the participants during the Warm-Up and Wrap-Up activities and accompanied them as an observer during their playing time, using a field journal and addressing their doubts or questions related to the video game or computer.

4.5.3 Phase 3: Description of students' increase in vocabulary and motivation

The third phase aimed to assess and evaluate the students' increase in vocabulary and motivation after they engaged with the video game. This phase included the administration of the post-questionnaire to gather additional data on their perceptions and attitudes and a post-interview to delve deeper into their experiences. A Vocabulary Post-test was conducted to measure their vocabulary growth, and a focus group was conducted to gather collective insights and reflections on the overall learning process. In this phase, the participants took a post-vocabulary test, this time knowing the vocabulary presented to evaluate how much improvement there was or if there was none. Likewise, a second questionnaire and interview were conducted again with similar and adapted questions designed to know their opinions and motivation after the sessions and their playing time to compare it with their views and preliminary answers during the first phase of the research sessions. Finally, a last meeting was held between the researcher and participants where they could share their perceptions and opinions about the experience, thus generating a discussion on the subject.

4.6 Design, piloting, and administration of instruments

The design of the data collection instruments was based on previous studies and theory. They were reviewed and piloted before implementation to validate them and identify which aspects worked and which needed correction.

4.6.1 Questionnaire

The questionnaire is a popular data collection technique in second language research (Dörnyei, 2003) because it allows researchers to gather a large amount of data in a standardized manner. The questionnaires used in the present research were adapted from J.S Torres (2015) and aimed to collect information from the participants regarding their contexts and relationships with English, computers, and video games, as well as their motivations for learning the language and for using these tools before the playing the game. After this, a post-questionnaire was applied to find out the participants' experiences using the video game computer and whether or not their motivations were affected. The questionnaires were administered through Google Forms. The pre-questionnaire had 25 questions, while the post-questionnaire had 14. Both formats presented closed and open questions to give them options to express their perceptions. The questionnaires consisted of four sections, each addressing specific aspects (see Appendix 2 and Appendix 9):

- **Personal Information:** This section sought to collect personal information about the participants' backgrounds regarding gender, age, profession and current occupation. This information helped provide a demographic profile of the participants.

- ***Relationship to the English language:*** This section collected information about the participants' familiarity with English. It was considered what they considered their level to be, whether it is a language they have learned in the past and whether they continued to practice it at that moment. This also helped to take into account their motivations for continuing to learn it and why they consider it important to do so.
- ***Relationship to Video Games:*** This section was intended to know the participants' connection, opinions and closeness with video games and whether they would be interested in learning to use and play with one as a tool to acquire vocabulary.
- ***Relationship to Computers:*** This last section sought to identify the participants' relationship with computers or technological media, how often they use them and if they presented any difficulties. This information helps us to understand their motivations, uses and perceptions of these tools.

The researcher's supervisor carefully reviewed the questionnaires to ensure their appropriateness and relevance to the research objectives. Before its administration, the questionnaires underwent a piloting process. The piloting was conducted by a student with a Bachelor's Degree in Foreign Languages and a professor with a Bachelor's Degree in Economics, both of whom were currently taking English classes. The pilot study helped identify questionnaire issues, such as repetitive or confusing questions. Following the piloting and review, the questionnaires were administered to the participants.

Regarding the administration procedures, the first questionnaire was distributed to the participants during the first week of the research study. They were given sufficient time to complete the questionnaire in Google Forms, and any questions or concerns were addressed. Participants were instructed to answer the questions honestly and to the best of their knowledge. The second questionnaire was administered at the end of the sixth week after the end of the game sessions. This was done to compare responses and identify changes once the participants had a first-person game experience.

4.6.2 Interview

Başkarada (2013) defines the interview as a guided conversation which could constitute part of the most important sources of evidence in case studies. There are three types of interviews; they can be structured, semi-structured or unstructured (Başkarada, 2013). For this research, it was necessary to use a semi-structured interview because, although this format may have a prepared line of questions, it is flexible and provides an opening to acquire more information, redirect questions and inquire in case the interviewee provides new or interesting information during the conversation.

Similar to the questionnaire, the objective of this interview was to learn about the participants' motivations for learning English and their familiarity with and use of computers and video games. For this purpose, two interviews were prepared, an initial and a post-gameplay one that helped to identify changes, if any, in the opinions and motivations of the participants. The questions were designed as follows (See Appendices 3 and 10).

- ***Perceptions of learning English:*** This section identified participants' motivation and interest in learning English. This information was asked in the questionnaire, but the interview was used to develop it further and, in this way, to know in depth the context and perceptions of both interviewees. Also, through this means, it was possible to know what methods they know or prefer to learn a second language and their perception of being middle-aged learners.

Because of the semi-structured nature of this interview, some questions are coded and were asked to the interviewee, but depending on their answers, more questions may arise.

- ***Perceptions of computer use:*** It was important to know the participants' perceptions about computers during the ten game sessions as they had to use these devices independently. The questions included their familiarity with computers, whether they consider them easy to use and what kind of difficulties they usually had using them.

Once the gameplay is over, other questions emerge in this section. In this way, we can learn the opinions and new perceptions of the participants after they have experienced computer-based learning.

The results of both interviews allow a comparison between the participants' perceptions before the playing the game and after the implementation.

- ***Perceptions of video games as a language learning tool:*** The last part of the interview sought to elicit the participants' perceptions regarding the interaction with the video game and their opinions about it as a tool for English vocabulary acquisition. Not only this but the difficulty level of this particular game, the handling, story, vocabulary and playability.

At the end of the gameplay, other questions were asked within the exact scope of the video game, this time, from the new perspective of the participants once they had completed their experience with this tool and had acquired a personal vision from it. Once all the pre- and post-interviews were conducted, data were analyzed to identify participants' views, perceptions and motivations regarding video games.

While recording the interviews may be a good option to facilitate transcription and not lose the data collected, it could interfere with the participants' responses as they may feel obliged to moderate themselves (Yin, 2009). However, the pilot test showed that better results would be

obtained by recording since only by taking notes would there be much information that could be lost. This is why the help of another person was needed to record and count the time while the participants were being interviewed. As it was a semi-structured interview, the questions among the participants varied, but both helped better identify their perceptions of the three aspects mentioned above. The researcher's supervisor reviewed the interview questions. The number of questions varied between the pre-interview (9 questions) and post-interview (11 questions) based on the specific focus of each interview and the need for additional information.

4.6.3 Vocabulary Test

According to Brown (2004), a test measures a person's ability, knowledge, or performance in a specific domain. Specifically for language testing, Douglas (2010) defines it as an instrument to measure language ability. The present research used the language test to measure participants' vocabulary knowledge. This vocabulary test was based on Baskar and Nosratirad's (2013) instrument. The test had 68 randomly chosen words within the game, including nouns, verbs, phrasal verbs and adjectives. The questions included multiple-choice items, matching exercises, and fill-in-the-blank tasks (see Appendix 4).

A piloting process was conducted to ensure the vocabulary tests' validity and reliability. The piloting involved the assistance of a twenty-one-year-old university student with a B2 level of English and a forty-three-year-old university professor with an A2 level of English. The piloting aimed to evaluate the appropriateness of the test questions, identify any potential issues, and gather recommendations for improvement. Modifications were made to the tests based on the piloting feedback and instrument review.

The test was administered before and after playing the game to assess any increase in participants' vocabulary acquisition. The participants had 30 minutes to answer the test, and the final goal of the test was to compare them to evidence or not the progress they made before and after the game sessions. The design of the vocabulary tests followed a communicative approach, that is, vocabulary in context.

4.6.4 Weekly Vocabulary Test

The creation of Weekly Vocabulary Tests (WVT) considered the results of the participants' vocabulary lists after each session (see Appendix 7). The vocabulary accumulated after three sessions were taken from each participant to generate a personalized WVT based on the unknown words they had written down to check if they could recognize, understand and use them in context, thus confirming whether or not they had learned that new word.

A total of six WVTs were conducted, three for each participant and applied during the second and third phases at the beginning of every two weeks. The weekly vocabulary tests were administered at the beginning of every two weeks, aligned with completing each game session. The tests were implemented in a controlled environment, ensuring consistent conditions for all participants. The participants were instructed to complete the tests independently, without external assistance.

4.6.5 Vocabulary Lists

The vocabulary lists were based on those used in Bakar and Nosratirad's (2013) study. These lists were given to the participants to write down the words they were unfamiliar with. In another column, they wrote down what they thought was the correct meaning of that word, and in the third and last column, the actual meaning, which may or may not coincide with what they had previously written down. In addition, the list had ten rows where the participants could write the vocabulary. However, on some occasions, this was short, and they wrote outside the lists or asked for other lists to continue writing there during the same session. See a sample of this instrument in Appendix 15.

This real meaning could be obtained through the dictionary, the game's translator or by asking the researcher. Everything was up to the participant's decision to observe their strategies in case this was a factor that affected their learning. These lists were valuable and appropriate for this study since they were used to determine the number of unknown words for each participant, generate weekly tests based on them, and calculate the number of words learned from the previously unknown words.

This instrument was implemented during the second phase and the entire implementation of the game. It was piloted in the first instance by a student of computer science, and then some changes were made to the first version until the final version was reached.

4.6.6 Field Journal

The field journal, as recommended by Creswell and Cresswell (2018), served as a valuable tool for documenting the implementation of video games as vocabulary-learning tools for middle-aged adults. It functioned as a qualitative data collection instrument in this case study. According to Creswell and Cresswell (2018), a journal is a written record where researchers can document their observations, experiences, and reflections over a period of time. The field journal consisted of ten entries and aimed to share the researcher's reflections and perceptions regarding each session. It served as a platform to analyze and interpret the collected data. It was used during the three phases. The purpose of the field journal was to capture detailed accounts of the participants' experiences, interactions, and behaviors during the research study. It provided a means to record planned and unexpected events and the researcher's reflections, insights, and interpretations.

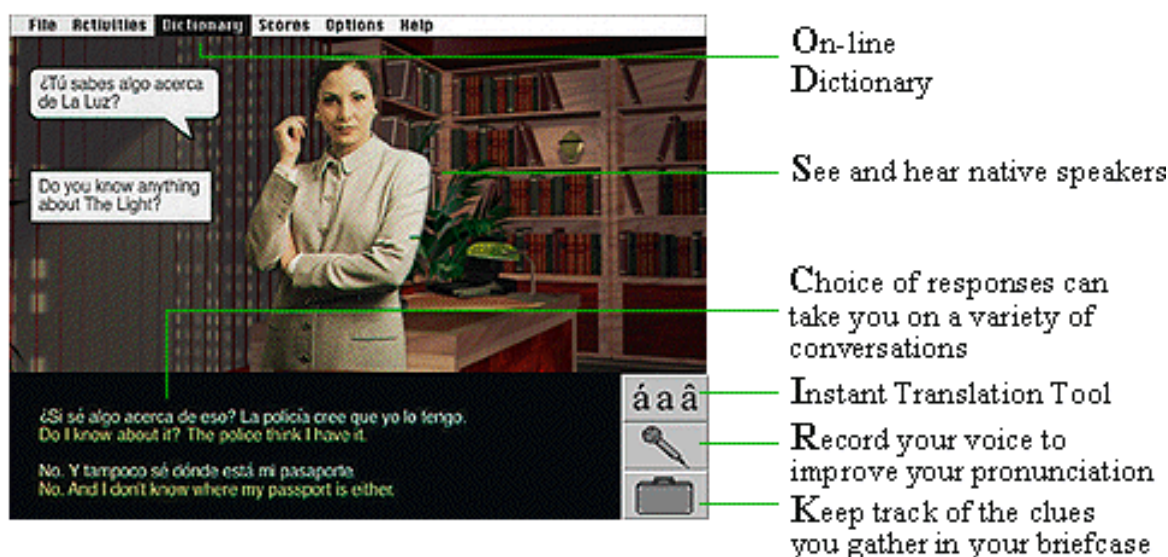
During Phase 1, the field journal was used to document initial observations and insights gathered from the participants' questionnaire responses. It also served as a platform for the researcher to note any potential modifications or adjustments needed for the subsequent phases. In Phase 2, the journal accompanied the participants' game sessions, allowing the researcher to record their interactions, motivations, challenges, and noteworthy observations. It provided a space to document verbal and non-verbal cues, participant feedback, and emerging themes related to using the video game as a language-learning tool. Finally, in Phase 3, the journal continued to capture the participants' progress, reflections, and changes in vocabulary and motivation. It served as a record of their experiences with the intervention and facilitated the identification of any notable developments or shifts in their language learning journey. See a sample of the journal in Appendix 6.

4.6.7 The Video Game: *Who is Oscar Lake?*

The videogame used in this research is the 1996 educational video game, *Who is Oscar Lake?* It is a narrative detective language-learning video game published by Language Publications Interactive, Inc., designed to enhance second language acquisition through immersive gameplay. The game places players in a foreign city, where the player must solve a mysterious puzzle in a new language. By interacting with native-speaking characters, players learn vocabulary and practice language skills. The game offers live-action video, interactive elements, and multiple possible endings, allowing players to control the story's pace and learning experience.

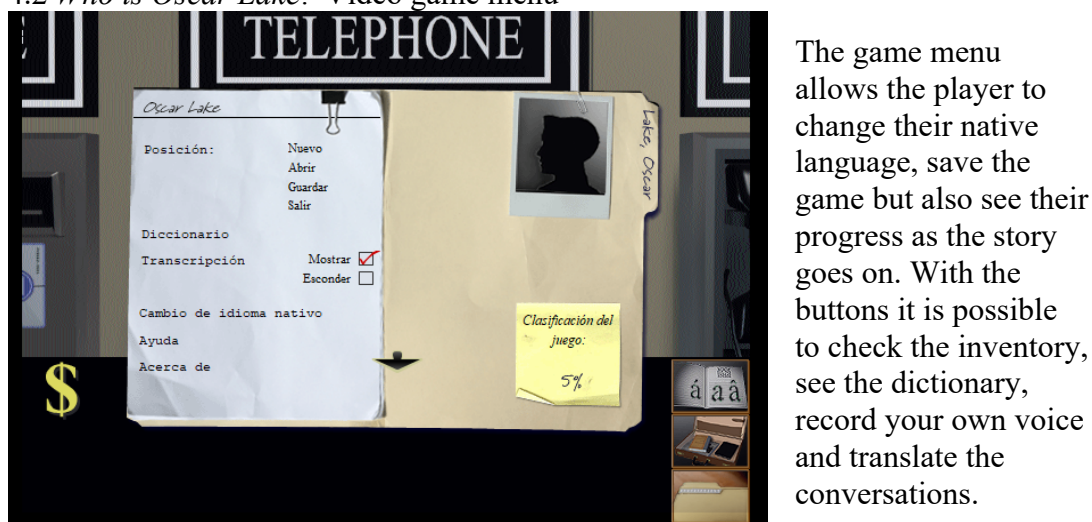
The video game features live-action videos and offers a fully interactive experience. It provides the opportunity to learn over 1,200 vocabulary words throughout the whole gameplay. The characters in the game are native speakers of the target language. Players can click on any object in the game to learn its meaning. The game also includes a voice record/playback feature for practising pronunciation. Furthermore, the game offers multiple possible endings, adding to the immersive and dynamic nature of the gameplay experience. Figure 4.1 illustrates the video game features.

Figure 4.1 *Who is Oscar Lake?* The video game features



This game was chosen because of the researcher's familiarity with it. She also acquired a lot of vocabulary in her youth, and the question arose about applying this learning to other learners. As stated before, the game is also an educational video game and, based on the theory for choosing an appropriate game (Kasanic, 2017; Whittaker, 2013), falls within the standards of interest that would catch an adult's attention (McClanahan, 2014) but is also easy to use and understand due to its language level and the participants' English level. Figure 4.2 illustrates the video game's menu.

Figure 4.2 *Who is Oscar Lake?* Video game menu



The game was strategically divided into sessions, with a total gameplay time of 10 hours. Each session allowed participants to engage with the game and its language-learning features. It is important to note that *Who is Oscar Lake?* is commercially licensed and copyright-protected. Therefore, it was strictly used within the confines of the study and could not be copied or distributed without authorization to ensure compliance with copyright laws (EDUCOM & ITAA, 1993).

4.6.7.1 Storyline

The game takes place in the United States in the 1990s. The player will assume the role of a diamond collector invited by his friend Chandler to the Blue Diamond exhibition "The Light" in New York. Upon arrival in New York, the collector can explore the city, visiting different places such as the gallery, the Square Café, the police station and the hotel. After settling into the hotel, the collector will attend the exhibition. However, once he leaves, he learns through the news that the Blue Diamond has been stolen, and before he can do anything, he is framed by the police as the prime suspect, accused of being Oscar Lake, the notorious antique thief. Finding himself trapped in the city while the case is still open, the collector must gather evidence through exploration and the help of characters such as Mandy Ming and Cypher Key to reveal the diamond thief's true identity without imprisonment.

The protagonist is also never called by a name. He is accused of being called Oscar Lake, but not having a name makes it easier for the player to put himself in his place. Furthermore, the game has three possible endings that the player can reach depending on his actions:

- *Ending #1 (Good)*: The player gets the thief to confess his crime while the detective listens undercover. The thief is imprisoned, and the protagonist is eventually cleared of his charges and set free. A final shot shows a newspaper showing the evidence and uncovers a criminal network of antique theft.
- *Ending #2 (Bad)*: The protagonist fails to prove his innocence and is imprisoned by the detective. In the final scene cut, a newspaper headline is shown where it is revealed to us that he will stay in jail.
- *Ending #3 (Bad)*: The real thief learns that the protagonist is gathering evidence against him and sends a group of thugs to his hotel room. A final scene cut shows a newspaper headline revealing that the protagonist has disappeared, implying that he was murdered.

Reaching these endings may depend on several actions, so if one of the bad endings is completed, the player must go back to their last save point and start from there.

4.6.7.2 Game Sessions and Objectives

The division of the game into sessions allows for systematic progression, ensuring that participants explore diverse scenarios, engage in conversations, and encounter new vocabulary. Each session was calibrated to fit within an hour, enabling participants to advance through the game synchronized. While the objectives and scenarios vary from session to session, they collectively contribute to a coherent narrative. This narrative enhances participants' linguistic skills and stimulates their engagement with the game's plot.

Integral to these sessions is the integration of vocabulary learning within the gameplay itself. Participants encounter new words as they navigate different in-game scenarios. Furthermore, previously introduced vocabulary is consistently reinforced as they appear in ongoing dialogues. The game's design acknowledges participants' autonomy by allowing them to make choices that shape their in-game experience. While each session offers specific objectives, some objectives are presented as optional, recognizing the player's agency in directing their virtual journey.

Table 4.3 below presents a comprehensive overview of each session, capturing the objectives, session summaries, and targeted vocabulary.

Table 4.3 Video game objectives and summaries divided by sessions

Session	Objectives	Summary	Vocabulary in context
Session #1: <i>Arrival in New York City</i>	- Explore the train station and buy a one-way ticket to New York. - Arrive in New York City and explore different places in the city. - Enter the Café and read the menu (avoid ordering anything due to being on a diet).	In this session, the participant's objective is to explore the train station, answer a phone call, and purchase a ticket to New York. Once in New York City, they are encouraged to visit various places and interact with different objects, such as reading the menu in the café. It is essential not to ask for food because the character is on a diet, and the café only serves desserts.	In this section, the participant will be exposed to vocabulary about places in the city and objects found on the street. When reading the menu, vocabulary about food, dishes, drinks, and desserts can be found in the café.
Session #2: <i>Hotel and Meeting Chandler</i>	- Speak to the desk clerk to inquire about the room. - Visit the penthouse and have a conversation with Chandler, a friend who works there. - Explore the room and learn about household objects. - Watch the weather channel on TV to learn weather vocabulary and practice the days of the week.	In this session, the participant must check-in at the hotel and interact with the desk clerk to get the room key. The room might not be ready yet, so they can take the opportunity to visit the penthouse where their friend Chandler works. A conversation with Chandler takes place. Afterwards, they can explore their room and interact with different household objects. Turning on the television will reveal a message that suggests they are in danger, with someone offering to help.	Interactions with various objects facilitate vocabulary development related to room items and weather.
Session #3: <i>Gallery Exhibition and Mandy Ming</i>	- Take the Gallery Exhibition invitation and Chandler's presentation card. - Call Chandler or talk to the desk clerk (optional interaction). - Visit the Gallery and look for Mandy Ming (she's wearing a hat).	The participant receives an invitation to the Gallery Exhibition and Chandler's presentation card in this session. They are encouraged to call Chandler. At the Gallery, they can inquire about Mandy Ming and have a conversation with her. The participant will discover that Mandy is wearing a hat and find the Blue Diamond. A message from Chandler will prompt them to return to their room. However, on	Vocabulary learning extends to art-related terms, conversation phrases, and descriptive language.

	- Engage in a conversation with Mandy and learn about the diamond. - Receive a message from Chandler about the Blue Diamond robbery. - Encounter Detective Dash and get taken to the Police Station.	their way out, Detective Dash and the police suspect them of robbing the Blue Diamond.	
Session #4: <i>Interrogation and Uncovering Clues</i>	- Defend yourself during the interrogation by Detective Dash. - Receive a message on the phone instructing you to call a number. - Call the number and talk to Cypher Key, who offers to help. - Watch the news and find out about the Lake Corporation's involvement.	In this session, the participant is taken to the police station and must defend themselves during the interrogation with Detective Dash. The detective receives a call, and the participant can return to the hotel to speak with Chandler or call the provided number. If they choose the last one, they will speak with someone called Cypher Key, who offers to help and advises them to watch the news.	Language skills are honed in persuasion, defense, and comprehension of spoken instructions.
Session #5: <i>Gathering Information and Investigating</i>	- Buy a newspaper and learn about the stolen antiques. - Go to the police station and gather information about the Lake Corporation. - Investigate Mandy Ming's office and find an invitation and fax. - Discover Mandy works for Oscar Lake, and Chandler might be involved.	In this session, the participant buys a newspaper from a newsstand and discovers information about the Lake Corporation's robberies. They can visit the police station to ask for additional information and explore Mandy Ming's office at the Gallery, where they find an invitation and a fax from Oscar Lake.	Participants learn terms related to news, investigation, and art objects.
Session #6: <i>Confrontations and Discoveries</i>	- Meet Mandy Ming at the Square Café. - Confront Chandler or visit your room (choose either option). - Discover information about the Blue Diamond in the Gallery box (optional).	In this session, the participant can visit Mandy Ming at the Square Café and talk with her. They will receive a letter from Chandler to Oscar Lake recommending Mandy Ming for a job. The participant can then confront Chandler or return to their room.	Vocabulary enrichment includes dialogues, social interactions, and expressions of opinion.
Session #7: <i>Decisions and Meeting Cypher Key</i>	- Choose between going to the Gallery or your room (affects the ending). - Call Cypher Key and discuss what the player discovered.	In this session, the participant enters the Square Café and finds Mandy Ming interacting with the waitress. They receive an envelope with a key inside, which opens a box at the Gallery. They must decide whether to investigate the box or return to their room.	Participants learn vocabulary associated with clues, directions, and investigation.
Session #8: <i>Unraveling the Truth</i>	Find and access Chandler's secretary's computer.	In this session, the participant can choose to find Mandy in the Gallery and use the key she gave	Vocabulary development covers technology,

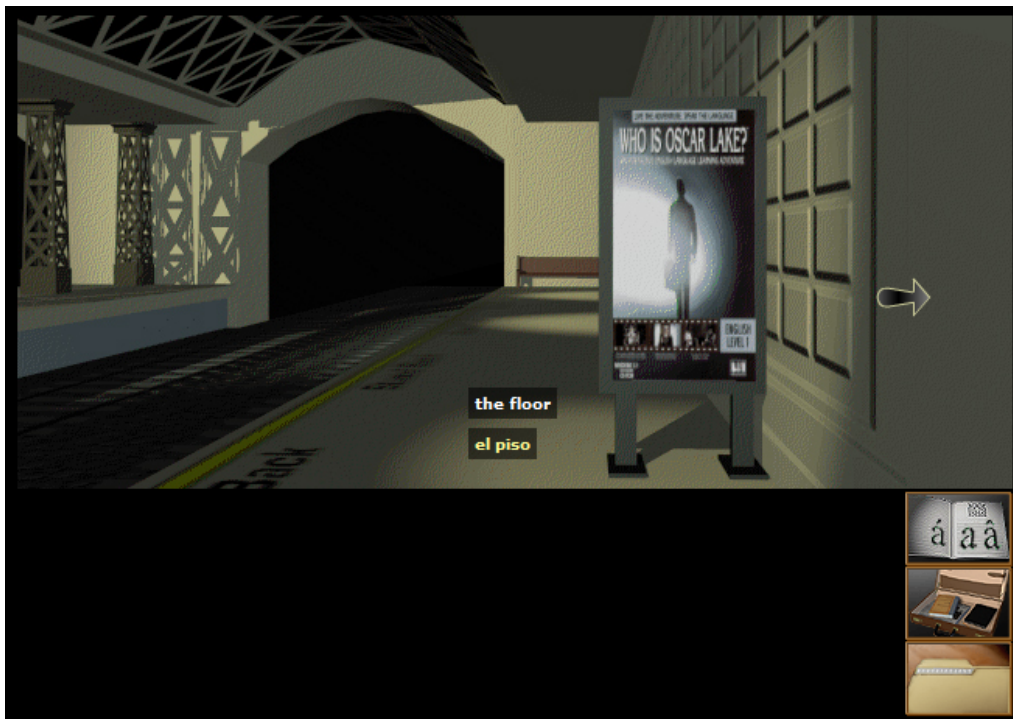
	• Read emails between Chandler and Oscar Lake, exposing their plan. • Choose between finding Mandy or Cypher Key (affects the ending).	them to uncover the Blue Diamond. Alternatively, they can locate Cypher Key and interact with him. Cypher Key will advise them to find evidence in Chandler's secretary's computer if they choose the latter.	communication, and investigation.
Session #9: <i>Seeking Justice</i>	• Talk to Cypher Key and share your knowledge. • Choose between going to the police or speaking with Chandler.	Participants can talk to Cypher Key about everything they have discovered in this session. Cypher Key suggests speaking with the police, and the participant can decide to do so or meet Chandler at the Square Café.	Vocabulary growth extends to persuasion, strategy, and decision-making.
Session #10: <i>Final Confrontation</i>	• Choose your actions carefully to lead the conversation with Chandler. • Make Chandler confess her involvement with Oscar Lake and the theft. • Succeed in making her confess to win the game.	The participant can confront Chandler at the Square Café in this final session. They must lead the conversation skillfully to make her confess her involvement with Oscar Lake and the robbery; successfully getting her to admit results in her arrest, leading to a victory in the game.	Vocabulary skills encompass persuasion, interrogation, and guiding discussions.

With these instructions and objectives for each session, the participants can engage in the game effectively, improving their vocabulary and language skills as they progress through the story.

4.6.7.3 How to play?

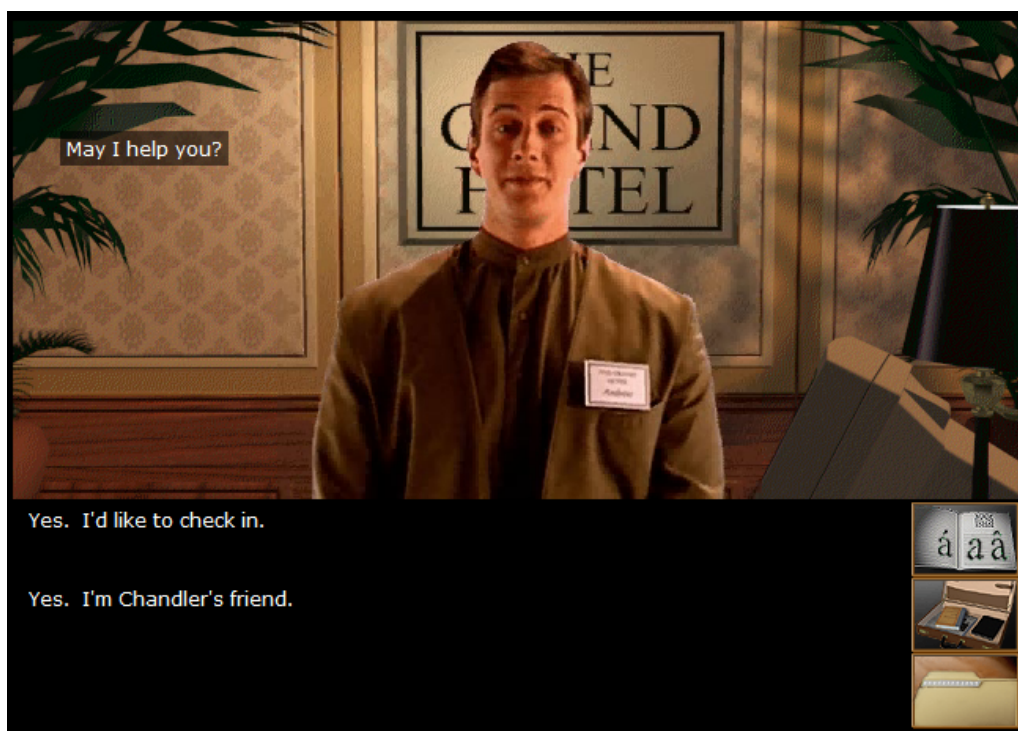
Who is Oscar Lake? is a point-and-click video game. Its graphics are made with CGI, and the cutscenes are full-motion video (FMV), a video game narration technique that relies upon pre-recorded video files (rather than sprites, vectors, or 3D models) to display action in the video game. The latter allows for a more realistic view of the game by allowing you to interact with images of real people, hearing their voices and seeing their faces, thus making the experience much more immersive. To advance and interact with objects and people in the game, it is necessary to use the point-and-click method, as this video game does not use the buttons on the keyboard. The player has to move the cursor on the screen; arrows will appear on the sides of the screen, indicating that it is possible to move forward to that side. It is also possible to move backwards. By moving the cursor, the player can also interact with objects, pressing them to see how they are said in English, and if the translator option is used, this can also be translated, as shown in Figure 4.3.

Figure 4.3 In-game movement and interactions



Not all objects in the game can be interacted with. By hovering over them, the player must verify that an arrow appears in front of them, indicating that they can be interacted with before clicking on them. It is also possible to interact with all characters. The player will be presented with two to three dialogue options they can choose to say in response. These will guide the conversation and the path of the story. This can be seen in Figure 4.4.

Figure 4.4 Response options in the video game dialogues



Translating these conversations using the translator button on the right-hand side of the screen is possible. The second button is the player's suitcase, which is the player's inventory and stores items that can be found in the game and used as the game progresses. The third button is a folder that functions as a menu, in which the player can view their progress, save the game, open the dictionary, choose whether to view the transcripts and change the native language.

4.7 Data Analysis

Thematic analysis and descriptive statistics were used to analyze the data collected.

4.7.1 Thematic analysis

Data were collected from questionnaires, interviews, and a field journal to identify middle-aged learners' attitudes toward video games as a learning tool. Thematic analysis was used to analyze these data. It involves identifying patterns, themes, and key insights from the participants' responses and focuses on extracting meaningful information related to the research objectives (Braun & Clarke, 2006), thus allowing for a comprehensive understanding of the participants' perceptions and motivations toward the video game. The data obtained from the interviews were transcribed (see Appendices 11, 12, 13, and 14) using the Transkriptor app and analyzed using thematic analysis. Likewise, the analysis of the field journal focused on identifying recurring patterns, themes, and insights from the recorded observations and reflections. The researcher thoroughly reviewed the field journal entries, organizing and categorizing the data into themes and sub-themes. The journal entries, supported by quotes or excerpts, were used as rich qualitative data sources in the results section. They provided valuable context and evidence to support the interpretation and discussion of findings.

The data were prepared first (compiled and organized, transcribed if necessary) in Excel and Word. After that, color coding was used to identify categories and main topics or themes in the questionnaires, interviews, and field journal entries. Figure 4.5 shows a sample of the interviews' data transcripts, coding and analysis.

Figure 4.5 Thematic analysis sample using the interviews' data

acostumbrado. Y no siento que... **No fue, no fue difícil.** De pronto que a veces el computador falló. Pero... Ah, y que para usar el juego había que meterse en la configuración algo así. **Pero nada, creo que solo eso. Lo demás fue fácil.**

00:00:59 Luis

Mmm. Eh. De pronto a haber. Utilizado más juegos. Como no quedarse solo con ese sino. Usar más juegos y así poder aprovechar más sesiones en la semana. Eso hubiera estado bien, me hubiera gustado.

00:01:34 Luis

Sí, la verdad me gustó, era cómodo porque lo podía hacer desde mi casa. Llego de trabajar. Voy a comer y de una eh. Podría entrar. Mmh y ver el juego. Entonces nada, creo que. Que sí podría me gustaría hacerlo.

00:02:21 Luis

Pues me parece que para las dos cosas creo que uno puede. Aprender. Y entretenerse al mismo tiempo. **Como que no tiene que separarse una cosa de la otra. Y me gustó porque fue muy divertido. Fue emocionante, por ejemplo, cuando nos dimos cuenta de que Chandler era la ladrona. Fue chévere fue como si fuera una película de de detectives de acción.** Em, pero a la vez estaba aprendiendo, entonces creo que funciona de las dos maneras.

00:04:27 Luis

Lo negativo. Que en dos ocasiones. Se me. Se me paró el juegos de la nada. ¿Y, tuve que repetir? Desde donde había guardado.

00:05:02 Luis

A veces me confundía con las palabras, porque hay palabras que se parecen, entonces a veces no entendía muy bien como que me me confundía o. Entendía algo distinto a lo que me

- Positive attitudes towards the game
- Negative attitudes towards the game
- Suggestions for improvement
- Difficulties with the language
- Difficulties of the video game
- Vocabulary Learning

From this analysis, it was possible to identify the key attitudes and perceptions of the participants towards Vocabulary English learning through computers and video games. The analysis helped uncover valuable insights into their motivations, interests, and beliefs, which are crucial for understanding their experiences and informing the research findings.

4.7.2 Descriptive statistics

The participants' performance on the vocabulary tests was examined to assess their vocabulary acquisition. The scores from the pre- and post-vocabulary tests were compared to measure the improvement in participants' vocabulary knowledge. Given the low number of participants in this case study, descriptive statistics through percentages were used to measure their vocabulary increase. The number of learned words can be determined by subtracting the unknown words from the total vocabulary encountered and reporting the gains in percentages (Bakar & Nosratirad, 2013). The present study considered 70% and above in the post-test as a substantial increase and 20% and above as a gain difference between pre and post-test results. For example, María scored 47/68 (69%) on the pre-test and 62/68 (91%) on the post-test, indicating an important increase in vocabulary acquisition in the post-test and a gain difference of 22% between the tests. Figure 4.6 illustrates the descriptive statistics analysis.

Figure 4.6 Vocabulary Test Scores Analysis Sample

	Pre Vocabulary Test		WVT #1		WVT #2		WVT #3		Post Vocabulary Test	
	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage
María	47/68	69.12%	35/42	83.33%	39/44	88.64%	24/24	100%	62/68	91.18%
Luis	41/68	60.29%	40/55	72.73%	43/55	78.18%	22/26	84.62%	56/68	82.35%

On the other hand, the daily vocabulary lists provided insights into participants' active engagement with vocabulary learning during the game sessions. The number of words recorded by María and Luis in each session was tracked to observe their vocabulary retention and development over time. Figure 4.5 shows a sample of the vocabulary list traced per participant.

Figure 4.7 María's vocabulary list of new words

	Session #1	Session #2	Session #3	Session #4	Session #5	Session #6	Session #7	Session #8	Session #9	Session #10	Total
María	15	12	15	10	11	12	11	9	9	6	110

Overall, the data analysis incorporated thematic and descriptive statistics as qualitative data analysis approaches, allowing for an exploration of participants' perspectives, progress, and experiences with the video game.

4.8 Trustworthiness in qualitative research

To ensure the trustworthiness or validity of this research, measures were taken to uphold its substantive and methodological soundness. The concept of trustworthiness encompasses theoretical and methodological coherence, reliability, and ethical procedures (Paltridge & Phakiti, 2015; Guapacha & Chaves, 2023). In terms of validity, as discussed by Creswell and Creswell (2018), the research aimed to provide accurate and credible findings from the perspectives of the researcher and participants. Some validity procedures, such as triangulation and reflexivity, were employed to check the accuracy of the findings. Furthermore, as emphasized by Phakiti et al. (2018), the concept of dependability was applied in this qualitative research to account for any shifting conditions related to the participants and the research setting. The research procedures were explicitly and honestly described to demonstrate the researchers' commitment to ensuring the accuracy and credibility of the findings. By adhering to these principles of trustworthiness, the research sought to establish a solid foundation for its findings and enhance the overall quality and credibility of the study.

4.9 Ethical considerations

To ensure ethical procedures, several measures were taken (Creswell & Creswell, 2018). First, informed consent was collected from the participants, outlining the purpose of the study, the data collection procedures, and how their data would be used. Second, to respect their privacy and confidentiality, pseudonyms were assigned to the participants, ensuring their anonymity throughout the research process. Transparency and openness were prioritized in this study. Verbatim transcriptions of the interviews and field observations were made available to the participants, allowing them access to the data collected and the opportunity to verify the accuracy of the information. Their rights and interests were respected by providing participants with this level of access. Participants were also informed of the benefits of the research, and no risk was posed.

In addition to participant-related ethical considerations, copyright and software licenses were also relevant. The video game used in the study is protected by copyright laws prohibiting unauthorized copying (Ramos et al., 2013). To ensure compliance with copyright regulations, the participants used the researcher's license, who had acquired the game in 2007. The participants were granted access to the game using this licensed version. Once the research was completed, the game was uninstalled to adhere to the implications and restrictions of U.S. Copyright Law (EDUCOM & ITAA, 1993). By adhering to copyright and software license regulations, the research respected intellectual property rights and maintained ethical standards in using proprietary software.

The participants' rights, interests, and wishes were prioritized regarding data reporting. Choices regarding the presentation and reporting of the findings were made with their perspectives in mind. The final decision regarding participant anonymity was left to the participants, allowing them to determine if they preferred to be identified or remain anonymous. By implementing these ethical considerations, the research aims to ensure the well-being and rights of the participants, promote transparency and trust, and maintain the integrity of the research process.

4.10 Concluding remarks

Based on the qualitative case study design employed in this research, the study focused on exploring the perceptions and experiences of two beginning middle-aged adults when learning vocabulary through the video game *Who Is Oscar Lake?* Various instruments were utilized throughout the study to observe and study the research phenomenon. The three phases of the study allowed for a comprehensive examination of the participants' attitudes, vocabulary acquisition, and overall experience with the video game as a learning tool. These methodological choices and instruments provided valuable insights into the effectiveness and potential benefits of using video games for language learning purposes among middle-aged adults with limited English proficiency.

This research followed established procedures and principles to ensure trustworthiness and address ethical considerations. Measures were taken to uphold the substantive and methodological soundness of the study, such as detailed descriptions.

Chapter 5 Findings and Discussion

5.1 Introduction

This chapter presents the findings and their discussion with previous theories and studies. The study investigated the effectiveness of video games as tools for teaching English vocabulary and attitudes to middle-aged adults. This case study was documented with data from two participants through observations, interviews, questionnaires, vocabulary tests, and vocabulary lists. The study spanned ten game sessions, during which the participants engaged with the video game, and their vocabulary acquisition and attitudes were studied. The chapter is organized into two main parts. The first part presents the findings and discussion of RQ1 about participants' vocabulary increase, and the second part focuses on RQ2 about participants' motivation and attitudes towards the video game.

5.2 What is the participants' vocabulary repertoire before and after playing the game?

The participants' vocabulary increase before and after using the video game was studied through pre- and post-vocabulary tests, vocabulary lists, and three weekly vocabulary tests. All these instruments and evidence demonstrated that students increased their vocabulary notably regarding various topics within the game. The participants expanded their vocabulary in diverse communicative situations ranging from travel, exploring a city, having persuasive conversations, and solving crimes. Furthermore, the vocabulary acquisition extended across various linguistic categories, encompassing nouns, verbs and adjectives.

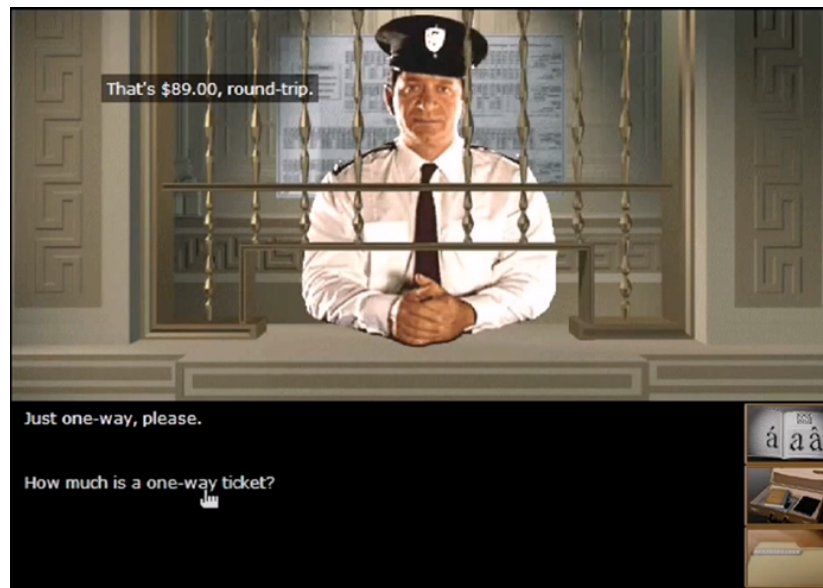
5.2.1 Vocabulary Acquisition in Different Contexts and Functions

In this section, we delve into the types of vocabulary that María and Luis learned throughout the game. Notably, we focus on the variety of contexts in which they encountered new words, the functions these words served within the gameplay, and the different types of vocabulary, such as nouns, adjectives, and verbs, that they acquired. By analyzing their vocabulary lists from each session, we can shed light on the nature of their language acquisition.

A brief presentation of the contexts of each of the ten game sessions and the vocabulary theme that could be found in these sessions is presented below, with images taken from Luis' gameplay. In this way, it is possible to understand more deeply the contexts and situations in which the participants acquired new vocabulary within the game and what kind of words they learned.

Session #1: Exploring the Train Station and New York City

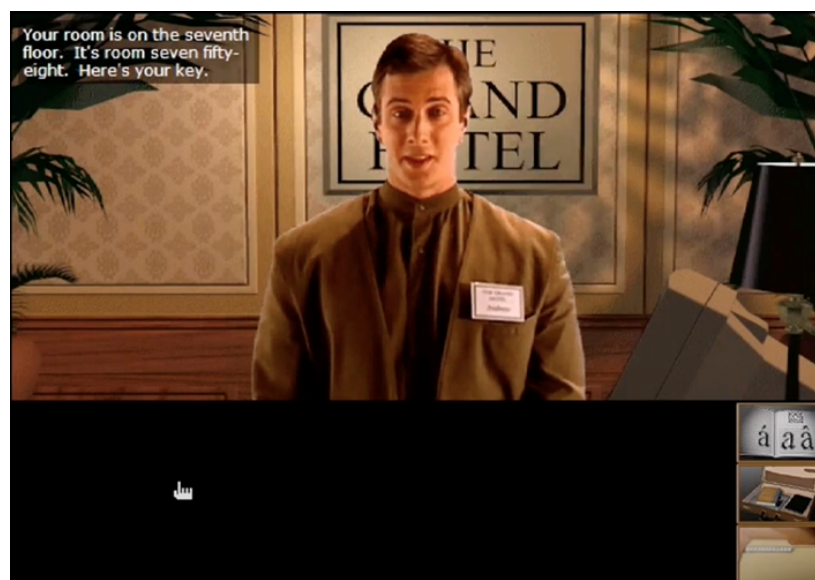
Figure 5.1 In-game screenshot illustrating the train station and ticket



During the initial session, participants were introduced to foundational vocabulary centered around travel, places, and fundamental conversational interactions. It takes place mainly in a train station and different parts of the city, so it is possible to find vocabulary such as nouns like: "train," "cash", "ticket", and "newsstand". Additionally, verbs like "explore," "buy," and "enter" and adjectives like "one-way" and "round-trip" were introduced when purchasing tickets, as seen in Figure 5.1.

Session #2: Hotel Stay and Conversations

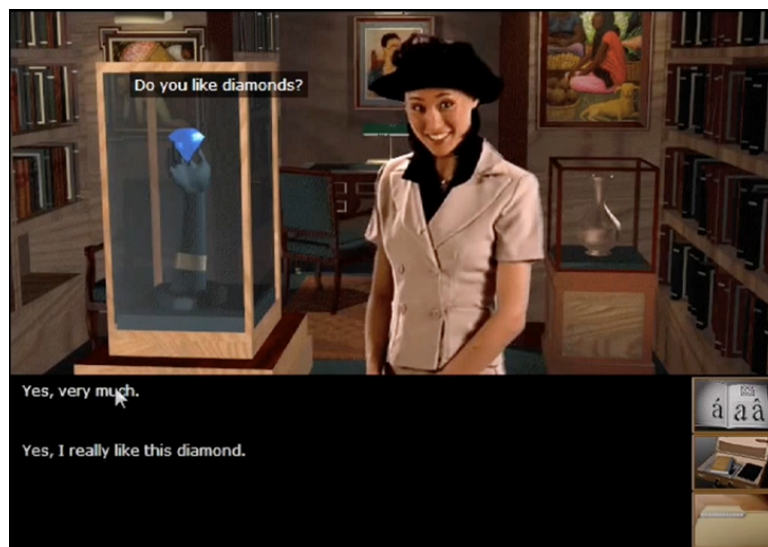
Figure 5.2 In-game screenshot showing the hotel setting



The vocabulary in this session revolved around accommodations and social interactions. Participants encountered words like "hotel," "desk clerk," "room," and "penthouse." The functional vocabulary included phrases like "ask for," "visit," and "explore,". Adjectives like "overseas" and "terrific" appeared, adding a descriptive dimension to conversations as the player conversed with other characters in the game. Figure 5.2 presents the hotel lobby where the participant can converse with the desk clerk and explore the objects.

Session #3: Gallery Exhibition and Conversations

Figure 5.3 In-game screenshot depicting the art gallery

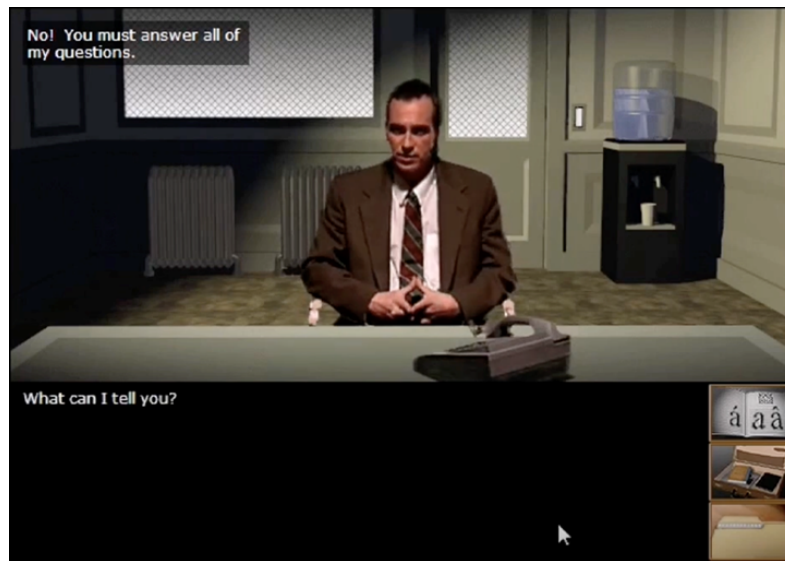


This session's vocabulary focused on art-related terms due to the gallery setting. Nouns like "gallery," "exhibition," and "diamond" were central. Verbs such as "see," "ask," and "meet" appeared as well. Adjectives like "rare" and "missing" were new for Luis as he wrote them down in his vocabulary list. Figure 5.3 shows an example within the gallery. The participant here must find Mandy Ming when indicated that she is wearing a hat.

Session #4: Police Station and Interrogations

Participants encountered vocabulary related to crime and investigations as they tried to defend themselves from the detective who took them to the police station. Nouns like "police," "interrogate," and "suspect" played a role. Verbs such as "defend," "find out," and "trust" appeared as well and seemed to be unknown words. Adjectives like "fake" and "disguise" appeared as the participant spoke with the detective while being interrogated, as shown in Figure 5.4.

Figure 5.4 In-game screenshot showing the police station



Session #5: Exploring the City and Newsstand

Figure 5.5 In-game screenshot featuring the newsstand



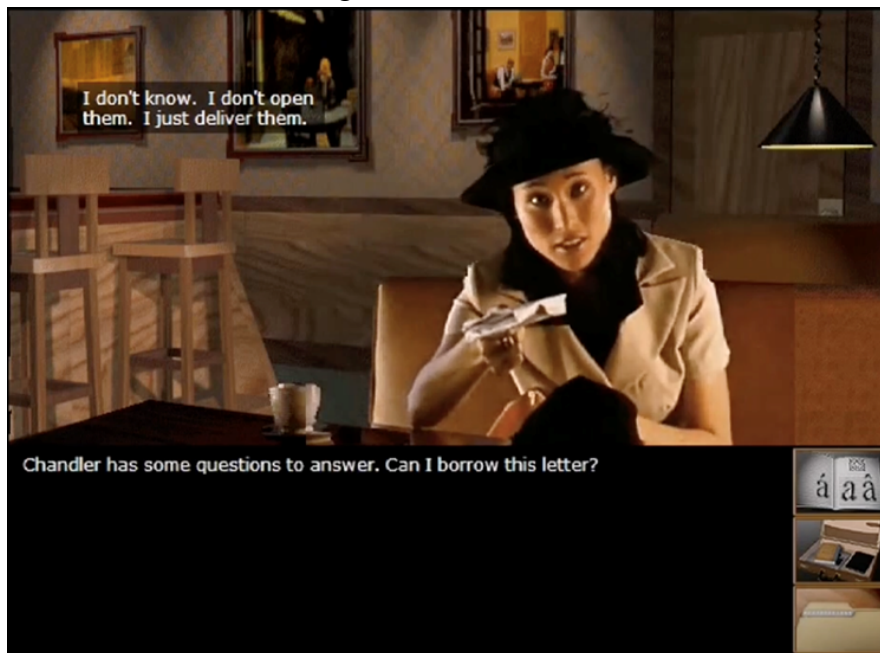
In this session, participants encountered vocabulary associated with news and antiques. Nouns like "newspaper," "antiques," and "thefts" appeared at the beginning of the session. Verbs such as "buy" and "take" were necessary for interacting with the newspaper seller. Adjectives like "valuable" and "expensive" emerged as participants explored the stolen objects. In Figure 5.5, the participant must buy the newspaper to identify the lost objects he is accused of stealing.

Session #6: Café Conversations and Clues

During this session, participants delved into conversational vocabulary to unravel the mystery and discover the real thief. Nouns like "culprit" and "letter" appeared during the participant and Mandy Ming's conversation. It was also possible to find Verbs such as "send," "borrow," and "confess" and

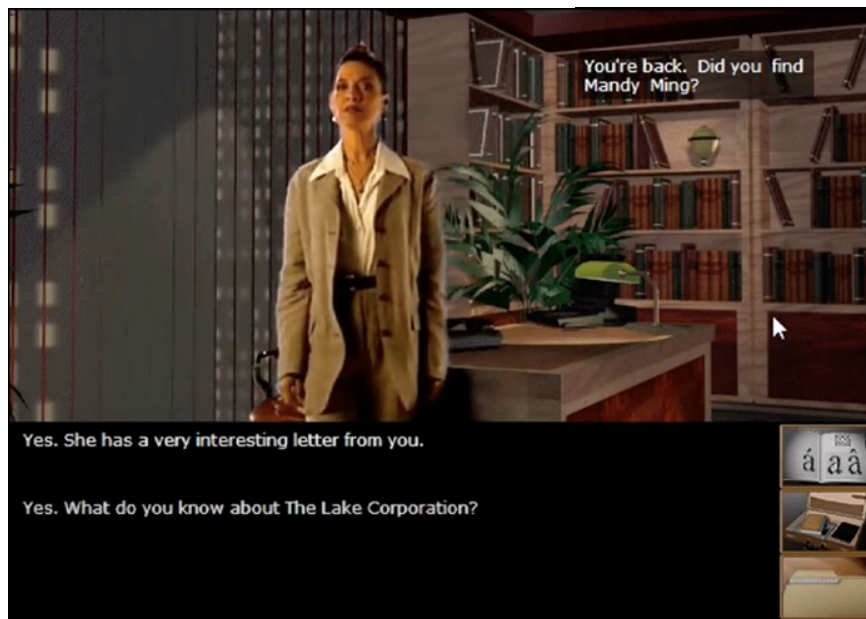
Adjectives like "strange" and "troublesome". Figure 5.6 shows Mandy Ming lending the participant a letter with evidence.

Figure 5.6 In-game screenshot showcasing the café



Session #7: Unveiling Secrets and Clues

Figure 5.7 In-game screenshot depicting the investigation



Vocabulary in this session revolved around investigations and uncovering secrets. Nouns like "package," "key," and "files", Verbs such as "find out," "check," and "rely", and Adjectives like "strange" and "suspicious" heightened the participants' descriptive language. Figure 5.7 shows the protagonist talking to Chandler in a decisive situation where, depending on his decisions, he could end up in one of the bad endings or get off easy.

Session #8: Uncovering Deception and Intrigue

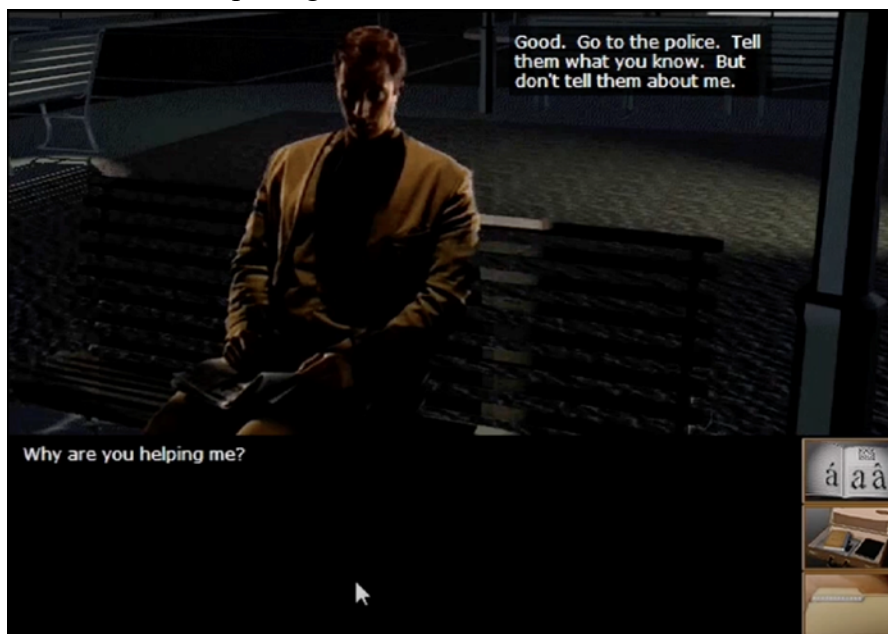
Figure 5.8 In-game screenshot featuring valuable objects



Participants encountered vocabulary associated with a criminal secret society and valuable stolen objects in this session. Nouns like "buyer," "glove," and "set up" appeared in the participants' vocabulary lists. Verbs such as "buy," "pick up," and "investigate", and Adjectives like "fake" and "valuable" appeared during the gameplay. Figure 5.8 illustrates the stolen antiquities within an inventory where the participant can find out who the buyers are, mostly business tycoons and politicians.

Session #9: Confrontation and Decision-Making

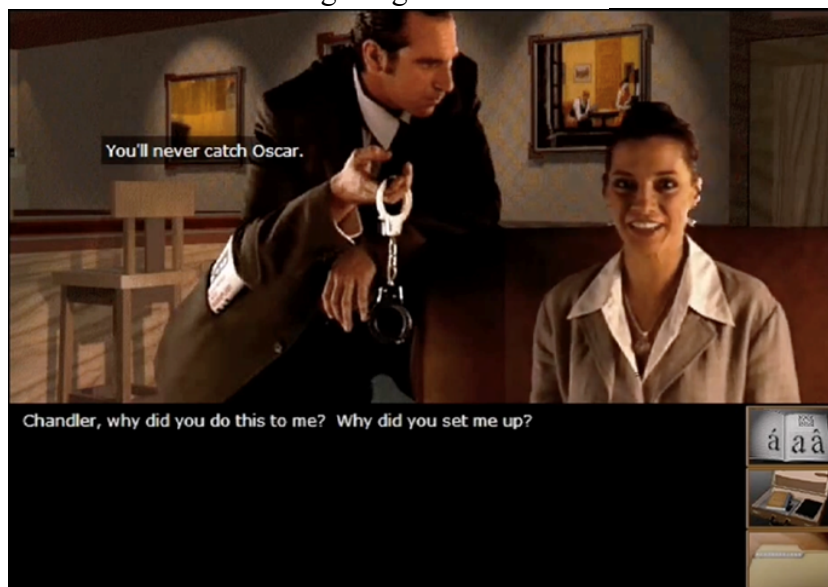
Figure 5.9 In-game screenshot depicting a decisive moment



Participants encountered vocabulary relevant to confrontation and decision-making, deciding whether to talk to the police and risk arrest or confront Chandler independently. In this session, it was possible to find nouns like "partner," "arrange," and "catch". Verbs such as "persuade," "arrange," and "confess". Also, adjectives like "belonging" and "dislike". Figure 5.9 shows the scene where the player finally meets his friend Cypher Key, and it is here that he must choose which decision to make.

Session #10: Culmination and Resolution

Figure 5.10 In-game screenshot showcasing the game's climax



The vocabulary of this session revolved around the final showdown and resolution. Nouns like "executive," "jail," and "confession" were prominent. Verbs such as "lead," "reveal," and "confess" were crucial for the climax. Adjectives like "over here" and "in fact" reflected the intensifying emotions of the narrative. Figure 5.10 reveals one of the Good Endings, where Chandler, the real thief, is arrested after the player manages to get her to confess through his dialogue choices during the conversation.

After some familiarization with the interface and contexts of the game and the type of vocabulary that might be encountered in each game session. The next session section provides evidence of students' vocabulary increase from all the instruments.

5.2.1.1 Pre- and Post-Vocabulary Test Results

The participants' initial and final vocabulary repertoire was assessed through pre- and post-vocabulary tests administered to María and Luis before and after playing the game. The test comprised 68 vocabulary items related to the video game content and other relevant topics. Each participant was given 30 minutes to complete the test. Significant gains or vocabulary increase were measured through percentages. The present study considered 70% and above in the post-test as a substantial increase and 20% and above as a gain difference between pre and post-test results. Table

5.1 presents the pre- and post-vocabulary test results for María and Luis, including the number of correct answers, percentage score, and the time taken to complete the test.

Table 5.1 Pre- and Post-Vocabulary Test Results

Participant	Time (30 mins)		Score (68 points)		Percentage (100%)	
	Pre	Post	Pre	Post	Pre	Post
María	16 min	17 min	47 pts	62 pts	69.12%	91.18%
Luis	21 min	19 min	41 pts	56 pts	60.29%	82.35%

As shown in Table 5.1, María initially achieved a score of 47 out of 68, corresponding to a percentage of 69.12%. This indicates that María knew approximately 69.12% of the game's vocabulary items tested. On the other hand, Luis obtained a score of 41 out of 68, equivalent to a percentage of 60.29%. This suggests Luis was also familiar with the game's vocabulary items in the pre-test. It is worth noting that both participants demonstrated familiarity with most words of the game before the study sessions. However, their knowledge in the pre-test did not reach the benchmark of 70%, meaning that their familiarity with the game vocabulary was not very high.

The results also show a difference in performance between María and Luis, with María exhibiting a slightly higher score and percentage than Luis. Both participants were familiar with vocabulary related to places in the city, household objects, and basic conversational phrases, which are used in the game to be able to engage in and maintain conversations with the different characters in the game, as well as follow instructions to go to places or look for objects whose names they were already familiar with (museum, police station, elevator, newspaper, computer, television, ticket, diamond, etc...).

The participants' improved vocabulary repertoire was assessed through a post-test administered after the gameplay. The post-test consisted of the same 68 vocabulary items as the pre-test, allowing for a comparison of the participants' performance before and after the gameplay. Based on the post-test results in Table 5.1, María substantially improved her vocabulary repertoire. She scored 62 out of 68, corresponding to a percentage of 91.18%. This indicates that María was able to acquire and retain a substantial amount of vocabulary during the gameplay. Similarly, Luis showed improvement in his vocabulary knowledge. He obtained a score of 56 out of 68, equivalent to a percentage of 82.35%. This suggests that Luis also expanded his vocabulary repertoire through the gameplay.

Comparing the post-test results with the pre-test results, María and Luis experienced increased scores and percentages. María's score increased from 47 to 62, representing a notable improvement. Similarly, Luis's score increased from 41 to 56. These improvements reflect the effectiveness of the video game implementation in enhancing the participants' vocabulary knowledge and that ten sessions are appropriate for that purpose. It is worth noting that María achieved a higher score and percentage than Luis in the pre-test and post-test. This difference in performance may be attributed to various factors, such as individual learning styles, prior language knowledge, and engagement with the game. Further analysis will provide a more comprehensive understanding of the participants' progress and the impact of the video game implementation on their vocabulary acquisition.

Overall, the post-test results show participants' improved vocabulary repertoire after the gameplay, as they obtained higher percentages than 70% overall. Table 5.2 below provides an analysis of the types of known words in the pre- and post-vocabulary test for both participants. The categories include nouns, adjectives, and verbs, essential language learning components.

Table 5.2 Types of known words in the pre- and post-vocabulary tests

Participants	Nouns (22)		Gain	Adjectives (12)		Gain	Verbs (20)		Gain
	Pre	Post		Pre	Post		Pre	Post	
María	16 (73%)	19 (86%)	3 (13%)	8 (67%)	11 (92%)	3 (25%)	13 (59%)	18 (90%)	5 (31%)
Luis	13 (59%)	22 (100%)	9 (41%)	5 (42%)	8 (67%)	3 (25%)	10 (50%)	18 (90%)	8 (40%)

In Table 5.2, the post-test results per category show that students increased their knowledge of nouns, adjectives and verbs overall by getting 70% or above, except for Luis, who seemed not to have learnt many adjectives (67%). Regarding gain, María did not increase her knowledge of nouns (13%), indicating that María had a relatively strong grasp of nouns in both the pre-test and post-test, which may have been advantageous for her gameplay. Nouns are vital for understanding objects, characters, and places in the game, enabling her to navigate the virtual world effectively. Additionally, improved knowledge of adjectives may have allowed María to describe and interact with the game environment more accurately. As for the verbs, a better understanding of action words likely facilitated her interactions with characters and objects within the game, enhancing her overall gameplay experience.

In contrast, Luis got higher gains in nouns (41%) and verbs (40%) than Maria, but both improved in learning adjectives. Luis demonstrated good knowledge in the noun category, which likely contributed to his ability to comprehend and engage with the game's content. The improved knowledge of nouns in the post-test indicates his enhanced understanding of various objects and entities in the game, enabling him to navigate and interact more effectively. While his improvement

in adjectives and verbs was less substantial, it still contributed to his overall language development, allowing him to express himself more precisely within the game's context.

The participants' familiarity with the vocabulary items tested in the pre-test can be attributed to their prior language exposure and learning experiences. María and Luis were introduced to basic conversational phrases and everyday vocabulary in English classrooms or daily life. This foundational knowledge provided a starting point for their language learning journey with the video game implementation. The game further reinforced and expanded their vocabulary through immersive interactions, repeated exposure to words in various contexts, and contextualized language use.

The observed improvements in their vocabulary knowledge after the gameplay can be attributed to the engaging and interactive nature of the video game. DGBLL incorporates game mechanics, narratives, and challenges that require language use and comprehension, motivating learners like María and Luis to engage with the content actively. The video game's contextualized language learning approach resembles real-life language acquisition, making learning more meaningful and effective (Wagner & Yuan, 2016).

Additionally, the learners' positive attitudes and motivation towards the video game implementation likely played a significant role in their progress. The game's immersive and enjoyable nature fostered a positive learning experience, encouraging them to invest effort and time into language learning with enthusiasm (Golonka et al., 2014).

Overall, the findings from the pre- and post-vocabulary test and the vocabulary type analysis highlight the effectiveness of the video game implementation in enhancing participants' vocabulary acquisition and language learning outcomes. These results indicate students' vocabulary increase due to the game exposure. The study provides valuable insights into the potential of DGBLL in language learning contexts and the benefits of integrating interactive and engaging approaches to foster learners' language development. The following analysis shows the participants' vocabulary performance in context in each pre- and post-vocabulary test section.

The vocabulary test consisted of seven sections designed to assess different aspects of the participants' vocabulary knowledge. In Section 1, participants were required to write the correct name for each image displayed, evaluating their knowledge of nouns. Section 2 involved matching words to their corresponding meanings in sentences, also assessing nouns. Section 3 required participants to complete sentences with the appropriate words, testing their knowledge of nouns. In Section 4, participants listened to the audio and filled in the blanks with the correct words, evaluating their grasp of verbs. Section 5 involved selecting the word that did not belong to each group and assessing

adjectives. In Section 6, participants completed sentences with one of the multiple-choice words provided, testing their knowledge of nouns. Lastly, Section 7 required participants to match words with their corresponding meanings, evaluating their understanding of adjectives. Through these sections, the test comprehensively assessed the participants' vocabulary knowledge, providing valuable insights into their language learning progress and the effectiveness of the video game implementation.

Table 5.3 Participants' knowledge of vocabulary in context

Pre-vocabulary test sections	Points	Maria's points		Luis' points	
		Pre	Post	Pre	Post
Section 1. Match the word to the picture	14 pts	11 pts	14 pts	9 pts	14 pts
Section 2. Match the word to the meaning	7 pts	5 pts	7 pts	5 pts	7 pts
Section 3. Complete the sentences	7 pts	6 pts	7 pts	6 pts	7 pts
Section 4. Listen to the words and complete the sentences	20 pts	12 pts	17 pts	11 pts	12 pts
Section 5. Select the word that doesn't belong to the group	4 pts	2 pts	3 pts	1 pt	2 pts
Section 6. Multiple choice words	8 pts	5 pts	7 pts	6 pts	8 pts
Section 7. Match the word to the meaning	8 pts	6 pts	7 pts	4 pts	6 pts

According to Table 5.3 above, participants scored well in Section 4 of the pre-vocabulary test, where they had to listen to the words and complete the sentences. This suggests that participants demonstrated stronger listening and comprehension skills, allowing them to fill in the blanks based on the audio prompts accurately. Both María and Luis improved their scores in this section during the post-test, indicating enhanced listening abilities after engaging with the video game implementation.

On the other hand, participants had relatively lower scores in Section 5 of the pre-vocabulary test, where they were required to select the word that didn't belong to the group. This suggests that participants faced challenges distinguishing unique vocabulary items in a given set. María and Luis showed only a slight improvement in this section during the post-test, which might indicate that they struggled with identifying word associations or differences.

Regarding individual results, María consistently outperformed Luis in most pre-test and post-test sections. Her scores in Section 1 (matching words to pictures) and Section 4 (listening and completing sentences) were particularly strong, indicating her solid grasp of vocabulary in visual and auditory contexts. Conversely, Luis displayed weaker performance in the pre-test but made notable

improvements in the post-test, especially in Section 4. This suggests that the video game implementation benefited Luis's listening and comprehension skills, significantly increasing his scores.

The differences in performance can be attributed to individual learning styles, prior language knowledge, and engagement with the video game implementation. María may have had prior exposure to some of the vocabulary items tested, allowing her to perform better in certain sections. In contrast, Luis might have faced challenges due to unfamiliarity with specific vocabulary or less exposure to the language context featured in the video game.

Overall, the participants' performance in the pre-vocabulary test varied across sections, with strengths in listening comprehension (Section 4) and challenges in identifying outliers (Section 5). The video game implementation seemed to positively impact their listening skills, reflected in the improved scores after playing it. The differences in individual results highlight the significance of personalized learning experiences and indicate the potential benefits of DGBLL in addressing learners' diverse needs and preferences.

In sum, the results of the pre- and post-vocabulary tests showed that both María and Luis experienced significant improvements in their vocabulary repertoire after engaging with the video game implementation. The participants demonstrated strengths in specific sections, such as listening comprehension (Section 4) and matching words to pictures (Section 1), which allowed them to excel in those areas. However, they faced challenges in identifying outliers and selecting words that did not belong to a group (Section 5). The differences in individual performance highlighted María's consistently higher scores than Luis in most sections, indicating her prior language knowledge and engagement with the implementation. Nonetheless, both participants benefited from the video game-based language learning approach, as evidenced by their increased scores and percentages in the post-test. The findings emphasize the potential of DGBLL as an effective method for enhancing language learning outcomes, catering to learners' diverse strengths and weaknesses. These results contribute to the growing body of research supporting the use of digital games in language education and underscore the importance of personalized and context-based language learning experiences.

5.2.1.2 Vocabulary Lists and Weekly Tests

The participants' vocabulary acquisition was further assessed through their vocabulary lists and weekly vocabulary tests (WVT). The vocabulary lists served as a record of the unknown words encountered by María and Luis during the game sessions, while the WVT evaluated their ability to learn and apply these new words. Table 5.4 presents the results of the vocabulary lists results per participant.

Table 5.4 Vocabulary lists results

Participant	Unknown words per session	Learning Strategy	Total unknown words
María	8-10 words	Guess the meaning; ask the researcher, translator	110 new words
Luis	10-15 words	Guess the meaning; ask the researcher	136 new words

The vocabulary lists revealed that María identified 110 unknown words throughout the sessions, while Luis identified 136 unknown words. These numbers demonstrate the substantial amount of new vocabulary they were exposed to during the gameplay. Table 5.5 shows the unknown words per session registered in every vocabulary list.

Table 5.5 Unknown words per session

Session	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
María	15	12	15	10	11	12	11	9	9	6
Luis	17	20	18	17	13	12	13	9	10	7

Based on the information from Table 5.5 and the summary of the game sessions, it is evident that one participant encountered more unknown words in specific sessions than the other one. For both María and Luis, Session #1 had a relatively lower number of unfamiliar words (15 for María and 17 for Luis), which can be attributed to the introductory nature of this session, where the participants were mainly exploring the train station and making initial interactions with the game environment.

However, as the game progressed and the complexity of the interactions increased, the number of unknown words also rose. Sessions such as Session #2 and Session #3 witnessed an increase in unfamiliar vocabulary (12-20 unknown words for Luis and 10-15 unknown words for María). These sessions involved exploring the hotel, conversing with characters, and encountering new places, which likely introduced a wide range of vocabulary related to room objects, hotel amenities, and gallery-related terms.

Furthermore, as the plot developed, the participants engaged in more challenging interactions, requiring them to understand and use words related to crime, suspects, and detective work (Session #4 and beyond). For instance, Session #4 marked a crucial turning point with the encounter with Detective Dash and the suspicion surrounding the Blue Diamond robbery. Subsequent sessions, especially those leading to the game's multiple endings (Session #9 and Session #10), demanded a

deeper understanding of vocabulary linked to the investigation, such as clues, evidence, and interrogations.

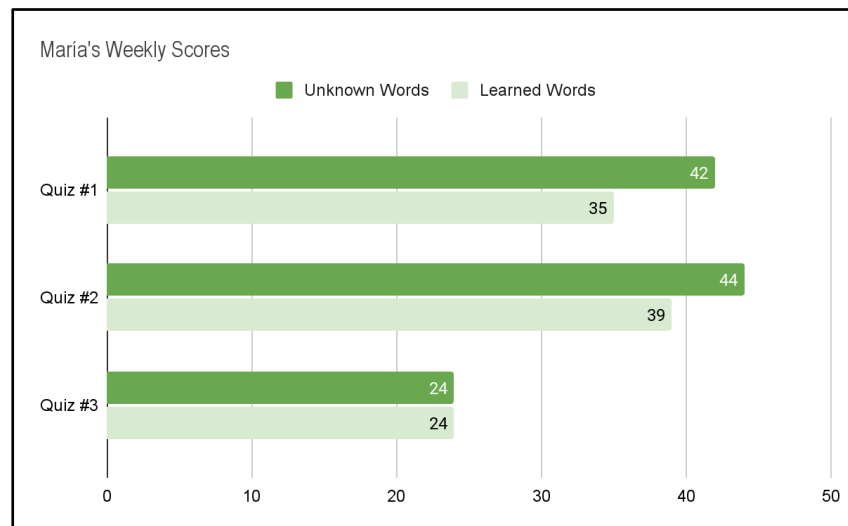
The variations in the number of unknown words per session reflect the game's progressive difficulty and the expanding thematic content. As the participants delved deeper into the plot and explored more diverse scenarios, they encountered new vocabulary specific to each situation. Additionally, the different choices made by the players during interactions might have exposed them to distinct linguistic contexts, influencing the types of unknown words they encountered in each session.

In conclusion, the fluctuations in the number of unknown words per session can be attributed to the game's storyline and the linguistic challenges presented to the participants at different stages of the game. The increasing complexity of interactions and the evolving plot contributed to the participants' exposure to a wide array of new vocabulary. These demonstrate how the game's design and narrative intricacies were crucial in facilitating language learning by continuously introducing and reinforcing vocabulary relevant to the game's context.

To assess the participants' learning and application of these new words, weekly vocabulary tests (WVT) were conducted. These tests evaluated their ability to recall and use the learned vocabulary in context.

María consistently demonstrated a strong performance in the weekly vocabulary tests, achieving high scores and percentages. In WVT 1, she scored 35 out of 42, with 83.33%. This indicates her ability to recall and utilize a significant portion of the learned vocabulary. Her performance further improved in WVT 2, where she scored 39 out of 44, achieving a percentage of 88.64%. Finally, in WVT 3, María attained a perfect score of 24 out of 24, reflecting her complete mastery of the vocabulary introduced that week. Figure 5.1 shows María's WVT scores.

Figure 5.11 María's Weekly Vocabulary Tests Scores

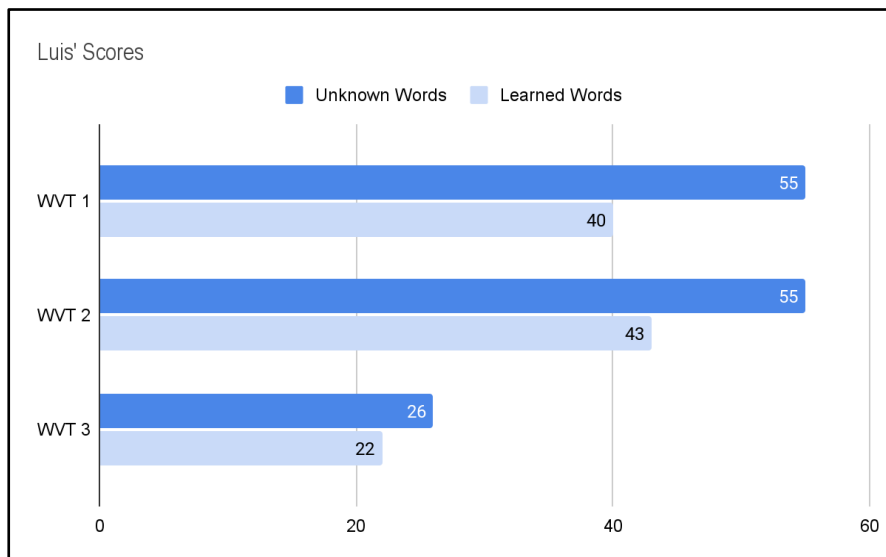


In WVT#1, covering sessions 1 to 3, she demonstrated a strong command of terms associated with travel arrangements, dining preferences, and interpersonal interactions, aligning with the early stages of the game's storyline. Transitioning to WVT#2, including sessions 4 to 7, María's successful recall of vocabulary related to investigation, theft, and communication highlighted her ability to engage with more intricate in-game scenarios.

María's remarkable achievement was shown in WVT#3, which covered sessions 8 to 10. Her scores indicated a deep understanding of words integral to discussions of deception, negotiation, and decisive interactions. This performance underscored her complete mastery of the vocabulary presented in the game's culmination.

Luis also displayed notable progress in the weekly vocabulary tests. Although his scores were slightly lower than María's, he consistently improved over time. In WVT 1, he scored 40 out of 55, with a percentage of 72.73%. This indicates a solid grasp of the vocabulary learned in that week. In subsequent tests, Luis's performance continued to improve. In WVT 2, he scored 43 out of 55, with a percentage of 78.18%, demonstrating a growing ability to apply the newly acquired vocabulary. In WVT 3, Luis scored 22 out of 26, resulting in a percentage of 84.62%, reflecting his continued progress in learning and utilizing the vocabulary. Figure 5.2 shows Luis' three WVT scores.

Figure 5.12 Luis' Weekly Vocabulary Tests Scores



Luis also improved his vocabulary acquisition, as indicated by his performance in the weekly vocabulary tests. In WVT#1, which encompassed vocabulary from sessions 1 to 3, Luis displayed a strong understanding of terms related to travel, dining, and gallery settings, suggesting his acquisition of vocabulary introduced in these sessions. His proficiency extended to WVT#2, covering sessions 4 to 7, where Luis showcased familiarity with words used in discussions of theft, investigation, and encounters with suspicious individuals. Notably, despite his slightly lower scores compared to María, his WVT#2 performance indicated an increasing grasp of vocabulary relevant to complex scenarios and investigative dialogues within the game's context.

In WVT#3, which included vocabulary from sessions 8 to 10, Luis continued to demonstrate advancement in language skills. His grasp of terms related to fraud, deception, and confrontational conversations mirrored the evolving plot of the game's final stages. Luis's consistent improvement across WVTs reflects his ability to understand and apply the vocabulary introduced within diverse in-game scenarios, ultimately contributing to his growing language proficiency.

Overall, the assessment of participants' vocabulary acquisition and utilization through the weekly vocabulary tests (WVTs) revealed noteworthy progress in their language skills. Both participants, María and Luis, demonstrated distinct language acquisition patterns within the game's interactive sessions. The nature of vocabulary retention and application was notably influenced by the frequency of word repetition within the game's narrative structure.

An intriguing observation that emerged from the analysis was the impact of vocabulary repetition on participants' performance. For instance, vocabulary, such as food and weather-related terms, appeared only in specific sessions, limiting the exposure and subsequent retention of such terms. Conversely, vocabulary consistently repeated across sessions, such as conversational phrases,

action verbs, and words related to investigation and deception, exhibited higher proficiency in the WVTs.

A potential explanation for the variation in performance could be attributed to the cognitive phenomenon of "spaced repetition." This theory posits that learning is enhanced when information is continuously reviewed. María's exceptional performance in the later WVTs could be partially attributed to her engagement with vocabulary that underwent repeated reinforcement in multiple sessions. This consistent exposure likely contributed to her mastery of these terms, enabling her to recall them effortlessly during the tests.

Conversely, Luis's steady improvement across the WVTs could be linked to his engagement with vocabulary that required a deeper understanding of contextual nuances and intricacies. For instance, vocabulary related to deception and investigation required more complex comprehension and implementation. As the game progressed, his increasing familiarity with these terms indicated his adaptive learning process.

The findings also show the significant role of contextual repetition in enhancing vocabulary acquisition within a game-based learning environment. Through a series of game sessions encompassing diverse scenarios and interactions, participants María and Luis demonstrated improvement in their language skills, as evidenced by their performance in the weekly vocabulary tests. A crucial aspect contributing to their success lies in the patterns of vocabulary repetition within the game.

Both participants exhibited higher scores and percentages in the WVTs for the vocabulary frequently repeated throughout the game. For instance, specific terms used in conversations, actions, and recurring situations emerged as recurrent themes in multiple sessions. Interestingly, María's impeccable performance in WVT#3 and her exceptional grasp of words introduced in the game's final stages align with the repetitive vocabulary related to confrontational dialogues and decisive interactions. Similarly, Luis's consistent improvement across WVTs can be attributed to his adeptness in comprehending and applying vocabulary consistently reiterated in diverse in-game contexts.

The observed results resonate with theories of vocabulary acquisition that underscore the significance of repetition in language learning. The Frequency-based Learning Hypothesis posits that frequent exposure to words leads to more robust memory representations and faster access to those words during communication (Nation, 2013). In the game context, the vocabulary used repeatedly became ingrained in the participants' memory, enhancing their ability to recall and utilize those words effectively.

In summary, the participants' vocabulary acquisition journey within the game's interactive sessions showcased the intricate interplay between vocabulary repetition and context relevance. While both María and Luis demonstrated growth in their language skills, the variations in their performance could be attributed to the frequency of vocabulary exposure and the cognitive demands posed by different word categories. The repetition of words across diverse game sessions reflected the dynamic nature of communication and tapped into theories emphasizing the power of repetition in enhancing memory and recall. The results of both participants and their percentage improvement can be seen in Table 5.6.

Table 5.6 Weekly Vocabulary Tests' Scores

	WVT 1			WVT 2			WVT 3		
	<i>uw.</i>	<i>lw.</i>	<i>per.</i>	<i>uw.</i>	<i>lw.</i>	<i>per.</i>	<i>uw.</i>	<i>lw.</i>	<i>per.</i>
María	42	35	83.33%	44	39	88.64%	24	24	100%
Luis	55	40	72.73%	55	43	78.18%	26	22	84.62%

Note: uw: unknown words; lw: learned words; per: percentage of words learned.

Table 5.5 shows how María and Luis learned new words from the game through their test results. María's learning improved over time. In the first test, she learned 35 out of 42 words (83.33%); in the second, 39 out of 44 words (88.64%); and the third, all 24 words (100%). Luis also got better: in the first test, he learned 40 out of 55 words (72.73%); in the second, 43 out of 55 words (78.18%); and the third, 22 out of 26 words (84.62%). This shows they improved by learning words that came up more often in the game.

Furthermore, the total number of learned words can be determined by subtracting the unknown words from the total vocabulary encountered, as shown in Table 5.7.

Table 5.7 Total Learned Words

Participant	Unknown Words	Learned Words	Percentage
María	110	98	89.09%
Luis	136	105	77.21%

María and Luis increased their vocabulary repertoire by more than 70%. This high percentage of learned words indicates participants' ability to acquire and retain new vocabulary throughout the study. Combined with the pre-test and post-test data, these results provide a comprehensive understanding of the participants' vocabulary improvement. María and Luis exhibited significant progress in their vocabulary repertoire, as evident from the pre-test, post-test, vocabulary lists, and weekly vocabulary tests. The participants' performance in the weekly vocabulary tests demonstrates

their ability to recall and apply the learned vocabulary, reinforcing the effectiveness of the videogame's implementation. The results indicate their growing familiarity and proficiency with the acquired words.

5.2.1.3 Field Journal Observation

During the game sessions, it was observed that the adaptation process to the video game was fast for both participants. The vocabulary presented in the game was mostly new, prompting reliance on dictionaries for comprehension. However, as the participants progressed and their vocabulary knowledge expanded, they gradually transitioned to guessing the meaning of words as they were learning and recalling them. Once the data were collected and analyzed, it was possible to identify that both participants acquired an average of 100 new words during the study.

Furthermore, a significant pattern emerged regarding the participants' motivation and confidence. As their vocabulary repertoire grew and they advanced in the video game, their motivation and confidence in learning English improved. The findings of this study align with previous research on digital game-based language learning and vocabulary acquisition. Similar patterns of increased vocabulary knowledge and motivation have been reported in studies examining the effectiveness of video games as language learning resources (Bakar & Nosratirad, 2013; Galvis, 2015, Whittaker, 2013; Rojas & Molina, 2014).

5.2.2 Comparative Analysis

Comparing the results from the pre- and post-vocabulary tests provides valuable insights into the overall vocabulary improvement of María and Luis. Both participants exhibited substantial progress in their vocabulary acquisition throughout the videogame's implementation.

María's and Luis' vocabulary increased by 22% from the pre-test, before being exposed to the game. These findings indicate that both María and Luis experienced substantial growth in their vocabulary knowledge and application. Furthermore, the data gathered from the vocabulary lists and weekly tests provide additional evidence of the effectiveness of the video game in helping participants acquire and apply new vocabulary. María and Luis demonstrated exponential improvement in their vocabulary by using it in a virtual environment where they could engage in first-person experiences and scenarios. This progress was reflected not only in the previous instruments but also through observation during the focus group, where participants naturally incorporated the previously unfamiliar vocabulary into their conversations. While, at times, the vocabulary was isolated and had no conjugation tense or was poorly conjugated, both could carry on conversations and understand each other as they shared their various experiences in the game.

It is worth noting that María's approach to learning vocabulary differed from Luis'. María utilized the translator and dictionary as learning resources, directly associating words with their Spanish equivalents. This method seemed to enhance her vocabulary acquisition and retention, as she indicated that she knew faster. In contrast, Luis preferred to rely on contextual cues and would occasionally guess the meaning of words or seek clarification from the researcher. Despite these differences in learning strategies, both participants demonstrated notable improvement in their vocabulary acquisition.

María, in addition to writing on her vocabulary list, took note of everything and was excited when she remembered the words she had previously written down and was now familiar with. In contrast, on several occasions, Luis repeated words that he had already written down in previous sessions, such as 'want,' 'need,' 'was,' and 'like,' which led to occasional confusion as he confused them with each other. These findings highlight the individual variations in vocabulary acquisition and the influence of different learning approaches. María's utilization of translation resources and diligent note-taking contributed to her remarkable progress. At the same time, Luis's contextual learning approach also allowed him to make substantial gains, albeit with occasional challenges.

Both María and Luis exhibited significant vocabulary improvement throughout the gameplay, demonstrating the effectiveness of the digital game-based approach in enhancing their vocabulary acquisition. Their distinct learning strategies and experiences further emphasize the need for tailored instructional methods that accommodate individual preferences and learning styles.

5.2.3 Discussion of Findings Related to Vocabulary Acquisition

The previous findings provide valuable insights into the potential of video games as a tool for vocabulary acquisition among middle-aged adults. The results demonstrate that both María and Luis experienced significant improvement in their vocabulary knowledge and application. The pre-test and post-test scores reveal substantial increases in their percentage scores, indicating that the video game positively impacted their vocabulary acquisition. María's score increased from 69.12% to 91.18%, while Luis's improved from 60.29% to 82.35%. These findings suggest that the video game implementation effectively facilitated vocabulary development for both participants.

María and Luis engaged with the video game throughout the gameplay, actively learning and applying new vocabulary in a virtual environment. The vocabulary lists and weekly tests further support the effectiveness of the video game, as both participants demonstrated considerable progress in learning and recalling new words. María successfully learned 89.09% of the unknown words encountered, while Luis learned 77.21% of the new vocabulary.

Moreover, noteworthy patterns and observations emerged during the study. María's utilization of translation resources and note-taking strategy seemed to enhance her vocabulary acquisition. On the other hand, Luis demonstrated the ability to learn and apply new vocabulary by relying on contextual cues. However, he occasionally encountered challenges distinguishing certain words, leading to occasional confusion. These findings align with existing literature on vocabulary acquisition and digital game-based language learning. Prior research (Bakar & Nosratirad, 2013; Galvis, 2015, Whittaker, 2013; Rojas & Molina, 2014) has emphasized the potential of video games as effective tools for vocabulary development among diverse learners. This study contributes to the existing body of knowledge by focusing specifically on middle-aged adults and highlighting their capacity to benefit from video game implementations.

The study's outcomes confirm the effectiveness of the video game implementation in enhancing vocabulary acquisition among middle-aged adults. This growth encompassed diverse linguistic categories, including nouns, verbs, and adjectives, and practical application in communicative contexts within the game environment. Also, the ten interventions in which participants were exposed to the game were also sufficient for such an increase. This might indicate that the longer the exposure, the higher the vocabulary increase. Hence, language teachers might use this tool for short or more extended periods in the EFL classroom with adult learners.

In line with the Andragogy Theory, which emphasizes self-directed learning and relevance, both participants tailored their approaches to their preferences. María used translation resources and note-taking, while Luis relied on contextual cues, showcasing the theory's principles (Bakar & Nosratirad, 2013). This aligns with the video game's ability to offer autonomy and contextualized learning, underscoring Andragogy's effectiveness in vocabulary acquisition through video games.

Furthermore, the study delved into Digital Game-Based Language Learning (DGBLL), which integrates language learning into game mechanics. Participants actively engaged with the game's content, as evidenced by their interactions with in-game characters and dialogues. These interactions, visually demonstrated in the screenshots, underline DGBLL's potential to promote vocabulary acquisition within dynamic virtual environments. In summary, these findings affirm video games' role in vocabulary acquisition, with Andragogy Theory offering a theoretical framework that resonates with participants' experiences. The findings underscore the potential of DGBLL, evident through participants' engagement with vocabulary-rich interactions.

Overall, the analysis of the participants' learning process and the contextual vocabulary enrichment across various linguistic categories reflect the game's effectiveness in enhancing vocabulary in real-life communicative situations. The consistent patterns in vocabulary retention and

the alignment with established theories like Andragogy underscore the potential of digital game-based language learning in catering to middle-aged adult learners' unique needs and preferences. Moreover, this study bridges the gap in understanding the applicability of Andragogy Theory to vocabulary acquisition through video games and contributes to the growing body of knowledge in this field. This research illuminated a new avenue of effective language education for middle-aged adults, demonstrating the far-reaching impact of innovative learning technologies like video games. The next part reports the findings of RQ2.

5.2 What is the attitude of middle-aged learners before and after using the video game as a learning tool?

The participants' attitudes, perceptions, and motivation toward the video game as a tool for learning English vocabulary were investigated through questionnaires, interviews, and field journals. It was identified that before using the video game, both middle-aged adults' attitudes, perceptions, and motivations were positive. They perceived that video games could help them practice a foreign language. After using the video game, not only did they confirm what they thought before, but they also had the experience of trying it out and learning and improving their vocabulary through it. The following sections show how the video game motivated these participants to learn.

María and Luis experienced significant vocabulary improvement, with pre-test to post-test scores reflecting substantial progress. The participants' active engagement with the game content showcased the potential of Digital Game-Based Language Learning (DGBLL) to enrich vocabulary acquisition within immersive virtual environments. These findings align with previous research on video games' effectiveness for vocabulary development among diverse learners. The study's focus on middle-aged adults underscores the adaptability of video games for various age groups, highlighting their role as tailored learning tools. The outcomes validate the applicability of theories like Andragogy and the potential of DGBLL, contributing to enhancing vocabulary acquisition through innovative methods for this specific learner demographic.

5.2.1 Initial Perception Questionnaire and Interview

The purpose of this initial perception questionnaire was to identify participants' relationships and perceptions of English, computers and video games, as well as their motivations for learning the language using these tools before the implementation of the game. Based on the participants' responses, it was identified that María and Luis displayed several positive attitudes and perceptions towards learning English, using video games, computers, and video games as English vocabulary learning tools. The following key findings emerged from their responses.

Both participants shared positive attitudes and perceptions towards learning English, computers, and video games, which formed a foundation for their engagement with the video game implementation. Their motivations, experiences, and views on the suitability of video games for language learning were generally encouraging.

5.2.1.1 *Positive Motivation and Interest in Learning English*

Both participants expressed being motivated towards English language learning. María expressed a strong motivation to learn English as it is essential for her teaching profession in bilingual schools and as a personal challenge. Her interest stems from the need to communicate effectively with her students and enhance her professional skills. Luis also demonstrated motivation, citing the rapid advancements in science and technology and the majority of information in English as reasons to learn the language.

In the context of María, her strong motivation came from the direct relevance of English to her teaching profession in bilingual schools. This connection between her career requirements and language learning objectives heightened her commitment to learning English. It ensured a deep engagement with the video game tool, as it directly connected to her professional growth. For Luis, his motivation was based on the pragmatic recognition of the role of English in the contemporary world. This pragmatic motivation set the stage for him to approach the video game-based learning experience with an understanding of its potential value in acquiring language skills needed for real-world scenarios.

Both participants' positive motivation and interest directly influenced their attitudes and engagement with the video game-based learning tool. This, in turn, could have significant implications for the overall outcomes of the study. Motivated learners like María and Luis are more likely to invest time, effort, and attention into learning (Whittaker, 2013). This heightened engagement might lead to a deeper understanding and internalization of the learning material, including vocabulary acquisition through the video game. Furthermore, their enthusiasm could foster a positive perception of the learning tool itself, potentially contributing to a more fruitful and constructive interaction with the game.

In essence, positive motivation and interest in learning English ensured that the participants were willing and eager to embrace the innovative video game-based learning approach. This, in turn, could have positively influenced their performance, attitudes, and the richness of the data collected, ultimately strengthening the validity and comprehensiveness of the study's results.

5.2.1.2 *Low Experience with Video Games*

María had prior experience playing video games, specifically mentioning Mario Bros, whereas Luis did not have experience playing video games. The participants' differing experiences with video games had implications for the study. María's familiarity with games, even at a basic level, likely gave her an advantage in understanding the game's interface, controls, and mechanics. This familiarity might have helped her quickly adapt to the learning tool's environment, leading to a smoother learning experience. On the contrary, Luis's lack of experience with video games posed challenges. His difficulties adapting to the game's controls and movements at the beginning of the gameplay could have affected his performance and engagement with the tool. This might have led to a steeper learning curve for Luis, potentially impacting his initial interactions with the game. This indicates that skilful middle-aged adults at video games might perform better than unskilled learner adults. In the educational context, teachers should familiarize these learners with the features and skills the video game requires.

5.2.1.3 *Positive Perceptions of Video Games as Language Learning Tools*

Both María and Luis believed that a foreign language could be learned through video games. They highlighted video games' engaging and immersive nature, allowing learners to become part of the game's world and experience language in context. María and Luis also shared their belief in the effectiveness of video games as language learning tools provided a strong foundation for their engagement with the game-based learning intervention. By recognizing video games' engaging and immersive nature, participants set a constructive mindset toward the learning tool. This perception likely influenced their initial willingness to explore and interact with the game, which could have contributed to more active participation and an open attitude toward language acquisition within the gaming context.

5.2.1.4 *High Interest in Playing Video Games*

María expressed interest in playing video games, finding them enjoyable. She saw it as an opportunity to learn while taking on challenges presented in the game. Luis also demonstrated interest in playing video games, particularly drawn to their realism. Both participants' enthusiasm for video games positively influenced their engagement and performance within the game-based learning intervention. For María, her interest signifies a proactive and motivated approach to the learning process. Seeing video games as enjoyable and educational implies that she may be more inclined to invest time and effort into the game, enhancing her language learning experience. The challenges presented in the game could be perceived as opportunities for growth, driving her to engage with the learning content persistently.

In Luis's case, his attraction to the realism of video games could enhance his immersion in the learning environment. Realism often leads to heightened engagement and emotional investment, which may result in a more impactful language-learning process. Additionally, his expressed interest might motivate him to overcome any initial challenges related to his limited prior experience with video games. The participants' high interest in playing video games could foster a sense of enjoyment, active participation, and determination, all of which could collectively contribute to improved learning outcomes and a more favorable perception of the game-based approach.

5.2.1.5 *Perception of Video Games for Adult Language Learners*

María and Luis both believed that video games are suitable for adult language learners. María emphasized the benefits of learning new things enjoyably, exercising the mind, and improving fine motor skills. Luis highlighted the development of skills such as decision-making, teamwork, and language proficiency within the game's context. This positive attitude towards video games can significantly impact their engagement and performance in the game-based learning intervention.

María's belief in the benefits of enjoyable learning suggests that she recognizes the potential of video games to make language learning a more interactive and pleasurable experience. This alignment between her perception and the instructional approach can lead to increased enthusiasm and commitment to the game, translating into a higher level of engagement and potentially better retention of the language content. On the other hand, Luis's emphasis on developing diverse skills, such as decision-making, teamwork, and language proficiency, highlights his understanding of the holistic benefits of game-based learning. This broader perspective could inspire him to actively participate in the various aspects of the game, including language-related activities, contributing to a more comprehensive and immersive learning experience.

In sum, both middle-aged participants perceived video games as suitable for adult learners.

5.2.1.6 *Computer Literacy and Usage*

Both María and Luis had access to desktop computers, and Luis also had access to a laptop. They reported using computers daily or a few times a week without difficulties. This served as a facilitator for their engagement and performance within the game-based learning intervention. Their regular access to desktop computers and Luis's additional access to a laptop indicated their familiarity with these devices. This familiarity led to a smoother integration of the game's interface and controls, minimizing the learning curve associated with new technology. Consequently, they likely spend less time navigating technical aspects and focusing more on the actual language-learning content.

Furthermore, their comfort with computer usage suggests they had the foundational digital skills to navigate the game's interface, access learning materials, and interact with the game's features. This proficiency enhanced their overall experience and performance, allowing them to seamlessly navigate the game environment and engage with its language-related activities. Their established computer literacy and regular usage created a favorable foundation for interacting with the game-based learning tool. This contributed to higher efficiency, reduced technical barriers, and a more immersive learning experience, ultimately influencing their performance positively.

Overall, the results show that both middle-aged adults had positive attitudes and perceptions of video games as a learning tool and their interest in utilizing technology, specifically computers, for English language learning. Their motivation and belief in the effectiveness of video games for language acquisition and computer literacy created a favorable foundation for their engagement with the video game implementation. The participants' positive attitudes, perceptions, motivation, and computer literacy offer valuable insights. These factors potentially contributed to their successful engagement with the video game implementation. Moreover, María's familiarity with video games might have conferred certain advantages. At the same time, Luis' lack of experience introduces diversity into the study, aiding a comprehensive analysis of adult learners' responses to the game-based learning approach.

In summary, the participants' favorable attitudes, motivation, prior experiences, and beliefs in the potential of video games for language learning constituted an encouraging backdrop for evaluating the impact of the video game implementation in the subsequent stages of the study.

Based on the participants' interview responses, it was identified that both María and Luis held distinct perspectives and attitudes towards using video games as a language learning tool. María's motivation centered around her teaching profession and personal challenge, while English music, movies, and family communication drew Luis. This suggests that leveraging their individual interests could have enhanced engagement. María highlighted classroom interactions and collaborative learning, underscoring the significance of social engagement. In contrast, Luis advocated for immersion in language and culture, emphasizing experiential learning. Both participants agreed that age should not limit language learning; however, María stressed motivation and discipline, while Luis noted other factors, such as work obligations impacting learning opportunities. María expressed concerns about her limited familiarity with computers potentially affecting her learning experience, highlighting the importance of user-friendly interfaces and clear instructions. In contrast, Luis did not foresee difficulties in digital learning. These insights showcase the diversity in their perceptions, motivations, and anticipated challenges, which were crucial for tailoring the video game implementation to their individual needs, enhancing their engagement, and maximizing the learning

outcomes. The following key themes and attitudes shown in Table 5.8 emerged in the initial interview regarding their perceptions of using video games as a language-learning tool.

Table 5.8 Initial Interview's answers comparison

Aspects	María	Luis
Motivations for Learning English	- To assist students in bilingual schools as an independent teacher - Personal challenge	- Interest in English music - Desire to communicate with English-speaking nieces and understand English movies
Preferred Learning Method	- Classroom-based instruction, interactions with peers and instructors, collaborative learning	- Speaking and interacting with people, learning through music and movies, immersing in culture
Age as a Limiting Factor	- Age is not a barrier; motivation and discipline matter	- Age is not a barrier; other factors like work and time constraints
Difficulties with Digital-Based Learning	- Lack of familiarity with computers may pose difficulty; clear instructions are important	- No specific difficulties anticipated, possible challenges with game complexity or unclear instructions

The table above shows that while both María and Luis hold positive attitudes towards learning English, they differ in their preferred learning methods and perceived difficulties with computer-based learning. María emphasizes the importance of classroom interactions and expresses concerns about her computer familiarity impacting her language learning. In contrast, Luis prioritizes interaction with people, and learning through music and movies, and does not foresee significant challenges with digital learning.

Their motivations are distinct, with María's focused on teaching and personal challenge, while Luis's motivations stem from music, family communication, and personal interest. Neither participant sees age as a barrier, but Luis highlights potential hindrances like work obligations.

This comparative analysis underscores the diversity in perceptions, motivations, and anticipated challenges between María and Luis, as middle-aged learners. Such differences could affect how these learners engage with the game-based learning tool and overall performance. The participants' motivations and attitudes were conducive to exploring video games as a language-learning tool. Both participants did not consider age to be a significant limitation in language learning. It is interesting to observe that María's prior experience with video games and her positive perception of their potential for learning and enjoyment aligned with her interest in using them as a tool for language learning. On the other hand, Luis's motivation was driven by his affinity for music in English and movies, suggesting that cultural aspects play a role in his interest in language acquisition.

These attitudes and perceptions provide valuable insights into the participants' initial mindset before engaging with the video game as a language-learning tool. They indicate a favorable disposition towards technology-mediated language learning and a recognition of the potential benefits of video games in language acquisition.

5.2.2 Post-Administration Questionnaire and Interview

After playing the video game, a post-questionnaire was applied to find out the participants' experiences with using the computer, the video game and whether their motivations were affected. After engaging with the video game during the 10 sessions, María and Luis expressed increased contentment with the learning process. They observed vocabulary growth, improved speaking and listening skills, and a positive learning experience. This shift reinforced their perception of video games as effective language-learning tools. Both participants enjoyed interactive features, such as decision-making and dialogue engagement. María's strong motivation due to her professional context drove notable progress. Her active involvement and prior gaming familiarity played a role. Both found the storyline and critical thinking, facilitating vocabulary acquisition. Despite varying motivation levels, Luis also recognized the game's value. Their feedback confirms the game's fusion of education and entertainment, highlighting its efficacy as a language-learning tool.

Based on the participants' responses from the post-administration questionnaires and interviews, several noteworthy findings regarding their attitudes and perceptions towards learning English and using the video game as a learning tool emerged:

5.2.2.1 Final Perception Questionnaire findings

- *Increased Vocabulary:* Both participants indicated that they believed their vocabulary had improved due to video game use.
- *Adequate Language Level:* María and Luis expressed that they found the language level of the game to be appropriate and understandable for their learning needs.
- *Intention to Continue:* Both participants stated their intention to continue using the video game as a learning method, indicating a positive attitude toward its effectiveness.
- *Enjoyment and Fun:* María and Luis mentioned that the video game was enjoyable, suggesting a positive experience.
- *Improvement in Speaking and Listening Skills:* Both participants reported that, in addition to vocabulary, their speaking and listening skills had improved through the use of the video game.

5.2.2.2 Post-Administration Interviews findings

After applying the video game, a new interview was also conducted to find out the participants' perceptions after playing the game. Table 5.9 below a comparison between both participants' answers per category.

Table 5.9 Final Interview's answers comparison

Topic	María's Perceptions	Luis' Perceptions
Difficulty with Computer Use	Understanding game controls and feeling confused about where to click were challenging. However, the positives outweighed the negatives.	Found computer usage relatively easy due to familiarity, with minimal difficulties except for a few glitches.
Suggestions for Improvement	More practice time through additional game sessions, interest in socializing, and interactions.	Desired more game options for varied learning experiences.
Willingness to Continue Learning	Willing to continue learning English virtually, mainly through games or platforms.	Positive about continuing virtual English learning due to convenience.
Perception of Video Games	Effectiveness depends on usage. If approached for learning and vocabulary expansion, games are valuable tools.	Believes games can simultaneously entertain and educate, enjoy the interactive aspect, and learn new vocabulary.
Enjoyment and Benefits of the Game	Enjoyed the storyline, solved mysteries, appreciated pronunciation guides, and felt fulfilled learning through the game.	Liked the interactive nature, feeling like a protagonist, recognized the game's effectiveness in vocabulary learning and skill improvement.
Negative Aspects of the Game	Mentioned confusion with controls initially but adapted.	Not explicitly mentioned.
Vocabulary Learning Strategies	Asked for help when unsure, used context, dictionary, and trial-and-error.	Asked the researcher, used context and a dictionary, learning from mistakes.
Perception Change due to the Game	Recognized games' potential as learning tools and saw them more positively.	Perception shifted and found games educational and valuable for language learning, particularly for contextual understanding.
Usefulness of the Method for Others	Believed games can be effective and enjoyable for other adults, promoting engagement and language learning.	Thought other adults could benefit from this method, suggesting games' usefulness for entertainment and learning.

From the open-ended questions, individual themes emerged that are worth highlighting from each participant, as follows.

María's Perceptions

- *Difficulty with Computer Use:* María mentioned that the most challenging aspect of using the computer as a learning tool was understanding the game controls and occasionally feeling confused about where to click. However, she emphasized that these difficulties did not overshadow the positive aspects of using the computer for language learning.

"Considero que el aspecto más difícil... la flecha. Fuera de eso. Creo que fue fácil utilizarlo y creo que hay más aspectos positivos que negativos." – María

- *Suggestions for Improvement:* María suggested that having more time for practice, possibly through additional game sessions or tutorials, would have enhanced the learning experience. She also expressed an interest in socializing with more people during the learning process.

"De pronto haber tenido más tiempo para practicar con el juego como otra introducción. O tal vez como tutorial. Y eso creo que hubiese podido haberlo tal vez mejorado. Eh. Sin embargo, creo que fue algo muy agradable. Tal vez eh, poder socializar con más personas." – María

- *Willingness to Continue Learning English Virtually:* María expressed her willingness to use her computer for virtual English learning, mainly through games or platforms.

"Si es así sí. Si es por medio de un juego, sí, ¿si es como una clase online? No, no me siento muy cómoda. Sí, pero si es otra vez como usando un juego o una plataforma, sí, no, no veo ningún problema, me gustaría." – María

- *Perception of Video Games:* María acknowledged that the effectiveness of video games as learning tools depends on the individual's approach. She believed that video games could serve as valuable learning tools to learn and expand vocabulary.

"Creo que eso depende de la persona y la función que le estén dando al juego porque el juego es muy divertido... si uno lo utiliza de manera que pueda eh aprender y buscar vocabulario y reflexionar sobre ese vocabulario, creo que funciona muy bien, como una herramienta de aprendizaje." – María

- *Enjoyment and Benefits of the Game:* María enjoyed the game's storyline, the opportunity to think and solve mysteries, and the sense of being part of the game's world. She appreciated the pronunciation guides and the slower pace of speech, which made it easier to understand. María felt that the game fulfilled its purpose as a language learning tool, providing a more natural and enjoyable learning experience than traditional classroom settings.

"Me gustó la historia... pronuncia cada cosa donde sea que uno de clic está el vocabulario de cómo se dice. Y. Y me gustó que es un es un lenguaje, hablan despacio y se les puede entender... algo como más eh inconsciente, y natural. Entonces eso me gustó y siento que sí cumplió su función porque siento que aprendí." - María

Luis' Perceptions

- *Ease of Computer Use:* Luis found using the computer as a learning tool relatively easy, as he was accustomed to computer usage. He did not encounter significant difficulties except for a few technical glitches.

"Bueno, la verdad, no siento que haya sido difícil usar el computador... Lo demás fue fácil." – Luis

- *Desire for More Game Options:* Luis wanted more games to be utilized in the learning process, as he believed it would offer a broader range of learning experiences.

"Mmm. Eh. De pronto a haber. Utilizado más juegos. Como no quedarse solo con ese sino. Usar más juegos y así poder aprovechar más sesiones en la semana. Eso hubiera estado bien, me hubiera gustado." – Luis

- *Willingness to Continue Learning English Virtually:* Luis positively approached using his computer for virtual English learning. He appreciated the convenience of engaging with the game from his home.

"Sí, la verdad me gustó, era cómodo porque lo podía hacer desde mi casa. Llego de trabajar. Voy a comer y de una eh. Podría entrar. Mmh y ver el juego. Entonces nada, creo que. Que sí podría me gustaría hacerlo." – Luis

- *Perception of Video Games:* Luis believed that video games could simultaneously serve as tools for entertainment and learning. He enjoyed the excitement and interactive nature of the game, where he could make decisions and feel like the protagonist. He recognized the game's effectiveness in helping him learn new vocabulary and improve his English skills.

"Pues me parece que para las dos cosas creo que uno puede. Aprender... me gustó que podía elegir que decir que habían como varias opciones de respuestas. Entonces, como que todo lo que pasaba era decisión mía y todo lo hacía a conciencia, o sea que era como que yo era el protagonista." – Luis

- *Changed Perception of Video Games:* Luis's perception of video games shifted due to his experience with the language learning game. He recognized their potential as learning tools and saw them in a more positive light, appreciating their capacity to engage and teach players.

"Mmm. Pues a mí la verdad... que pueden servir dependiendo de lo, el, el objetivo que uno tenga o el enfoque o esas cosas. Me parece que sí." - Luis

Both María and Luis expressed satisfaction with the video game administration. They noted increased vocabulary, improved speaking and listening skills, and a positive overall experience with the game. The participants' perceptions shifted towards recognizing video games as effective tools for language learning, providing an engaging and enjoyable learning experience.

María and Luis demonstrated notable satisfaction and enthusiasm towards the video game implementation. Both participants recognized a significant expansion in their vocabulary and a tangible enhancement in their speaking and listening skills due to their engagement with the game. However, a closer examination of their motivations sheds light on the varying degree of their outcomes. María's strong motivation and interest in learning English played a pivotal role in her more substantial progress. As an educator in bilingual schools, María had a clear professional incentive to excel in English. This motivation likely contributed to her active engagement with the game, her persistence in understanding instructions and vocabulary, and her efforts to communicate effectively within the game's context. Additionally, her experience with low-key video game familiarity appeared advantageous, as she seemed comfortable with the game's interface and navigation, which might have facilitated her overall performance.

Notably, both María and Luis thoroughly enjoyed the interactive aspects of the game, where they could make decisions, explore various locations, and engage in conversations. María, in particular, highlighted her enjoyment of the game's storyline, the opportunity to engage in critical thinking to solve mysteries and the immersive sense of being part of the game's world. This deep engagement likely contributed to her effective acquisition and retention of new vocabulary. While experiencing a positive shift in his perception of video games as learning tools, Luis exhibited a relatively less urgent need for English proficiency than María. This difference in motivation might explain the variance in their vocabulary acquisition. Despite this, both participants found the pronunciation, contextual learning, and the game's realistic environment enjoyable and beneficial for language learning. These positive experiences highlight the game's successful fusion of entertainment and education, underscoring its efficacy as an innovative language-learning tool.

To summarize, the participants' post-administration responses indicated positive shifts in their attitudes towards learning English and using the video game as a learning tool. They reported increased vocabulary, improved speaking and listening skills, enjoyment of the game, and an intention to continue using this learning method. María's perception of video games evolved to confirm her initial thoughts about their educational value. At the same time, Luis highlighted the benefits of immersing oneself in the virtual world for language learning purposes.

These findings demonstrate the participants' positive experiences and their recognition of the potential of video games as practical tools for language learning, aligning with their initial motivations and attitudes expressed in the pre-administration phase. The participants' satisfaction, improved skills, and intention to continue using the video game support the effectiveness of the video game in enhancing their learning experience and outcomes.

5.2.3 Field Journal Observations Regarding Motivation

During the ten game sessions, several observations were made regarding the participants' attitudes and behaviors while engaging with the video game. These observations shed light on their level of engagement, motivation, and interactions within the learning environment. Also, the observations provided evidence of the participants' intrinsic motivation, curiosity, competitiveness, personalization of learning, and engagement. These themes align closely with the motivations identified in the interviews, indicating consistency between the participants' expressed motivations and their actual behaviors during the game administration.

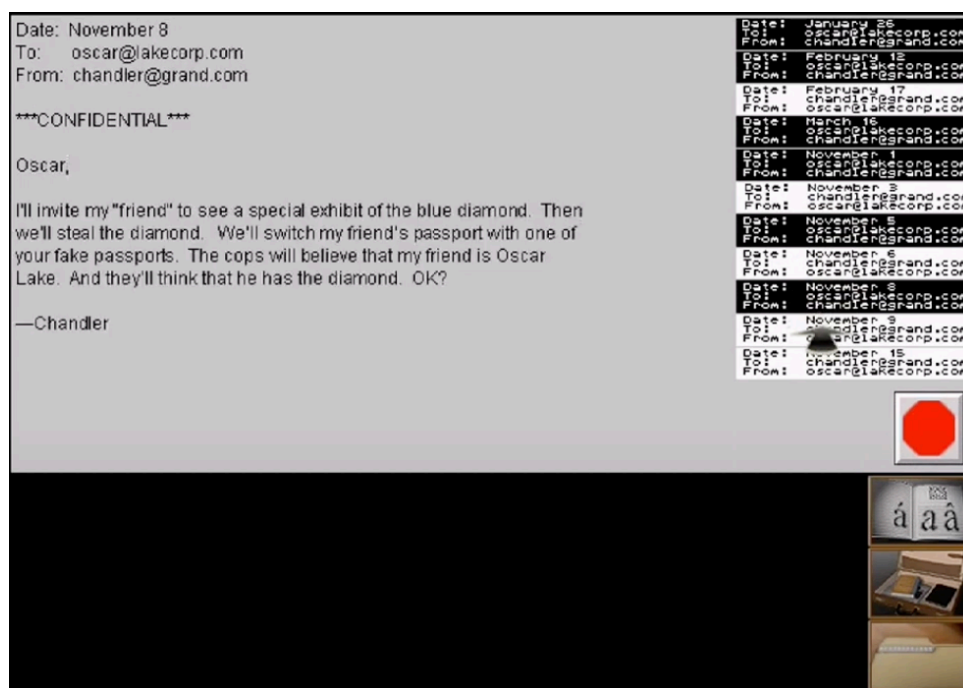
5.2.3.1 High Engagement and Enthusiasm

María and Luis demonstrated high enthusiasm and active participation during the game sessions. They eagerly explored the virtual world and interacted with characters as they tried to solve

the game's central mystery and followed the instructions for each session. This enthusiastic engagement indicated their intrinsic motivation to delve into the language learning experience.

In the field journal, an excerpt from Session 6 notes Luis' excitement as he successfully figured out who was the antagonist in the game who framed him for a crime he did not commit while using the game vocabulary, stating, "After finding and reading the emails on Chandler's secretary's computer, Luis figured out that she was the diamond thief and set him up although this was not explicitly revealed yet in the game. Luis didn't know how to express himself initially, but he got excited and restrained himself from speaking in Spanish to tell me right after that, 'It is Chandler! She is the *thief*. I Chandler don't like. She bad, bad.'" (Field Journal, Session 6).

Figure 5.13 Luis find the emails between Chandler and Oscar



5.2.3.2 Collaborative Learning

The social interactions between the participants during the group sessions enhanced their motivation. Sharing experiences, discussing strategies, and celebrating each other's successes contributed to a collaborative learning environment that motivated them to engage with the game. Furthermore, the group socialization allowed the participants to share experiences and discuss their progress. Considering that they both had the same progress but had the opportunity to make different decisions, it was exciting for them to come to similar conclusions when they had similar results in their experiences. When Luis revealed to María that he had confirmed that Chandler is the antagonist in the game because he found emails that framed her, María had not explored this option when she

was in that same scenario. Yet, she told Luis that she had initially been suspicious of her (Field Journal, Session 7). In this interaction, both made their best effort not to speak Spanish. The most excited was notoriously Luis, who, at times to express himself sought to make sounds and said the vocabulary learned in isolation and without conjugations. However, he managed to be understood in this way and carry on a conversation with María.

5.2.3.3 Personalization and Ownership

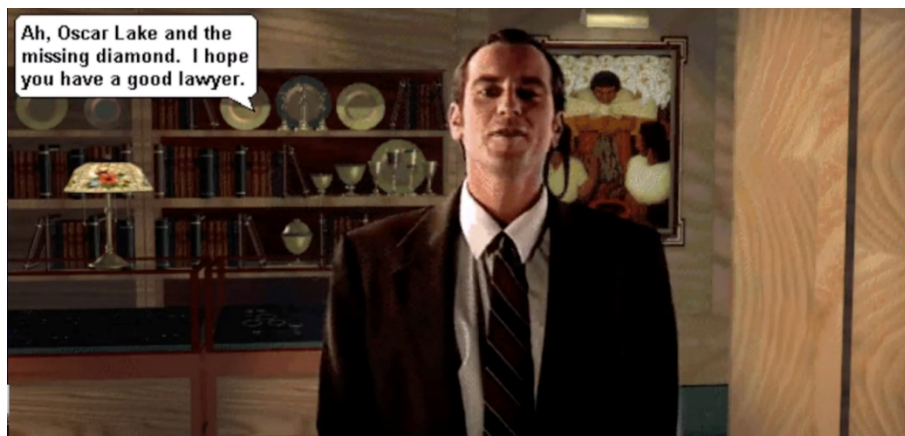
Both participants expressed a sense of ownership over their progress and decisions within the game. They felt connected to their in-game achievements, demonstrating that their motivation was fueled by a desire for accomplishment and a sense of control over their learning experience. The resolution of the weekly vocabulary tests served as a measure of the participants' progress and comprehension of the game's language. Both participants exhibited notable improvements in their vocabulary recall and comprehension throughout the sessions. For example, during Session 8, Luis confidently answered the vocabulary questions, displaying a deeper understanding of the game's language compared to the first administration of the first weekly vocabulary test, where he was more confused, even if he had good results. His progress was evident, as he correctly identified complex vocabulary terms that were previously unfamiliar to him. (Field Journal, Session 8)

5.2.3.4 Increased Confidence and Understanding

Throughout the sessions, both participants exhibited growing confidence in using English. They became more comfortable speaking in the language, within the game context and during interactions with each other. This increase in confidence was accompanied by excitement about their linguistic progress, reflecting their motivation to overcome language barriers and communicate effectively.

Additionally, the participants' attitudes towards the game's language difficulty evolved. At the beginning of the sessions, during the first interview, both participants expressed that one difficulty could be not understanding the game's instructions as it is entirely in English. However, as documented in Session 9, an excerpt from the field journal reveals María's growing confidence, stating, "María reached one of the bad endings and was arrested [...] she was able to identify the error and deviate from that bad ending without help, this denotes a noticeable improvement as she understands the language of the game better on her own without getting as lost as she did at the beginning. She plays with more confidence and curiosity now that she knows how to solve the mystery." (Field Journal, Session 9).

Figure 5.14 María is arrested (Bad Ending #2)



Regarding how these observations relate to the previous findings, they largely complement and reinforce the interview findings. Before engaging with the game, the interviews provided insights into María and Luis's motivations, preferences, and perceptions. At the same time, the observations revealed how these motivations translated into behaviours and engagement during the actual game sessions. The observations confirmed the participants' positive attitudes towards using the game for language learning. Both María and Luis demonstrated increased vocabulary recall, improved comprehension, and growing confidence in navigating the game's language. This aligns with their earlier expressed interests in immersive and enjoyable learning experiences.

Overall, the observations made during the game administration provide valuable insights into the participants' attitudes and engagement with the video game as a learning tool. The participants' enthusiasm, collaboration, progress in vocabulary recall, and increased confidence highlight the positive impact of the video game on their language learning experience.

5.2.4 Discussion of findings related to motivation

The findings about middle-aged adults' postures towards using the video game as a learning tool provide valuable insights into the impact of video games on their attitudes. Initial points of view towards learning English and using video games for language learning were positive and were identified through the pre-administration questionnaire and interview. María and Luis expressed a shared motivation to learn English due to its importance for their professional and personal development. This is consistent with the andragogy theory by Knowles (2005), who states that in addition to needing a goal to learn, adults are often more interested in learning topics that have immediate relevance to their work and personal lives. Also, this aligns with previous research by McClanahan (2014), who found that adult learners often prioritize the practical benefits of language learning.

Throughout the gameplay, the participants' attitudes underwent noticeable changes. The post-administration questionnaire and interview indicated that both participants perceived increased vocabulary. This positive outcome is consistent with the study by Bakar and Nosratirad (2013), which highlighted the potential of video games as effective tools for vocabulary acquisition among adult learners. Moreover, the participants' overall satisfaction with the video game as a learning tool and their intention to continue using it demonstrate the positive impact on their attitudes. These findings align with the research conducted by Kasanic (2017) and Whittaker (2013), who emphasized the importance of learner satisfaction and engagement in adopting technology for language learning.

The participants' motivations and interests were crucial to their attitude changes. María's motivation was driven by her role as an independent teacher and the need to support her bilingual students. This aligns with the findings of Berns et al. (2011) and McClanahan (2014), who highlighted the influence of professional context on motivation and attitudes towards language learning. However, this differs from the studies of Bakar and Nosratirad (2013) and Galvis (2011), as their professions were not directly related to English speaking ability in their research with adults. This was more of a personal interest or, in the case of Galvis, an institutional requirement. It is important to address any inconsistencies or contradictions observed in the data. While both participants reported increased vocabulary and improved speaking and listening skills, María initially expressed concerns about potential language barriers. This inconsistency may be attributed to María's lack of familiarity with computer use, highlighting the importance of providing adequate support and guidance for less experienced learners.

In brief, the data analysis underscores the positive impact of the video game administration on the participants' attitudes toward learning English. Their motivations, interests, and satisfaction contribute to the observed attitude changes. These findings align with existing literature on middle-aged learners' attitudes towards technology and video games in language learning while highlighting the importance of addressing individual differences and providing necessary support for learners.

5.3 Concluding remarks

This chapter presented the findings of this study that investigated the effect of video games on middle-aged learners' vocabulary acquisition and attitudes before and after the gameplay. The analysis of various instruments, including pre- and post-questionnaires, interviews, observations, and vocabulary tests, provided valuable insights into the participants' vocabulary increase and attitudes towards video games as learning tools.

The results showed that both middle-aged adults experienced significant improvement in their vocabulary knowledge and application. The pre-test and post-test scores reveal substantial increases

in their percentage scores, indicating that the video game and exposure positively impacted their vocabulary acquisition. Vocabulary improvement encompassed diverse linguistic categories, including nouns, verbs, and adjectives, and practical application in communicative contexts within the game environment. Middle-aged learners also engaged with the video game, actively learning and applying new vocabulary in a virtual environment. The vocabulary lists and weekly tests further support the effectiveness of the video game, as both participants demonstrated considerable progress in learning and recalling new words. The screenshots from the game sessions visually showed the participants' engagement with vocabulary-rich interactions.

The analysis of the participants' learning process and the contextual vocabulary enrichment across various linguistic categories reflect the game's effectiveness in enhancing vocabulary in real-life communicative situations. The consistent patterns in vocabulary retention and the alignment with established theories like Andragogy underscore the potential of digital game-based language learning in catering to middle-aged adult learners' unique needs and preferences. Moreover, this study bridges the gap in understanding the applicability of Andragogy Theory to vocabulary acquisition through video games.

In line with the Andragogy Theory, participants tailored their approaches to their preferences, showcasing self-directed learning and relevance (Bakar & Nosratirad, 2013). This alignment with Andragogy Theory supports the video game's provision of autonomy and contextualized learning, reinforcing the theory's effectiveness in vocabulary acquisition through video games. Furthermore, the study delved into Digital Game-Based Language Learning (DGBLL), which integrates language learning into game mechanics. Participants' interactions with in-game characters and dialogues, visually demonstrated in the screenshots, underline DGBLL's potential to promote vocabulary acquisition within dynamic virtual environments.

Regarding attitudes and motivations, participants showed positive attitudes towards learning English and using video games for language learning before and after the game administration. These middle-aged learners expressed a shared motivation to learn English due to its importance for their professional and personal development. This alignment with the andragogy theory by Knowles (2005) emphasizes that adults are more motivated to learn topics relevant to their work and personal lives. Additionally, this resonates with previous research by McClanahan (2014), which underscored the practical benefits of language learning for adult learners. Throughout the gameplay, the participants' attitudes underwent noticeable changes. The post-administration questionnaire and interview indicated that both participants perceived increased vocabulary. This positive outcome is consistent with the study by Bakar and Nosratirad (2013), which highlighted the potential of video games as effective tools for vocabulary acquisition among adult learners.

Although previous studies have reported the effectiveness of video games in language learning, most of these studies have been conducted with children and teenagers. In contrast, fewer studies have been done with adults (Galvis, 2011). The present study on middle-aged adults confirms that adults' cognitive abilities, including abstract thinking and greater attention span, can facilitate success in specific tasks (Brown & Lee, 2015). These cognitive advantages align well with video game-based learning. Adults can increase motivation by achieving different learning objectives and relating the game to their life experiences. Adults' capacity for vocabulary retention and understanding and acquisition of grammatical concepts can be advantageous when exploring video games.

Overall, these findings, in line with the literature above, underscore the growing potential of video games as effective tools for vocabulary acquisition among middle-aged adults. They also highlight the need for educators to be adaptable, addressing learner preferences and incorporating innovative technologies to enhance language learning experiences and the positive impact of the video game administration on the participants' attitudes towards learning English and their vocabulary acquisition. The results support the effectiveness of video games as engaging and effective tools for language learning among middle-aged learners. These findings contribute to the existing literature on the attitudes of middle-aged learners towards technology and video games in language learning.

Chapter 6 Conclusions

6.1 Summary of the Findings

This case study investigated whether video games are effective digital language learning tools for increasing middle-aged learners' vocabulary. This topic was studied because the population of middle-aged EFL learners and their specific needs in vocabulary acquisition remain underexplored. Previous research has primarily focused on video game-based learning with younger learners, neglecting adult learners' unique characteristics and learning needs (Galvis, 2011). However, studies with older students have shown positive outcomes in terms of adaptability to the curriculum and vocabulary acquisition (Bakar & Nosratirad, 2013). To be able to focus the research, the following research questions were posed:

Main research question

- Are video games effective tools for vocabulary acquisition and motivation in middle-aged adults?

Specific research questions

- What is the adults' vocabulary repertoire before and after using the video game?
- What is the attitude of middle-aged learners before and after using the video games as a learning tool?

To answer the research questions, this study employed theories related to Andragogy Theory, Motivation and Linguistic Attitudes, Vocabulary Acquisition, and Digital Game-Based Learning. These theoretical frameworks provided a comprehensive lens through which to examine the effectiveness of video games as vocabulary acquisition tools for middle-aged adults and to explore the changes in attitudes and vocabulary repertoire. Data were collected from two beginner-level middle-aged adults through various methods, including observations, interviews, questionnaires, vocabulary tests, and vocabulary lists completed throughout ten game sessions.

Overall, the results revealed a substantial increase in the participants' vocabulary knowledge and skills during ten sessions (six weeks) related to different function words in communicative contexts of the game. This suggests that both participants could effectively acquire and apply new vocabulary through their engagement with the video game. The results showed positive attitudes, with both participants expressing increased motivation and enjoyment in learning. They also reported feeling more confident in their language abilities, particularly regarding vocabulary knowledge and speaking usage. The participants expressed satisfaction with the video game as a learning tool. They

highlighted the interactive and engaging nature of the game, which made the vocabulary acquisition process more enjoyable and effective for them.

The findings allow the researcher to conclude that video games are effective tools for vocabulary acquisition in middle-aged adults. The positive changes in attitude, a significant increase in vocabulary repertoire, and the participants' satisfaction with the video game as a learning tool provide evidence for the effectiveness of video game-based learning with this population. These findings align with previous research that has demonstrated the effectiveness of video games in language learning, particularly with younger learners (Tan & Tan, 2020; Tumolo, 2019; Rojas & Molina, 2014; Kasanic, 2017; Ma et al., 2020; J.S. Torres, 2015; Rivas, 2016; H.H Torres, 2015; Burbano, 2015). However, this study extends the understanding to middle-aged adults, highlighting the suitability and benefits of video game-based learning for this specific learner group.

In conclusion, this study provides valuable insights into the effectiveness of video games as vocabulary acquisition tools for middle-aged adults. The positive outcomes observed in terms of increased vocabulary knowledge, improved attitudes, and enhanced motivation underscore the potential of video game-based learning in language education. The findings of this study support the integration of video games as valuable resources for teaching vocabulary to adult learners, fostering an inclusive and effective learning environment. From this study, the following implications arise.

6.2 Implications and recommendations

Based on the results of this study, several implications for teaching and learning English as a foreign language using video games can be drawn. Firstly, it is recommended to continue incorporating new technologies as tools for language education, extending their use beyond young learners to middle-aged and older adults. Contrary to common misconceptions, this study highlights that middle-aged learners can effectively engage with video games and take ownership of their learning with proper instruction. Video games offer opportunities for learners to experience different situations and scenarios, facilitating vocabulary acquisition and its practical use.

To ensure successful implementation, it is important to consider certain factors. Guided immersion or a tutorial is necessary to facilitate learners' adaptation to the game and understand its educational purposes (Rivas, 2016). Therefore, it is recommended to set clear learning objectives within the game and for each session. Objectives provide direction and purpose, ensuring meaningful learning experiences (Bakar & Nosratirad, 2013). Group-based sessions can be organized with well-defined objectives, allowing learners to progress collectively while making individual decisions within the game. This promotes socialization, and fosters shared experiences among learners (Camacho & Ovalle, 2011).

Additionally, the selection of an appropriate game is crucial. While developing custom games is an option (H.H Torres, 2015; Berns et al., 2011), it may not always be feasible. Teachers can instead choose from a wide range of existing digital games and adapt them to suit the learning objectives. As teachers, it is important to take into account three factors when choosing a game: the language can be neither too simple nor too complex, the pronunciation must be clear, being optional to have subtitles depending on what is needed, and finally, it must be a well-designed game so that it represents a challenge for the students to boost interest and motivation, but not too difficult as not to demotivate them due to frustration (Whittaker, 2013, p. 9). In this regard, the educational game *Who is Oscar Lake?* can be recommended for language learning and teaching adults. Its audiovisual features, interactiveness and tools allow learners to understand the game and its objectives.

Furthermore, as evidenced in previous empirical studies (Rivas, 2016; Kasanic, 2017; Whittaker, 2013; Camacho & Ovalle, 2011), it is important to implement activities before and after the game session. Pre-game activities can involve introducing game elements, and characters, making predictions, or presenting vocabulary relevant to the upcoming game session. This helps learners to be aware of the learning objectives and what they will encounter during gameplay. Post-game activities serve as opportunities for reflection, reinforcement, and socialization. Learners can share their experiences, discuss decisions made during the session, and compare outcomes based on their actions, as reflected in this study. Pre- and post-game activities should align with each session's learning objectives and target vocabulary. Considering these implications, it's possible to consider integrating video games into instructional practices, providing engaging and motivating learning experiences for middle-aged learners.

6.3 Limitations

Some limitations of this research are acknowledged. The small sample size does not allow to generalize the results to a broader population. Having so few participants reduced the source of information and the possibility of observing more cases and perceptions. However, it provides findings from two motivated middle-aged learners from diverse data, which can be contrasted or confirmed by future studies. Another aspect to highlight was the errors within the game. On two occasions, the screen froze and went utterly black; this did not happen previously in the pilot tests, so it is essential to know what to do so that this does not affect the participant's game session. As a precautionary measure, the session and game progress was saved. It is important to keep in mind that these errors could occur with any tool, either due to the game itself or the device being used.

Even with these situations, the study collected valuable data about middle-aged adults' performance, motivation and interactions with the video game. It is important to acknowledge these

limitations as they provide context for interpreting the findings and understanding the scope of this research. Future studies might address these limitations by involving a larger sample size, implementing measures to minimize technical issues, and considering strategies to enhance participant commitment and engagement.

6.4 Further research

The findings of this study provide a foundation for further research in the field of using video games as a language-learning tool for middle-aged adults. Building upon the insights gained from this study, several areas of further research are suggested.

6.4.1 Expanding the Study to a Larger Group

Conducting similar studies with a larger group of middle-aged adult learners is suggested. This could be done in traditional face-to-face classroom settings or virtual environments, considering the growing trend of online language learning. Assessing the effectiveness of video games as a component of virtual classes and their impact on vocabulary acquisition and learner attitudes would provide valuable insights for educators and curriculum designers. In this case, unlike the game used for this study which limited the population, it is highly recommended to use free or public domain games to avoid problems with software licenses and game copyright when being used with a larger population, except that all participants have their license.

6.4.2 Investigating the Effect on Speaking Skills

Given the observed increase in vocabulary and participants' growing confidence, it is important to explore the impact of video games as learning tools on speaking skills. Further research could focus on how video games contribute to developing speaking abilities, particularly learners' ability to express their experiences and thoughts. This line of research would shed light on the potential of video games to enhance oral communication skills.

6.4.3 Exploring Different Game Types

The educational video game *Who is Oscar Lake?* was used in this study. However, it is crucial to investigate the effects of different types of games, including both educational and entertainment games, on vocabulary acquisition and learner attitudes. Comparing the outcomes of using different game genres and styles would provide insights into the preferences and perceptions of middle-aged learners regarding video game-based language learning.

6.4.4 Longitudinal Studies

Further research could adopt a longitudinal approach to explore the long-term effects of using video games as learning tools among middle-aged adult learners. Assessing the retention of vocabulary knowledge over an extended period and tracking the participants' continued engagement and motivation would offer valuable insights into the sustainability and durability of the learning outcomes achieved through video game implementations.

6.4.5 Pedagogical Strategies

Future research could develop and evaluate pedagogical strategies and guidelines for incorporating video games into language learning contexts for middle-aged adults. This would provide educators with practical recommendations on integrating video games into their instructional practices, considering factors such as game selection, task design, and assessment methods. The existing literature identified that video games as learning tools could be positively adapted to the institution's curriculum and increase older students' vocabulary (Bakar & Nosratirad, 2013).

Although video games are considered positive language learning resources for children and teenagers, there is a need to investigate how these tools can help improve adults' acquisition and learning of the English language (Rojas & Molina, 2014). Language teachers must consider learners of all ages and contexts and understand that different learning tools could help teach learners of different ages. Introducing video games in classrooms generates a unique learning method teachers can integrate (López, 2016). It is important to apply this method in our context, contributing not only to the community of foreign language teachers exploring andragogy but also to older learners, providing visibility as important targets within the bilingualism process.

Furthermore, despite potential obstacles impeding technological innovation in classrooms (Yang & Huang, 2008), video games can be used to acquire a second language (Kasanic, 2017). Kenny and Gunter (2010) highlight the opposing views of teachers towards these technologies, possibly due to misconceptions that associate video games with negative behavior. However, video games can be introduced effectively in classrooms, generating management guidelines in coherence with learning processes and school curricula (Restrepo et al., 2019).

By exploring these avenues of further research, we can deepen our understanding of the potential of video games as effective and engaging language-learning tools for middle-aged adults. Such investigations would contribute to developing evidence-based instructional practices and offer new perspectives on optimizing language learning experiences for this specific learner population.

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Appendices

Appendix 1. Participants' consent form



Licenciatura en Lenguas Extranjeras con énfasis en Inglés y Francés
Escuela de Ciencias del Lenguaje
Facultad de Humanidades

Título de la investigación: Video Games for Teaching English Vocabulary To Middle-Aged Adults

Estudiante investigadora: [Sara Riascos Prieto](#)

Correos: sara.riascos@correounivalle.edu.co

Tutora: Maria Eugenia Guapacha

Correo: maria.guapacha@correounivalle.edu.co

Consentimiento Informado para participante

Yo _____ identificado(a) con la CC número _____ declaro que he sido informado(a) e invitado(a) a participar en la investigación denominada “Video Games for Teaching English Vocabulary To Middle-Aged Adults”, el cual es un proyecto de investigación que realiza la estudiante investigadora Sara Riascos Prieto como requisito para la obtención del título de Licenciado en Lenguas Extranjeras (Inglés - Francés) de la Escuela de Ciencias del Lenguaje de la Universidad del Valle.

Comprendo que este estudio busca determinar la eficacia del uso de los videojuegos como recurso didáctico para la enseñanza del inglés como lengua extranjera a adultos mayores de cincuenta años. Reconozco que mi participación consiste en asistir a varias sesiones de clases de inglés de dos horas cuyo énfasis yacerá en la adquisición de vocabulario por medio del uso de videojuegos, responder encuestas y permitir a la investigadora observar mi proceso de aprendizaje para poder así determinar la eficiencia de éstos como herramienta de aprendizaje. Así mismo, se me ha informado que los datos registrados serán confidenciales, y que los nombres de los participantes serán tratados bajo el anonimato, esto quiere decir que en el tratamiento de los resultados como en la publicación de los mismos la identidad de los participantes no será expuesta. Además, reconozco que mi participación en este proyecto es voluntaria y que no hay retribución económica por la colaboración en este estudio.

Por otro lado, reconozco que el trabajo podrá beneficiar de manera indirecta o directa a la comunidad, pues el estudio contribuiría a determinar la eficiencia de los videojuegos como recursos didácticos en la adquisición de vocabulario para poder así tenerlas en consideración como herramientas en la enseñanza para adultos de mediana edad. Al mismo tiempo, sé que puedo negar la participación o retirarme en cualquier etapa de la investigación, sin consecuencias negativas para mí.

Con lo anterior, acepto voluntariamente participar en este estudio y he recibido una copia del presente documento.

Firma participante:

Fecha:

Si tiene alguna pregunta durante cualquier etapa del estudio puede comunicarse con Sara Riascos, Estudiante de la Licenciatura en Lenguas extranjeras inglés-francés, sara.riascos@correounivalle.edu.co, 3012027622. o con el director de trabajo de grado, Maria Eugenia Guapacha, maria.guapacha@correounivalle.edu.co

Adaptado del formato de confidencialidad de la Universidad del Desarrollo, Chile : <https://www.udd.cl/wp-content/uploads/2019/08/Consentimiento-Informado.pdf>

Universidad del Valle
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Delivered on September 22, 2022

Santiago de Cali – Colombia

Appendix 2. Initial questionnaire for participants

CUESTIONARIO PARA PARTICIPANTES

Este cuestionario tiene el propósito de identificar el nivel de familiarización de los participantes con el idioma inglés, juegos de vídeo y computadores así como sus percepciones y motivaciones frente a estos. Además se busca recolectar algunos datos sociodemográficos que serán utilizados como aporte dentro de la investigación *Video Games For Teaching English Vocabulary To Middle-Aged Adults*. Este cuestionario consta de 4 secciones y 25 preguntas en total. Por favor, lea atentamente las instrucciones antes de responder a cada ítem. La información de esta encuesta será utilizada con propósitos académico-investigativos y es absolutamente confidencial y anónima.

Recuerde que no se trata de un test, por lo que no hay respuestas malas o buenas. Apreciamos su honesta colaboración y disposición.

A. Información personal:

1. Nombre

2. Edad

3. Nivel de estudios

Primaria / Secundaria / Técnico-Tecnólogo / Profesional

4. Ocupación

B. Relación con el idioma inglés

Seleccione según sus experiencias con la lengua extranjera.

5. Considero que tengo conocimientos básicos del idioma inglés SÍ / NO

6. He estudiado en una institución de inglés SÍ / NO

7. He practicado/aprendido inglés por mi cuenta SÍ / NO

8. Considero importante aprender inglés SÍ / NO

9. Tengo interés actualmente en aprender inglés SÍ / NO

Por qué:

C. Relación con los videojuegos

10. Tengo experiencia jugando videojuegos SÍ / NO

11. Considero que puede aprenderse una lengua extranjera por medio de un videojuego SÍ / NO

12. Tengo interés en jugar videojuegos SÍ / NO

Por qué:

13. Considero que los videojuegos son únicamente para niños, adolescentes y jóvenes adultos SÍ / NO

Por qué

14. Considero que es difícil jugar videojuegos SÍ / NO
15. ¿Qué dificultades considero que se me podrían presentar al jugar videojuegos?
-
16. ¿Cree que los videojuegos pueden ser útiles para expandir el vocabulario en inglés?
17. ¿Alguna vez ha aprendido algo por medio de un videojuego? De ser así, mencione lo que ha aprendido
-

D. Relación con los computadores

18. Cuento con acceso a una computadora SÍ / NO
19. ¿A cuál de los siguientes dispositivos electrónicos tiene usted acceso? (Puede marcar más de una opción)
- a) Pc de escritorio
 - b) Pc portátil
 - c) Tablet
 - d) iPad
 - e) Ninguno de los anteriores
20. ¿Con qué frecuencia utiliza el pc y/o dispositivo electrónico?
- a) Todos los días
 - b) Entre 2 y 3 veces a la semana
 - c) Una vez a la semana
 - d) Nunca
21. Tengo dificultades para manejar una computadora SÍ / NO
22. Siento cansancio/fatiga cuando utilizo una computadora SÍ / NO
23. Considero que las computadoras son útiles como herramientas de aprendizaje SÍ / NO
24. Tengo interés en utilizar mi computadora y/o otros recursos tecnológicos para aprender inglés SÍ / NO
25. Encontrar información en Internet para usted es:
- a) Fácil
 - b) Complicado
 - c) Muy Difícil

¡Muchas gracias por su colaboración!

Applied on October 4, 2022

Appendix 3. Pre-Interview Questions

1. What are your motivations for learning English?
2. Really? Do you watch movies in English?
3. What do you think is the best way to learn English?
4. Do you consider age a limiting factor in learning a second language? Why?
5. What kind of difficulties do you think might arise when learning languages using a computer?
6. What difficulties do you think might arise when playing this video game?
7. What type of video game would you like to play?

Appendix 4. Vocabulary Pre-Test

Pre-Prueba de Vocabulario

Pts: ____ / 68

1. Write the name for each image. 14pts (____) *(Utilizando las palabras de la caja, escriba frente a cada imagen el nombre que corresponda)*

Desk - Keys - Credit Card - Dinner - Diamond - Ticket - Waitress - Elevator - Coffee - Newspaper
- Hat - Letter - Thief



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2. Write the word in front of the corresponding meaning. 7pts (____)
(Escriba frente a cada significado la palabra correspondiente)

Elevator - Thief - Dinner - Waitress - Key - Ticket - Letter

- a. You show this at a station to be able to board the train
- b. This is the food you eat at night
- c. This is sent to communicate with a person who lives far away
- d. A person who steals and commits crimes
- e. You use this when you have to go from one floor to another floor
- f. You use this to open a door or a box
- g. It's the woman who helps you in a restaurant

3. Complete the following sentences with the correct word. 7pts (___)

(Complete las siguientes oraciones con la palabra apropiada)

Hat - Desk - Diamond - Dessert - Credit Card - Coffee - Newspaper

- a. I love to wear this It looks beautiful on my head.
- b. There is a big in the exposition. It is blue, shiny and expensive.
- c. I need my to buy things.
- d. When I feel tired I drink and I can work again.
- e. In the I can read today's news.
- f. I have a metallic at my office. There I can work on my computer.
- g. I don't want a I am on a diet.

4. Complete the sentences with the words you hear. 20pts (___) (Complete las oraciones con las palabras que escuche)

- a. I'd like to a ticket please.
- b. Ithis song
- c. Can I you?
- d. I would like to
- e. Take the telephone and the police
- f. May Iwhat is your name?
- g. I would like to where is my room

- h. How do I
- i. I want to this hat
- j. I this place
- k. Nice to you
- l. I don't you
- m. I I am hungry
- n. the train to New York
- o. I can'tanything
- p. I don't you
- q. I can't this door
- r. I don't this
- s. Can I you?
- t. me what happened

5. Select the word that does not belong to each group. 4pts (___)

(Seleccione la palabra que no pertenece al grupo)

- a. Happy Glad Sad Comfortable
- b. Strange Normal Mysterious Crazy
- c. Wonderful Terrific Amazing Horrible
- d. Terrible Lovely Kind Gentle

6. Complete the sentences with one of the multiple choice words. 8pts (___)

(Complete las oraciones con alguna de las palabras de elección múltiple)

- | | |
|--|---|
| a. At the train station I received a from Chandler on the telephone. | e. When I get to the hotel I want to go to my room but I need a |
| a) gallery | a) package |
| b) message | b) reservation |
| c) dinner | c) city |
| b. When I arrived in New York I was lost, I needed some | f. A robbed the Blue Diamond from the Grand Gallery. |
| a) secret | a) thief |
| b) help | b) waitress |
| c) danger | c) detective |
| c. I can't eat dessert because I am on a | g. The detective thinks I robbed the Blue Diamond. I was a |
| a) diet | a) employee |
| b) city | b) suspect |
| c) call | c) police |
| d. I am on a diet because I want to lose some | h. At the police station I have to answer some |
| a) food | |
| b) friends | |
| c) weight | |

- a) name
- b) questions

c) secret

7. Match each word with its corresponding meaning. 8pts (___)

(Una cada palabra con su significado correspondiente)

- | | |
|--|--------------|
| a. When something makes you laugh it is: | 1. delicious |
| b. When something is not real it is: | 2. hungry |
| c. When something tastes good it is: | 3. fake |
| d. When something is not legal it is: | 4. funny |
| e. When you want to eat you feel: | 5. happy |
| f. When there's a lot of wind it is: | 6. cloudy |
| g. When there are a lot of clouds it is: | 7. illegal |
| h. When you really want to smile you feel: | 8. windy |

Appendix 5. Sequence sample

SESSION #1:

Topic: From the station to the restaurant

Language Learning Outcomes:

- The learner will be able to understand and follow basic instructions to get to places.
- The learner will get familiar with the train station vocabulary.
- The learner will be able to order healthy food.

In-game Objectives:

- To buy a train ticket.
- To explore New York City.
- To enter the Cafe.
- To find the hotel.

Vocabulary the student can find in this chapter:

- | | | |
|-------------------|-----------|---------------|
| • Buy | • Steak | • Main dishes |
| • Ticket | • Ham | • Side dishes |
| • Roundtrip | • Onion | • Beverages |
| • Oneway | • Dessert | • Watching |
| • I would like to | • Square | |
| • Diet | • Shrimp | |
| • Weight | • Onion | |

Warm Up:	Time:	Materials :
R will type a series of commands: - Take the train - Buy a ticket - Call a phone number - Buy a newspaper - Open the door Explain each command by miming and then show a list of pictures to the L so that he/she can identify the picture corresponding to each command. Welcome to the café! How can I help you? From a list of images, the S must select all the foods he/she thinks can order in a café in New York, then group them by breakfast, lunch (main dish - side dish) and dinner.	15'	-Board and markers
	15'	Class #1
In-game Activity:		

In the game, S is free to explore and make whatever choices he wants, but he must also complete the following missions: 1. Write down the unknown words, interpret meaning according to the context and if necessary, confirm it in the dictionary. 2. Explore the spaces. 3. Find the dishes and food worked on in the last activity inside the café. 4. The game session will end when you enter the hotel.	60'	- Videogame
Close up:		
S is going to recap what she/he did in the game since he arrived at the train station. T will ask what caught his/her attention and what he/she thinks will happen next. Activity: -S will write the command examples again, the student must now write three commands (can use buy + food vocabulary in the game). -S will write 5 more foods that can be found in a cafe and classify them. T will read a list of questions about the game: - Who was calling the phone? - How much did the ticket cost? - What does roundtrip and one-way mean? - What was the newspaper vendor doing? - Why didn't you buy dessert at the café?	30'	-Paper and pencil

Appendix 6. Field Journal Sample

FIELD JOURNAL			
Date:		Participant:	
Session:		Length:	
Summary:			
Categories:			
Attitudes and emotions:			
Vocabulary usage:			
Engagement and interaction:			
Strategies and problem-solving:			

Questions:	
What was the participant's attitude? Are they enthusiastic, hesitant, or curious?	
What vocabulary words or phrases does the participant encounter and use during gameplay?	
Does the participant show signs of enjoyment, frustration, or engagement while playing the video game?	
How do the participants respond to challenges or difficult vocabulary encountered in the game?	
Are there any notable changes in the participants' attitudes towards the video game or their perceptions of its effectiveness for learning vocabulary?	
Personal extra notes:	

Appendix 7. Weekly Vocabulary Tests Sample

WVT #1 LUIS

Part 1: Multiple Choice

Instrucciones: Elija el sinónimo correcto para cada palabra.

1. One-trip
a) A journey with multiple stops
b) A journey with one stop
c) A journey with no stops

2. May
a) Can
b) Might
c) Will

- To watch (something)
a) To look for
b) To see and pay attention to something
c) To buy something

3. Gallery
a) A place to buy groceries
b) A place to watch movies
c) A place to see art

4. Suitcase
a) A type of clothing
b) A container for carrying clothes and belongings
c) A kind of game

5. Want
a) Need
b) Have
c) Don't want

6. Rainy
a) Sunny
b) Cloudy
c) Windy

7. Missing
a) Found
b) Lost
c) Hidden

8. Darling
a) A sweet or affectionate term for someone
b) A type of candy
c) A type of flower

9. Look like
a) Appear similar to
b) Look at closely
c) Look quickly

10. One-way
a) A route with multiple directions
b) A route with a single direction
c) A route with no directions

11. Dinner
a) A morning meal
b) An evening meal
c) A meal with no specific time

12. Weight
a) How heavy something is
b) How tall something is
c) How long something is

13. Beverages
a) Foods you eat
b) Drinks you consume
c) Clothes you wear

14. Pudding
a) A type of dessert
b) A kind of soup
c) A type of bread

15. Overseas
a) In the same country
b) In a different country
c) In a rural area

16. Terrific
a) Very bad
b) Very good
c) Very sad

17. Desk clerk
a) A person who fixes computers
b) A person who works at a

- hotel reception
c) A person who delivers mail

18. Talcum powder
a) A type of seasoning
b) A type of cosmetic powder
c) A type of medicine

19. Staring
a) Looking briefly
b) Looking quickly
c) Looking fixedly

20. Meet
a) To avoid
b) To say goodbye
c) To come together

21. Weather
a) The condition of the air outdoors
b) The condition of the soil outdoors
c) The condition of the water outdoors

22. Humid
a) Dry and lacking moisture
b) Wet and having a lot of moisture
c) Cold and frosty

23. Cool
a) Warm
b) Cold
c) Hot

24. Cloudy
a) With no clouds
b) With a few clouds
c) With many clouds

25. Windy
a) Without any wind
b) With a gentle breeze
c) With a lot of wind

26.Comfortable a) Unpleasant b) Relaxed and at ease c) Awkward	b) Unusual or uncommon c) Ordinary	b) To think c) To trust
27.Hobby a) Something you have to do b) Something you choose to do for fun c) Something you dislike doing	30.Meet you a) To see you later b) To never see you again c) To see you for the first time	34.Know a) To be uncertain b) To be aware of c) To ignore
28.Wearing a) Putting something away b) Having something on your body c) Holding something in your hand	31.Suspect a) To believe strongly b) To doubt c) To accuse without evidence	35.About a) Approximately b) Around c) Regarding or concerning
29.Rare a) Common	32.Danger a) Safety b) Harm or risk c) Protection	36.Grand a) Large and impressive b) Small and insignificant c) Boring
	33. Believe a) To doubt	37.Come a) To leave b) To go c) To arrive

Part 2: Fill in the Blanks Instructions:

Instrucciones: Llena los espacios con la palabra correcta.

1. I couldn't _____ my keys this morning. Have you seen them?
a) find
b) steal
c) taste
2. The _____ of the painting was breathtaking. It was so beautiful.
a) fault
b) picture
c) thief
3. Can you believe it? I got this book for _____!
a) free
b) expensive
c) missing

Part 3: Matching Instructions:

Instrucciones: Une las palabras correctas con su significado.

- | | |
|--------------|--|
| a. Amazing | () To take someone else's belongings without permission |
| b. Waitress | () Very good or impressive |
| c. Box | () A female server in a restaurant |
| d. Crosswalk | () A container with a lid used for storage |

Part 4: Sentence Completion Instructions:

Instrucciones: Completa cada frase con la opción correcta dada.

1. I _____ to the party yesterday and had a great time.

- a) did
- b) found
- c) thought

2. _____ the weather like yesterday?

- a) Did
- b) Was
- c) Wanted

3. Can I _____ your pen for a moment? I need to write something.

- a) set someone up
- b) pick up
- c) think

Part 5: Dialogue Completion

Instructions: Elige la palabra correcta para completar el diálogo.

Person A: Can you help me find my keys? I can't locate them anywhere.

Person B: Sure, let's _____ and search together.

- a) go ahead b) find out c) think

Person A: I heard there's a _____ treasure hidden in this old house.

Person B: Really? That sounds _____!

- a) mysterious / amazing b) briefcase / between c) comb / while

Good luck! :)

Post-Prueba de Vocabulario

Pts: ____ / 68

1. Write the name for each image. 14pts (____) (Utilizando las palabras de la caja, escriba frente a cada imagen el nombre que corresponda)

Desk - Keys - Credit Card - Dinner - Diamond - Ticket - Waitress - Elevator - Coffee - Newspaper
- Hat - Letter - Thief



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2. Write the word in front of the corresponding meaning. 7pts (___)

(Escriba frente a cada significado la palabra correspondiente)

Elevator - Thief - Dinner - Waitress - Key - Ticket - Letter

- a. You show this at a station to be able to board the train
- b. This is the food you eat at night
- c. This is sent to communicate with a person who lives far away
- d. A person who steals and commits crimes
- e. You use this when you have to go from one floor to another floor
- f. You use this to open a door or a box
- g. It's the woman who helps you in a restaurant

3. Complete the following sentences with the correct word. 7pts (___)

(Complete las siguientes oraciones con la palabra apropiada)

Hat - Desk - Diamond - Dessert - Credit Card - Coffee - Newspaper

- a. I love to wear this It looks beautiful on my head.
- b. There is a big in the exposition. It is blue, shiny and expensive.
- c. I need my to buy things.
- d. When I feel tired I drink and I can work again.
- e. In the I can read today's news.
- f. I have a metallic at my office. There I can work on my computer.
- g. I don't want a I am on a diet.

4. Complete the sentences with the words you hear. 20pts (___) *(Complete las oraciones con las palabras que escuche)*

- a. I'd like to a ticket please.
- b. Ithis song
- c. Can I you?
- d. I would like to
- e. Take the telephone and the police
- f. May Iwhat is your name?

g. I would like to where is my room

h. How do I

i. I want to this hat

j. I this place

k. Nice to you

l. I don't you

m. I I am hungry

n. the train to New York

o. I can'tanything

p. I don't you

q. I can't this door

r. I don't this

s. Can I you?

t. me what happened

5. Select the word that does not belong to each group. 4pts (___)

(Seleccione la palabra que no pertenece al grupo)

a. Happy Glad Sad Comfortable

b. Strange Normal Mysterious Crazy

c. Wonderful Terrific Amazing Horrible

d. Terrible Lovely Kind Gentle

6. Complete the sentences with one of the multiple choice words. 8pts (___)

(Complete las oraciones con alguna de las palabras de elección múltiple)

a. At the train station I received a from Chandler
on the telephone.

a) gallery

b) message

c) dinner

a) diet

b) city

c) call

b. When I arrived in New York I was lost, I needed some
.....

a) secret

b) help

c) danger

d. I am on a diet because I want to lose
some

a) food

b) friends

c) weight

c. I can't eat dessert because I am on a

e. When I get to the hotel I want to go to my room bu
neda

a) package

b) reservation

c) city

f. A robbed the Blue Diamond from the Grand Gallery.

a) thief

b) waitress

c) detective

g. The detective thinks I robbed the Blue Diamond. I was a

a) employee

b) suspect

c) police

h. At the police station I have to answer some

a) name

b) questions

c) secret

7. Match each word with its corresponding meaning. 8pts (___)

(Una cada palabra con su significado correspondiente)

a. When something makes you laugh it is:

b. When something is not real it is:

c. When something tastes good it is:

d. When something is not legal it is:

e. When you want to eat you feel:

f. When there's a lot of wind it is:

g. When there are a lot of clouds it is:

h. When you really want to smile you feel:

1. delicious

1. hungry

2. fake

3. funny

4. happy

5. cloudy

6. illegal

7. windy

Appendix 9. Final questionnaire for participants

CUESTIONARIO PARA PARTICIPANTES

Este segundo cuestionario está diseñado con el fin de conocer sus opiniones y comentarios tras participar en la intervención utilizando el videojuego *Who is Oscar Lake?* como herramienta para la adquisición de vocabulario en inglés. Este cuestionario consta de 4 secciones y 25 preguntas en total. Por favor, lea atentamente las instrucciones antes de responder a cada ítem. La información de esta encuesta será utilizada con propósitos académico-investigativos y es absolutamente confidencial y anónima.

Recuerde que no se trata de un test, por lo que no hay respuestas malas o buenas. Apreciamos su honesta colaboración y disposición.

A. Información personal:

1. Nombre _____

B. En relación con el vocabulario

Seleccione según su experiencia con el idioma durante las sesiones

2. Considero que mi vocabulario incrementó SÍ / NO
3. El nivel de inglés del juego era adecuado y comprensible para mí SÍ / NO
4. Seguiría usando este método para adquirir vocabulario SÍ / NO
5. ¿Qué fue lo que más se me dificultó del idioma? _____
6. ¿Qué puedo mejorar? _____

C. Relación con el videojuego

7. El videojuego fue entretenido y/o me motivó a practicar SÍ / NO
8. Considero que este juego fue adecuado como herramienta de aprendizaje SÍ / NO
9. Mejoré otros aspectos además del vocabulario mientras jugaba SÍ / NO
10. De responder SÍ en la anterior pregunta, especifique cuáles aspectos

11. Considero que los videojuegos es adecuado para adultos SÍ / NO
Por qué _____
12. ¿Qué dificultades se presentaron al jugar este videojuego?

13. ¿Qué facilitó el uso y entendimiento del videojuego?

14. ¿Qué puede mejorar al usar esta herramienta como método de aprendizaje?

¡Muchas gracias por su colaboración!

Applied on November 10, 2022

Appendix 10. Post Interview Questions

1. What was the most difficult aspect about using the computer as a learning tool?
2. What do you think could have improved your learning experience?
3. Would you consider continuing to use your computer to learn English virtually?
4. What is your perception of video games, do you think they function more as entertainment tools, or could they be used as learning tools?
5. What did you like the most about the game?
6. What was negative about the game?
7. What did you find the most difficult while playing the game?
8. Do you feel that the game served its purpose as a vocabulary acquisition tool? In what way?
9. What strategies did you use to understand the unfamiliar vocabulary?
10. Did playing this game change your perception of video games? If so, in what ways?
11. Do you think other people your age could use this method to learn English? Why?

Appendix 11. María's Pre Interview Transcription

00:00:01 Researcher

¿Cuáles son tus motivaciones para aprender inglés?

00:00:05 María

Ah. En este momento mis motivaciones como yo soy maestra. Son para poder. Fer. Ayudar a mis estudiantes porque ahora soy profesora independiente y mis estudiantes usualmente vienen de colegios bilingües, así que lo necesito para poder. Ayudarles con sus tareas.

¿Pero también lo tengo como un reto personal, eh? Siempre me ha llamado la atención, pero por cuestiones de tiempo y dinero no he podido costearme los estudios.

00:00:45 Researcher

Okay. ¿Y, cuál crees que es la mejor manera de aprender inglés?

00:00:51 María

Creo que la mejor manera de aprender inglés. Es en una clase puede ser en un curso. Sí se puede preferencialmente. Que sea presencial.

Porque las interacciones con los compañeros y las otras personas pueden ayudar mucho. Además, me gusta la sensación de estar en un aula de clase.

Eh de poder interactuar con el profesor, hacerle preguntas, trabajar con mis compañeros y siento que esa es una buena manera.

00:01:30 Researcher

Ok. Consideras que la edad sea una un factor limitante en el aprendizaje de una segunda lengua, porque.

00:01:41 María

La verdad, no creo que la edad sea un factor limitante. Creo que los niños tienen de pronto una mayor facilidad y una rapidez para aprender.

Pero no creo que la edad sea un limitante, mucho menos para aprender inglés. Creo que todo eso depende. Eh de la persona.

Y de su motivación y su propia disciplina.

00:02:14 Researcher

¿Qué tipo de dificultades crees que puedan surgir cuando aprendas un nuevo idioma usando una computadora?

00:02:25 María

Eh tal vez. De pronto se me dificulta entender porque no estoy muy acostumbrada a usar el computador.

Entonces, si el juegos está en inglés, tal vez no entienda las instrucciones y de pronto me podría perder. Pero si tiene una buena instrucción y es clara, no creo que sea difícil.

Appendix 12. Luis' Pre Interview Transcription

00:00:01 Researcher

¿Cuáles son tus motivaciones para aprender inglés?

00:00:05 Luis

Pues me parece un idioma muy chévere, sobre todo porque mucha música está en inglés. Y porque tengo sobrinos que ahora hablan inglés

y me gustaría poder comunicarme con ellos, poder entender las películas en inglés me parece muy chévere.

00:00:28 Researcher

¿Sí y las películas que ves suelen estar en inglés?

00:00:38 Luis

Sí, usualmente las veo con subtítulos. Pero no entiendo mucho, entiendo un par de cosas donde sea en hello goodbye how are you mhm...

Hay cosas así. Ja ja ja ja ja.

00:00:55 Researcher

¿Y, bueno, entonces, cuál crees que es la mejor manera de aprender inglés?

00:01:02 Luis

Tal vez eh hablándolo. Eh, escuchándolo con música con películas. Eh viajando me parece que es la mejor forma interactuando con la gente

y pues también con clases, pero... pero creo que si se da la oportunidad de viajar y. Eh poder hablar con la gente y escucharlo y estar como

metido en ese mundo es mucho mejor.

00:01:33 Researcher

¿Ok y alguna vez has viajado a un lugar donde hablen inglés?

00:01:38 Luis

Eh no no lo he hecho.

00:01:40 Researcher

OK. ¿Consideras que la edad es un factor limitante para aprender una segunda lengua?

00:01:50 Luis

No la verdad no. Eh de pronto lo que puede pasar es que uno con la edad se va ocupando más por cuestiones de trabajo en y si uno

se dedica a algo que no tiene mucho que ver con el con el inglés pues es como más difícil generar un interés en aprenderlo y pues eso

por el tiempo más que todo.

00:02:24 Researcher

¿Ok y, cuáles crees que puedan ser las dificultades que surjan cuando se aprenda un idioma usando el computador?

00:02:35 Luis

La verdad, no sé. De pronto que el juego sea muy difícil o que no lo entienda.

Appendix 13. Luis' Post Interview Transcription

00:00:01 Researcher

¿Qué fue lo más difícil de usar el computador como una herramienta de aprendizaje?

00:00:13 Luis

Bueno, la verdad, no siento que haya sido difícil usar el computador. Porque pues estoy acostumbrado. Y no siento que... No fue, no fue difícil.

De pronto que a veces el computador falló. Pero... Ah, y que para usar el juego había que meterse en la configuración algo así.

Pero nada, creo que solo eso. Lo demás fue fácil.

00:00:53 Researcher

¿Qué crees que pudo haber mejorado tu experiencia de aprendizaje?

00:00:59 Luis

Mmm. Eh. De pronto a haber. Utilizado más juegos. Como no quedarse solo con ese sino. Usar más juegos y así poder aprovechar más

sesiones en la semana. Eso hubiera estado bien, me hubiera gustado.

00:01:26 Researcher

¿Considerarías continuar utilizando tu computador para aprender inglés virtualmente?

00:01:34 Luis

Sí, la verdad me gustó, era cómodo porque lo podía hacer desde mi casa. Llego de trabajar. Voy a comer y de una eh. Podría entrar.

Mmh y ver el juego. Entonces nada, creo que. Que sí podría me gustaría hacerlo.

00:02:03 Researcher

¿Cuál es tu percepción de los videojuegos ahora? ¿Crees que funcionan más como una herramienta para el entretenimiento o que pueden ser utilizados como herramientas de aprendizaje?

00:02:21 Luis

Pues me parece que para las dos cosas creo que uno puede. Aprender. Y entretenerse al mismo tiempo. Como que no tiene que separarse

una cosa de la otra. Y me gustó porque fue muy divertido. Fue emocionante, por ejemplo, cuando nos dimos cuenta de que Chandler era la ladrona.

Fue chévere fue como si fuera una película de de detectives de acción. Em, pero a la vez estaba aprendiendo, entonces creo que funciona de las dos maneras.

00:03:14 Researcher

¿Qué es lo que más te gustó del juego?

00:03:18 Luis

Me gustó todo, jaja me gustó que. Que que es que se veía como una película que podía interactuar, podía moverme por la ciudad.

Podía entrar al restaurante, podía entrar a lugares y tener conversaciones con la gente. Me gustó que podía elegir que decir que habían

como varias opciones de respuestas. Entonces, como que todo lo que pasaba era decisión mía y todo lo hacía a conciencia, o sea que era

como que yo era el protagonista. Porque además no tiene nombre. El personaje principal, jaja era, era yo, entonces eso me gustó.

Y, pues nada que es fácil de entender, y sirve para aprender.

00:04:22 Researcher

¿Y, qué te pareció lo negativo de este juegos?

00:04:27 Luis

Lo negativo. Que en dos ocasiones. Se me. Se me paró el juegos de la nada. ¿Y, tuve que repetir? Desde donde había guardado.

Pero solamente eso. No sé qué pasó allí.

00:04:56 Researcher

¿Qué encontraste como lo más difícil de hacer mientras jugabas el juego?

00:05:02 Luis

Eh lo más difícil. Fue de pronto. Eh. A veces me confundía con las palabras, porque hay palabras que se parecen, entonces a veces no entendía muy bien como que me me confundía o. Entendía algo distinto a lo que me estaban diciendo porque confundía las palabras.

00:05:32 Researcher

¿Crees que el juego cumplió con su propósito como herramienta de adquisición de vocabulario? Si fue así, ¿de qué manera?

00:05:43 Luis

Uy, sí, yo creo que sí. Eh. Siento que el juego sirvió. Porque. Aprendí bastante. Y al. Inicio. Tenía que estar preguntándote cada cosa.

Pero más adelante. Se hizo más fácil, ya iba reconociendo poco a poco las palabras. Iba, entendiendo lo que decían. Y ya no tenía que preguntar y como que entendía más por el contexto. Y pues porque me iba bien. En en los cuises en los resultados. Iba mejorando entonces.

Siento que que sí funcionó. Eh me divertí. Y, me gustaría probar otros juegos.

00:06:50 Researcher

¿Qué estrategias utilizaste para entender el vocabulario que no te era familiar?

(Aquí por problemas del programa se tuvo que dividir el audio, esto se ve reflejado en el tiempo)

00:00:26 Luis

Primero intentaba como adivinar qué querían decir. Pues. Según el contexto, viendo si había una imagen, pues viendo la imagen.

O por medio de de cómo iba la conversación, cierto? Em. Pero. En general, creo que pues con... Preguntando. Y ya. Te preguntaba si no.

Si me equivocaba, pues preguntaba. Y ya eso, eso fue lo que hice.

00:01:11 Researcher

¿Jugar este juego cambió tu percepción sobre los videojuegos?, si así fue, ¿de qué manera?

00:01:20 Luis

Mmm. Pues a mí la verdad. Me gustan los videojuegos. Y, pues de la forma en la que lo veo ahora pienso que. Por eso los chicos hoy en día son tan buenos con el, el inglés porque si jugaban y pues así de fácil iban aprendiendo, pues como que tiene más sentido. Y me parece algo muy chévere, muy positivo. En la Universidad uno siempre los ve a ellos en sus tiempos libres, jugando, entonces como que ahora lo veo de manera distinta, todo tiene que tener un control, no? pero siento que pueden servir dependiendo de lo, el, el objetivo que uno tenga o el enfoque o esas cosas. Me parece que sí.

00:02:11 Researcher

¿Crees que otras personas de tu edad podrían utilizar este método para aprender inglés? ¿por qué?

00:02:20 Luis

Pues claro, sí, yo creo que sí. Siento que eh, no sería difícil, siento que lo harían bien. Si son con este juego o con otros juegos.

Pues sí, creo que les gustaría y pues la verdad no es difícil, eh? Es algo como para salirse de la rutina, pasar un rato divertido. Entonces sí, yo creo que sí.

Appendix 14. María's Post Interview Transcription

00:00:01 Researcher

¿Cuál fue el aspecto más difícil sobre usar el computador como una herramienta de aprendizaje?

00:00:09 María

Considero que el aspecto más difícil. Fue. De pronto entender los controles del juego, los controles de manejo. Como había que hacer clic a los lados, a veces era confuso, no sabía en dónde tenía que hacer clic hasta que aparecía la flecha. Entonces, de pronto eso y porque la pantalla se veía muy pequeña. Fuera de eso. Creo que fue fácil utilizarlo y creo que hay más aspectos positivos que negativos.

00:01:04 Researcher

Muy bien ¿Y qué crees que pudo haber mejorado?

00:01:12 María

Esta experiencia de aprendizaje. Eh. Lo que creo que pudo. Mejorar esta experiencia de aprendizaje. En. De pronto haber tenido más tiempo. Para practicar con el juego como otra introducción. O tal vez como tutorial. Y. Y eso creo que hubiese podido haberlo tal vez mejorado. En. Sin embargo, creo que fue algo muy agradable. Tal vez eh. Tener. Poder socializar con más personas.

00:02:19 Researcher

¿Entonces considerarías continuar utilizando tu computador para aprender inglés virtualmente?

00:02:26 María

Si es así sí. Si es por medio de un juegos, sí, si es como una clase online? No, no me siento muy cómoda. Sí, pero si es otra vez como usando un juego o una plataforma, sí, no, no veo ningún problema, me gustaría.

00:02:45 Researcher

¿Cuáles son tus percepciones ahora sobre los videojuegos? ¿Crees que funcionan más como herramientas de entretenimiento o pueden ser utilizadas como herramientas de aprendizaje?

00:03:02 María

Creo que eso depende de la persona y la función que le estén dando al juego porque el juego es muy divertido, pero si uno de cierta manera se obsesiona y simplemente lo utiliza mhm... Así sin medir el tiempo y. Y sin pensar en lo que está haciendo sin ningún objetivo, creo que pues no, no se aprovecharía del todo, pero si uno lo utiliza de manera que pueda eh aprender y buscar vocabulario y reflexionar sobre ese vocabulario, creo que funciona muy bien, como una herramienta de aprendizaje.

(En esta parte la pantalla se apagó y hubo que comenzar una nueva grabación)

00:00:02 Researcher

¿OK, entonces, qué fue lo que más te gustó del juego?

00:00:07 María

Me gustó la historia, me gustó que lo pone mucho a pensar a uno. Y es un misterio que tipo? No sabes como qué va a pasar o. ¿O, cómo va a terminar? Eh, de pronto es un poco predecible quién es el villano. Pero uno se siente como con las manos atadas y es interesante saber qué es lo que está pasando y cómo se puede inculpar a digo... cómo se puede... Atrapar al verdadero culpable. Me gustó que aparece cómo se pronuncia cada cosa donde sea que uno de clic está el vocabulario de cómo se dice. Y. Y me gustó que es un es un lenguaje, hablan despacio y se les puede entender. Y, pues que de cierta forma se siente como si uno estuviera allí.

00:01:33 Researcher

¿Y que te pareció lo negativo?

00:01:36 María

Ah, tal vez eso que dije antes. Sobre que era un poquito. Difícil de manejar al inicio, como acostumbrarse, de pronto sería más fácil si se pudiera usar como un control o con el teclado, pero como había que dar clic y no siempre se podía dar, había que esperar a que apareciera esa flecha y para devolverse era confuso. Era más como cuestión de costumbre, pero eso de pronto es lo negativo.

00:02:12 Researcher

¿Eso te pareció lo más difícil mientras jugabas o hay algo más?

00:02:16 María

Solo eso de los controles. Inicialmente pensé que de pronto entender y el vocabulario, pero es bastante intuitivo. Uno puede darse cuenta por el contexto y como tiene un diccionario y un traductor, pues lo usaba cuando lo necesitaba, pero era fácil de entender lo que estaba pasando y a medida que uno juega se va cómo entendiendo más de qué trata?

00:02:52 Researcher

¿Y crees que este juego sirvió en su propósito de ser una herramienta de aprendizaje? ¿De qué manera?

00:03:04 María

Creo que sí sirvió porque. Mm al inicio. Había cosas que no entendía, pero a medida que iba jugando se me fue haciendo mucho más fácil entender y recordaba palabras. Y no se sentía como una clase, no se sentía como. De pronto esa presión académica, sino que era algo como más eh inconsciente, y natural. Entonces eso me gustó y siento que sí cumplió su función porque siento que aprendí.

00:03:48 Researcher

Cuéntame qué estrategias utilizaste para entender el vocabulario que era desconocido.

00:03:54 María

Pues te pregunté a ti jaja. Tomé, pues de pronto miraba, pensaba, qué significaba, escribía, qué significaba que era lo que yo pensaba que significaba. Y después miraba en el traductor y creo que ya por medio de esa prueba error. Me me queda más fácil aprender porque ponía lo que yo creía y luego al ver que no era lo que yo creía, me resultaba más fácil recordar después de ver la traducción, pero sí creo que me funcionó.

00:04:34 Researcher

¿Jugar este juego cambió tu percepción sobre los videojuegos? ¿Y sí lo hizo, de qué manera?

00:04:41 María

Siento que si la cambió porque pues no los videojuegos no me parecen malos, siento que uno puede aprender por medio de ellos, pero después de jugarlo me doy cuenta que. Realmente pueden ser muy útiles. Mira mi hijo usualmente se la pasa mucho rato jugando mhm sus juegos en el computador. Y yo veo que pasa horas y horas entonces pues para mí era como algo que veía más bien como adictivo. Pero después de probarlo en este contexto, me parece que pueden ser herramientas muy positivas. No solamente para niños, sino también para para adultos y para personas mayores, porque pues no se trata solamente de pelea y violencia y bala, sino que es como estar dentro de una novela es entretenido.

00:05:50 Researcher

¿Crees que otras personas de tu edad podrían usar este método para aprender inglés? ¿Por qué?

00:05:58 María

Yo creo que sí. Pienso que es un método bastante entretenido y didáctico. Si se usará dentro de una clase, sería excelente. Siento que uno podría conversar así como cuando llega al trabajo y uno, comenta. Eh habla sobre la novela que está en transmisión en ese momento, pero sería como llegar y hablar sobre lo que pasó en el juego de cada persona. Y. Y pues es bueno porque igual las personas de cualquier edad eh quieren aprender inglés, entonces me parece que es está bien y no, no solamente pensarlo como que los juegos son para niños, sino que también lo pueden usar personas adultas y nosotros también tenemos como derecho para divertirnos.

Appendix 15. Vocabulary List Sample

Student’s Vocabulary List

Name:
Date:

<i>New word:</i>	<i>What I thought it meant:</i>	<i>What this means:</i>

[Luis’ Vocabulary List](#)

[María’s Vocabulary List](#)