

**A NEW WAY FOR LEARNING LANGUAGES THROUGH VIRTUAL IMMERSIVE
ENVIRONMENTS**

BY

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ABSTRACT

Immersive virtual environments or metaverse are representations of real or imaginative worlds created on the digital world with the purpose of making real situations or impossible experiences in the real world. Users on these worlds represent themselves via avatars that interact in representation of the user. At present, these virtual worlds are used for business processes, research and education. The purpose of this article is to describe the process of adapting an immersive virtual environment to be used as a virtual teaching-learning tool of the English language as a second language. The immersive virtual world was tested in a learning environment, and the results of the evaluation is presented.

This research started with the identification of the adequate immersive platform, students group selection, test design and implementation in order to determining if it is more successful to teach over a virtual immersive environment or in the real classroom.

We proposed the hypothesis: “the Second Life tool is, at least, as effective in teaching a second language, in this case English, in A2 level students in the Common European Framework as the face-to-face mode.” and in order to validate it, a set of experiments were conducted. Different measures of results were given comparing the performance of an experimental group against a control group. The results of the experiments show that the experimental, using the virtual environment, has better improvement compared to the control group.

These results indicate that virtual immersive environments are efficient tools, useful in teaching-learning language processes.

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CHAPTER 1

1 INTRODUCTION

In recent years, technological advances have been vital in the development of new paradigms of teaching in different areas of education. Bringing the classroom, the teacher and the student knowledge, has been the focus of such developments. We observe as we moved from the classroom to the web pages and hyperlinks, then the Web Quest, Wikis, forums, study groups, platforms like Moodle and Blackboard, networks and knowledge in the cloud and others. These paradigms have lead teachers and students to handle high levels of complexity, to live in diversity of opinion based on personal knowledge provided from a network: "the model learning for the digital age" [1]. The next step in the evolutionary chain of virtual learning environments is the emergence of virtual environments, both immersive and semi-immersive. Some examples are Unity (<http://unity3d.com/>), (<http://www.vastpark.com/>), OpenSimm (http://opensimulator.org/wiki/Main_Page), and Second Life (Lindenlabs-<http://secondlife.com/>), the latter being the first to appear as a sum of technologies encompassing not only 3D visualization and immersivity, but also as a technology integrator of chat, VoIP and real-time interaction through customizable avatars. The latter provides huge possibilities in many fields, including the study of languages.

Having been launched in 2003 by Lindenlabs, SecondLife is the most used IVW (Immersive Virtual World) in higher education. Universities and other education institutions have an active presence [2]. An example is offered by a recent research focused on the sociological,

psychological and economic advantages of using SecondLife as support for people with social challenges allowing them to overcome social anxieties and fears, and by examining the satisfaction of participating in Secondlife sessions according to their gender [3]. In the case that concerns us, learning of English as second Language, projects, organizations and schools dedicated to the teaching of English already exist in SL (SecondLife). These institutions use traditional and constructivist philosophies and even create new paradigms as dogma or SLOODLE, among them find AVALON -<http://www.avalonlearning.eu> - and NIFLAR-<http://www.niflar.eu> - (experimental worlds for teaching English in 3D), KAMIMO PROJECT (an Island in Secondlife: <http://www.himolde.no/index.cfm?pageID=2232>), ASIMIL8, VIRTANTIS (Island in Secondlife to study a second language: <http://www.virtlantis.com/>), TEACH YOU TEACH ME (Island in buddy network - <http://tuwien.esnaustria.org/> -) and EDUNATION (Island in SecondLife for language learning: <http://edunation-islands.wikispaces.com/>). In the area of educational projects as example: AvatarEnglish.com learning school. Edunation II and III, which houses special islands different schools, and institutions of education paths of great global significance, such as the Technological Institute of the Americas (ITLA), Harvard, Massachusetts Institute of Technology (MIT) and Stanford University, as well as Colombian Andes University. These facts indicate that the implementation of these new technologies in the field of teaching and learning "is not so much a technological problem, as a social challenge that requires an educational solution" [5].

Thus, some visionaries seek to incorporate the new ICTs and 3D worlds to create a new revolution in education with greater force in the field of second language teaching. However, as far as we know, none of the previous efforts, despite the innovative nature of its work has

focused on making a measurement of the quality of the education and success of the strategies implemented to effectively make the student learn a second language more comfortably, in less time and in a more easy and affordable manner.

The purpose of the project that is described in this article is to evaluate the level of absorption of information learned through a remote and immersive 3D environment such as SecondLife (SL), in juxtaposition with classical learning process in the classroom. The idea is to provide information on which decisions can be made effectively and justify (or not) spending on virtual education centers, islands (in this context, an island is a virtual portion of territory which is sold by SecondLife client to an entity).

1.1 Contributions

This work offers the following contributions to the teaching-learning methods base don virtual learning environments:

Teaching-learning language community:

It shows that virtual immersive environmets could be more representative for students in order to improve their curiosity and attitude in order to learn.

For teachers, it represents a new way in wich they can enlarge their possibilities in order to teach in a new interesting and vivid ways.

It shows that new technologies have an inherent potential related to teaching-learning processes.

It shows the advantages of 3D virtual worlds when compared to traditional teaching environments.

1.2 OUTLINE

1.2.1 Outline

This document is organized as follows. Chapter 2 provides a review of the state of art related to practical works on SecondLife related to teaching-learning experiences. An extract of the theoretical works related to these topics is also provided. Chapter 3 describes and breaks down the experiment design process followed to conceive the different tools and virtual environment. First a platform analysis is described considering an analysis of various competitors. Next, the environment design and virtual world adaptation are explained; finally, tools such as pretest, post-test and user experience evaluation are described with their respective uses. Chapter 4 describes a set of experiments carried out in order to validate the proposed hypothesis. The results of these experiments are detailed and the findings are interpreted. Chapter 5 concludes the document by pointing out the findings and conclusions of this Project, how this work is being continued and questions that could lead to future work.

CHAPTER 2

2 BACKGROUND

2.1 CONTEXT OF STUDY

The virtual worlds or metaverses are simulated spaces of social interaction on the web through a universe that seek to mimic the real world in their geographical position, socio-graphical, economic and communication, but ignoring the real physical world limitations. These virtual worlds can simulate real world laws or have their own rules. In virtual worlds, inhabitants are represented by avatars. Moreover, virtual worlds have as a characteristic to be immersive, oriented towards adventure or towards social interaction. [1]

Its history goes back to the beginnings of networks to the sixties, when the scientist JCR Licklider discusses the concept of galactic network (1962), basis for the first LAN network created called DARPA (1966), which was the first step in the construction of ARPA NET (1967), first global network and considered the grandmother of the current internet (late 1969), the year in which Donald Davies and Roger Scantlebury from NPL introduce the concept of network packages. In 1970 the first routing protocols of packages with the NCP (Network Control Protocol) appeared. The confluence of these technologies resulted in the concept of internet 1 or interconnection networks and data exchange. In early 2000 is the concept of Web 2.0 and social networking, Facebook, Twitter and others which make their appearance, [2].

However, the virtual reality and simulation environments make a strong appearance through the concept of imitation about real worlds and the exponential growth of the video game industry, is how Open Source, Open Sim, Qwaq, Forterra, The Croquet Consortium, Sun's Virtual Workplace, Avalon and Second Life take the market and become a new business opportunity, research, study and social exchange [4].

Second Life, created by Linden Labs, was created as an experiment and is based on Philip Rosedale work, founder of virtual world in the year 2003, from a book called "Snow Crash" (1992, Neal Stephenson), in which the author describes an alternate universe populated by avatars, with an independent and real economy and in which the rules were created by its users. From this point of view we can say that Second Life is part of Web 2.0, constituting a 3D network, [3]. Second Life is divided geographically into Sims, which are virtual lands of 65,000 m², and which are divided into different levels (N4, N5, etc ...) depending on the hosting web server and the temporal delay and traffic network that supports. At the same time, the access to Second Life is divided by areas according to its content, finding: PG areas: for all audiences, M (Mature): moderate content, and A (Adult) fully adult content. To access the last two types of content is restricted.

Second Life offers many types of opportunities that go from business, communication, interaction, games, research to education.

2.2 PROBLEM STATEMENT

The virtual world Second Life, has now more than 7 million worldwide users, and generates an output of approximately 1.7 million dollars a day in businesses such as advertising, sale of islands, and schools from different areas, including teaching of foreign languages, and especially English, (Vickers, Howard. The language teaching conquest Second Life: Now the worlds).

However, in the last two years Second Life has lost market power due to the slow insertion of new technologies such as IP Voice, which was built only last year, and the difficulty of some users to interact effectively with technology (which requires a good source machine to run efficiently). These factors, together with others such as the difficulty of finding multiple users simultaneously in the same place (to interact) has created a drop in the expectations of the potential for Second Life involved.

In regard to teaching a second language, specifically English, many users use the system for this purpose and have even held events such as SLanguages 2009 Conference (figure 1) and the Second Life for Moodle in day of languages, (Howard Vickers. A Second Life for European Day of Languages: Languages Treasure Hunt Event in Virtual Worlds). Nevertheless, none of the organizations or users involved in the business, as far as we know, have measured the effectiveness of the platform or the methods used for the teaching of second languages (namely the English, French, Spanish or whatever), a situation that can also become an additional cause of reduced influx of users to the SL platform and to the SL virtual teaching schools. On the other hand, Second Life users do not have a framework to

compare the effectiveness of the teaching systems within Second Life in reference to other methods or systems like Moodle or traditional teaching method, which makes that they do not decide totally by the Second Life platform for such purposes.



Figure 1: Invitation to SLanguages Conference

The aim of this research project is to define certain parameters to measure the effectiveness of teaching under the traditional method of teaching of a second language, in this case English, in the classroom and to compare it with measurements of the effectiveness of the methodology used within the SL platform. The idea is, therefore, to define the percentage of effectiveness of both methods.

These tests were carried out into two experimental phases, in which it was explained the same topics in two samples of students between 16 and 25 years of old and who were selected randomly and based on the Common European Framework level A2. Half of the class was conducted through traditional class sessions; the second half was through virtual classes in the Second Life platform. Both samples were tested to establish a baseline and post-testing to compare results in the teaching methodology.

In the future, and according to the results of these experiments, we can propose a more effective teaching method in the Second Life platform that integrates 100% technologies such as IP Voice (Skype-like) and even a Sloodle model (combination between Moodle and Second Life) – Paul Mancini. Moodle + Second Life = Sloodle), resulting in a significant development for foreign language teaching in the Second Life model.

2.3 NEED OF STUDY

At the technological level this research project has its justification in the fact that, in recent years, many technologies have been developed for learning a second language or foreign language based on models such as Moodle, traditional web pages or Second Life, all competing for a global virtual market sector. A finding that Second Life was the ideal platform for these applications because of its combination of immersive environment, chat and IP Voice could radically change the future vision for teaching a second language on the Web and a higher rate of learning effectiveness and the final user satisfaction.

At the economic level, the global market moves millions of dollars daily through the web. The different technological developments in the second language teaching field turns around three main lines which are Moodle, traditional web pages and Second Life. Second Life could regain strength in the market if effectively and through a serious and impartial investigation proved the ideal platform for teaching a second language, which could even be improved by using a Sloodle type strategy; otherwise, options such as Moodle or web pages

would be a more effective solution to the problem of effectiveness in teaching a second language.

At the academic level, it is interesting to analyze which of the options, Second Life or traditional teaching classroom carry with them high levels of information comprehension and progress in teaching of a second language. As far as we know, there is still no research like the one presented in this document.

2.4 STATEMENT OF PURPOSE

To make a measurement and check that the Second Life tool is, at least, as effective for teaching a second language, in this case English, in A2 level students in the Common European Framework as the class attendance (face-to-face) mode.

2.5 LITERATURE REVIEW

According to Molka and Deutschmann, 2009 Second Life provides numerous and exciting learning possibilities for both educators and students. Several courses offered in SL have prompted the potential student to imagine a teaming environment where they can go anywhere and do anything while interacting and sharing experience, with others. The disciplines of the humanities abound with opportunities to share social context through live

performances. They also admit that SL is a general purpose platform and as such some may use it for pure entertainment.

Historia y Características de los Mundos Virtuales (2009) is a web page that explains what virtual worlds are as well as what they are designed for. Moreover, it illustrates similarities regarding virtual worlds and the real one and what advantages are when we immerse in the unreal one.

Ureña (2010) provides a brief history about how internet sourced, pointing out what its main purposed was and how it is used nowadays. The author starts telling how internet's ideas were changing through time, highlighting the use of internet for getting general information, communicating through social reds, including their advantages and disadvantages. In the same manner, Ureña lets us take a general view of what virtual worlds are, arguing, at the same time, what advantages and disadvantages these VWs have.

As Ureña mentioned a brief history regarding technology in the previous paragraph, Rosa (2006) supports how technology has impacted human life as time passes by. She lets us refresh how technological inventions have taken place in human beings, and how these inventions have evolved until coming out with internet, keeping in mind that the ethical considerations and legal framework to use this worldwide tool which is Internet.

Marrique (2009) illustrates us in metaverse, virtual worlds, giving certain types as well as concepts necessary to understand the way in which avatars can move, interact and communicate with simulated environments provided in the metaverse. Marrique also lets us

take into consideration that the metaverse has been since long time ago, underline fields such as literature, role games, MUDs, and imagination.

Thornbury (2009) allows us to know Dogme 2.0 for English Language Teachers (ELT) which is a methodology made for teaching in the virtual worlds or metaverse. Thornbury's methodology has grown out since it was created; making that each time it becomes better in its main focus which is teaching appropriately in those worlds. The author's methodology has influenced a lot in the conception of ideas and beliefs about the importance of conversational-driven and learner-focus language teaching. Also, Thornbury pointed out ten key principles in its methodology relevant for teaching.

In Molka's and Deutschmann's (2009) book called Learning and Teaching in the Virtual World of Second Life, present two aspects relevant in the goal of teaching and learning in an adequate manner in the metaverse. These authors, on one hand, make reference to the pedagogical aspect to keep in mind in both fields (teaching and learning) which provides relevant information about designs and environments for the fields mentioned previously. On the other hand, the authors mention the variety of learning projects that can be useful for a better learning in the virtual world of Second Life.

Vickers in his article "Language Teaching Gains Second Life: Virtual Worlds Offer New Methods to Teach" argued that students improve even more their language while they are in 3D virtual worlds like Second Life because it allows students to discover more creative and realistic ways for their language skills. Vickers also recognizes that this form of teaching is its early stage, but educators are working on that to improve and provide a better teaching;

educators are trying to combine other online tools such as Skype that can enhance learning and teaching in the Second Life platform to be more precisely. In the same way Gavin Dudeney says that "Second Life brings immersive, immediate and - more importantly - supportive, social and truly constructivist - potential to distance learning. Combined with a virtual learning environment such as Moodle, this is the killer education application for the inventive teacher".

Vickers (2007) in his article "SurReal Quests: Enriched Purposeful Language Learning in Second Life" explains that there are three dimensional (3D) virtual worlds like Second Life permits students to practice and improve the target language through real life communication with native speakers found in that platform. He also said that it is necessary to combine certain tools with Second Life to provide a better experience there; therefore, he said that tools like SurReal Quests are the combination of the WebQuest approach established by Dodge (1995) with the virtual world communication available in Second Life. Those quests allow students to see their product through a text, an audio podcast or a video podcast which can also help to see the virtual world experience in a research process.

Hundsberger (2009) in her article "Foreign language learning in Second Life and the implications for resource provision in academic libraries" points out that the written work is a report of a research exercise for the Arcadia Fellowship Programme at Cambridge University Library over a period of nine weeks. With it, she wanted to show some results regarding to foreign language learning in Second Life, the 3D virtual world, and the implications for resource provision in academic libraries.

The named “Second Life as a Social Learning Environment (Presentation at SLanguages 2009)” taken from the web page www.avatarlangauges.com illustrates how a learner felt while using Second Life as a tool for practicing the target language with a native speaker. Based on that information, there was an analyzed in about how they benefit from such experiences and how language teachers can organize their lesson plans in a better way in order for their students to gain a lot when they experience a virtual world.

Russell (2010) in her book “Cases on Collaboration in Virtual Learning Environments Processes and Interactions” claims that due to technology is growing as well as its potential for constructivist learning processes and responses, it is necessary that those who are in charge of the learning process such as educational researchers, instructional designers, cognitive scientists, and information scientists become more aware of advances in these correlating fields. This article shows some responses about how technology evolved in the field for enhanced education and training.

Ruberg (2008) in his article “Using Second Life to Teach English as a Second Language” mentions that in his first article called “How to Spark Remote Learning,” talks about how to use Second Life’s immersive environment to teach learners a foreign language. He also talked to Kip Boahn – head of a German ESL school by day, a man who founded a new island named Second Life English. They talked about certain approaches to teach a foreign language in Second Life which have had relevant results.

Garcia (2008) in his article named “Breathing second life into language teaching” pointed out that that virtual reality systems like Second Life makes parallel worlds to entertain, play, commerce and even learn. As Garcia and his colleges argue that virtual worlds could be

useful for learning a new language."Virtual reality is today one of the new frontiers in computer-assisted language learning," they explain, "offering a stimuli-rich environment for language students."

Bell (2009) in his article "Learning from Second Life" supports the idea that there is a lot of interest in exploring the opportunities to learn through three-dimensional multiuser virtual environments (3-DMUVEs). Bell argues that it is necessary to perform research into the emerging cultures of use in 3-D MUVEs, taking into account the Second Life platform. The article analyzes four issues in Second Life for learning taking into consideration the social and cultural studies of 3D MUVEs. Those issues are (1) the emerging 'virtual vernacular' of Second Life builds, (2) the development of a capitalist economy within and beyond Second Life, (3) the phenomenon of 'griefing', and (4) the need to take account of the everydayness of Second Life.

In the text "Learning and Teaching in the Virtual World of Second Life ", Virtual worlds have been in existence for much longer than most people think. I first became acquainted with what could be loosely termed a virtual world in 1979. Adventure was a text-only simulation in which the user communicated with the computer by typing commands at the keyboard and had to imagine how the cave network looked. The 1980s saw the arrival of a number of Colossal Cave Adventure-like simulations that were specially designed for language learners: for example, Osman Durrani's Schloss Sehaiienburg which was a virtual representation of a real French town. The next landmark in the history of virtual worlds was Multi-User Dungeon (MUD), the brainchild of Roy Trubshaw who developed the first version of the program in 1978 while he was an undergraduate student at The University of Hsex. MUD was the first

major simulation to be available over a wide area network when it was adopted by CompuServe in the mid-1980s and renamed British Legends. The important thing that makes a MOO different from a MUD is that it not only allows text chat between its participants but it also allows them to build their own "objects", for example a room into which they can retreat and chat with their friends. The objects are not visual objects. It gathers together experts from around the world who approach education in SL in a variety of different ways. Their contributions range from Practical advice to ongoing research, covering task-based learning, assessing learners' language skills, role-play in a business studies context, collaborative creative projects, and the use of SL as an active stage for the performing arts. The important message that comes across in the chapters of this book is that virtual world technology offers new opportunities for enhancing learning and teaching.

(Fetaji, 2007) In the paper "Usability Of Virtual Learning Environment For Learning Java", it i discuss the usability of the learning environment and principles how to implement a usable learning environment. Considering the usability testing of the environment from the beginning stage of the development process, should improve the qualitative characteristics of the learning environment thus improving the abilities of users efficiently to use the environment, to be productive and fill satisfaction. We expect this way to make the learning process more efficient. According to the usability testing results we will give recommendations how to design similar usable learning environments.

(Hundsberger, 2009) The report "Foreign language learning in Second Life and the implications for resource provision in academic libraries", produced for the Arcadia Fellowship Programme at Cambridge University Library aimed to investigate foreign language learning in Second Life and the implications for resource provision in academic libraries for virtual and

real academic courses. This is an important research made Cambridge for 9 days and it was attended by 16 people including teachers, teacher trainers and students in western Europe, the goal was to observe how you can provision of teaching resources through second life. Briefly describe the beginnings of Second Life in 2003, the way I joined Second Life and also means how I can use different tools, such as chat, send email messages, voice on line since 2007 and even its own currency. Explain that by their nature immersive second life is widely used as learning environment and language teaching. Explain that for students and teachers it is an exciting new world metaphor (combines world - game) and this makes it more attractive and easier to learn, as opposed to the games in which you win or lose points.

(Brozek and Duckworth, 2010) in the article "Supporting English Language Learners Through Technology", authors speak us about the influence of software and hardware technology in order to improve the contextual cues trough video, photos and graphics for introducing and explaining new concepts.

(García-Ruiz and others, 2008) in his paper "Collaborating and learning a second language in a Wireless Virtual Reality Environment", authors explain us how Virtual Reality (VR) is today one of the new frontiers in Computer- Assisted Language Learning (CALL). Those kind of environments can be used to promote language learning and practice as it simulates reality, based on a stimuli-rich environment for language students. This paper to provide us with an introduction to VR applications in CALL, and to describe the implementation of a Collaborative Virtual Reality Environment (CVRE) running on a wireless network.

(García-Ruiz and others, 2008) in “Wireless Collaborative Virtual Environments Applied to Language Education“ (chapter XIII) talk about how wireless collaborative virtual reality can contribute to resolving important pedagogical challenges. The importance of employing mobility and multimedia in different contexts for Second language learning in the context of just- in-time-learning in formal learning situations. The article hypothesizes about how virtual reality is a tool that can help teach languages in a collaborative manner.

(Liu, 2008) This paper (“Innovating research topics in learning technology“) reports on design research which is intended to validate and refine the guidelines for generating ‘value innovation’ in Learning technology (LT) research, with the aim of helping researchers and practitioners create new or previously unidentified research topics or questions. The five guidelines—inspired by the blue ocean strategy present refreshing insights. Twelve LT practitioners and researchers were invited to provide their constructive comments on the effectiveness of the guidelines while using LT tools to test a novel framework composed of the components of the widely accepted ADDIE instructional design model and Gagne’s nine events of instruction. The guidelines were then refined in a series of rigorous qualitative research procedures based on feedback from the 12 practitioners and researchers.

(Schiller, 2009) The article “Practicing Learner-Centered Teaching: Pedagogical Design and Assessment of a Second Life Project” Summarizes a practical exercise base on the learner-centered teaching methodology principles, through a Second Life project, it is designed to engage students in active learning of virtual commerce through hands-on experiences and teamwork in a virtual environment. At the same time, it exercise proposed a virtual

assessment framework based on the virtual experience. Finally, Lessons learned, recommendations for design issues, and implications for educators are discussed.

(Vickers, 2007) the article “SurReal Quests: Enriched Purposeful Language Learning in Second Life” introduce how educational institutions can use the power of immersive virtual worlds for communicative experiences. It proposes Adapting the web-based, inquiry-oriented approach of the WebQuest (Dodge 1995) to the 3D virtual learning environment in order to teachers exploit real interactions with real native speakers using SurReal Quests, it is the combination of the WebQuest approach established by Dodge (1995) with the virtual world communication available in Second Life.

(Bell, 2009) In this paper (“Learning from Second Life”), it is argue the need to conduct research into the emerging cultures of use in three-dimensional multiuser virtual environments (3-D MUVES), focusing on the example of Second Life. Drawing on social and cultural studies of 3-D MUVES, the paper briefly explores four issues in Second Life which have profound implications for the transplanting of learning: (1) the emerging ‘virtual vernacular’ of Second Life builds, (2) the development of a capitalist economy within and beyond Second Life, (3) the phenomenon of ‘griefing’, and (4) the need to take account of the everydayness of Second Life.

(Iñiguez & García) The article “Usability Test of a Virtual Environment Focused on Learning a Foreign Language“, proposes how to test the usability in a virtual environment based on multicriteria point of view. It means that is necessary to consider the immersion, sense of presence, ergonomics and multisensory characteristics without forgetting the objective of

usability which is to assure that the system is effective, efficient and satisfactory. In order to concrete the assessment, it is necessary take into account several methods and techniques such as user satisfaction, specific interface problems, improvements possibilities, etc.

(Vickers, 2007) “Language Teaching Gains Second Life: Virtual Worlds Offer New Methods to Teach Languages”, This article shows the increasing number of places to study a second language through 3D tools, avatars and virtual worlds of Second Life, and there are several academies exploring a new market conditions unexplored yet. The article also includes the personal opinions of several virtual class attendees, who expressed positive opinions about the topic. The experience is viewed from the standpoint of constructivist and structuralist, and highlights the degree of immersion of the student in the environment, the ability to chat, exchange files and voice capabilities in the near future on-line. Second Life to study a second language is not intended to displace the teacher, it is becoming a powerful tool that leverages the natural way that current generations are using the Internet and other electronic means to exchange and acquire information.

(Vickers, 2007) This article (“Surreal Quests: Enriched Purposeful Language Learning In Second Life“) talks about the infinite possibility that Virtual Life provides for educators, it is recommend for them with the purpose of improving speaking, listening and grammar of the language management. This is done on a methodological approach called WebQuest approach Established by Dodge (1995), which is aimed at teachers to choose activities according to the goals set for the teaching of the new language, those tools include web search, recommendation pages, creating podcasts, forums creation and recommendation and creation of WebQuests among others. The advantage of this approach to education is that

students have the advantage of not only interact with the teacher in the virtual environment, but also with the possibility of doing so in the real world, as well as to share and gain knowledge by communicating with native speakers of the language target virtual virtually anywhere, anytime.

(Moussy, 2009) "Second Life as a Social Learning Environment", This article was written by a student of languages in which she explains her experience through Second Life, giving the pros and cons of it: Virtual worlds and social media are great because people can relate without fear of exposure to physical damage and protecting his true identity. It includes some pros from teaching and how we can support classroom activities with Extra SL class activities.

(Vickers, 2007) The article "La enseñanza de idiomas conquista Second Life", talks about the benefits of Second Life as immersive environment in which people not only play but also learn. The virtual school teachers as AvatarEnglish.com have been applied vip tools to improve the exchange of information, based on learning languages through speaking.

(Kumar, 2009) The text "SecondLife Paper presentation", describes what is SecondLife, what I can find there, who are those that administer it. It shows how some of their worlds have technological means including, what are and how I can customize avatars, capabilities as an avatar and how I can communicate, types of education, SecondLife religion, sports, games, art, music, theater. At the same time it speaks us about how to buy and build, and accepted programming languages and some statistics by country.

(The consultants-e, 2009) "SLanguages 2009 conference", This paper describe what will SLanguages conference 2009, an ideal place in the islands Education II and III of Secondlife. They will join students and teachers, along with companies and universities dedicated to the teaching of second languages in virtual environments. Slanguage 2009 registered users allowed to share experiences in teaching-learning another language via SecondLife, discussing tools, methodologies, successful techniques, etc. What I liked: Knowing that universities and companies succeed in the field of language teaching in SecondLife, and is now the third time that this event takes place.

(Net-learning) "Second Life Intro", makes a historical summary of the evolution SL, describes what Second Life is, the tools, some sites of interest and what is possible through SL and future possibilities. Defines some terms frequently used in SL and also talks about the educational potential well: Useful in social networking, teaching, classroom projects, role play immersive education, learning games, reality and "Blended" exploration, construction and center experimental new technologies.

(Mancini, 2006) "MOODLE+SECONDLIFE: SLOODLE", In this article author speaks about educational e-learning platforms and their usefulness and validity are summarized in Moodle, which includes more than 2600 sites in over 100 countries, but the interesting thing is that it introduces the concept of Sloodle, a combination between Moodle and SL future work education from a constructivist perspective and leverage the advantages of SL.

(Ceballos, 2008) The article "Second Life sigue latiendo", talks of the heyday of Second life after its appearance in 2002, but three years after its release and although it has many

assets, many scenarios and many affiliated users it is difficult to find a large number of active users. However, Secondlife is living an economic boom and impressive business for more than \$ 9.5 million. When it comes to education appoints prestigious universities as the Technological Institute of the Americas (ITLA), Harvard, Massachusetts Institute of Technology (MIT) and Stanford University who have already opened their campus there and initiated activities. In the case of Colombia, the University of los Andes has opened its own island to issue some kinds of architecture.

(Ruiz y otros, 2009) “Proyecto de investigación: Tecnología de Realidad Virtual de Colaboración Aplicada a la Práctica y Comprensión del Idioma Inglés“, This experimental research project speaks about the analysis and evaluation of educational issues in the use of multimodal virtual reality techniques to support the English learning.

(Montenegro, 2009) “Uso De Agentes Pedagógicos Animados“, It describes the different types of avatars that can be found and an overview of websites useful for understanding and testing the operation of various types of avatars online.

(2008) “Edd Hifeng, la inteligencia artificial en Second Life“, this paper talks about research in Second Life, about artificial intelligence. There appears Ed, a robotic-looking avatar with the intelligence of one four years old boy that is controlled not by a human but by a machine. This applies artificial intelligence project in Second Life and is sponsored by IBM. What I would do differently: Allow ED not only understand English but also other languages.

(Boahn, 2008) "Using Second Life to Teach English as a Second Language", It accounts about BOAHM experience, he is a language teacher, which creates a proprietary method for teaching a second language in Second Life, and also speaks of how successful your school and virtual immersive environment like Second Life motivates and helps the students in their learning.

(Vickers, 2007) "A Second Life For European Day Of Languages: Languages Treasure Hunt Event In Virtual World", It presents the day's celebration of language in Europe through the Second Life platform. It is posed by the new way of using language teaching communicative task-based learning. This activity is supported by the Council of Europe and the European Union. This article highlights the importance of Second Life for teaching languages in Europe and the world, and how they are implementing new methodological strategies for implementation of this teaching in the virtual world.

CHAPTER III

3 DESIGN OF THE TEACHING-LEARNING EXPERIENCE AND VIRTUAL IMMERSIVE WORLD ADAPTATION

3.1 METHODOLOGY

In this chapter, you will find what was suitable to demonstrate throughout this investigation, which goals were attained, and how this process was performed.

3.2 RESEARCH QUESTION

What level of effectiveness does the Second Life platform have in the process of learning English as a second language in modern languages students from the University of Quindío based on the A2 level from the Common European Framework?

3.3 OBJECTIVES

The general objective as well as the specific objectives have been built with the intention of seeking the level of effectiveness of the Second Life platform to teach a foreign language, which is in this case English, in comparison with the traditional class attendance.

3.3.1 GENERAL OBJECTIVE

To prove the level of effectiveness of the Second Life platform in contrast with the class attendance (face-to-face) modality in a classroom to the teaching of a second language, in this case English, in students in A2 level based on the Common European Framework.

3.3.2 SPECIFIC OBJECTIVES

To poll the students' tendencies towards programs on the network suitable for the learning of a second language

To test students' knowledge about immersive environments appropriate for the learning of a second language.

To check students' preference between (1) virtual and (2) traditional environments for the teaching and learning of a second language

To compare obtained results between the traditional teaching method and virtual immersive environments.

To poll the user experience on the 3D immersive environment

3.4 HYPOTHESIS

The Second Life platform tool is at least as effective to the teaching and learning of a second language (English) for the modern languages students from the University of Quindío who are in the A2 level from the Common European Framework as the class session (face-to-face) method (traditional teaching).

3.5 VARIABLES

The following variables breakdown into three parts the elements needed to focus the project; they are the Second Life Platform, the language itself and the students tested.

3.6 INDEPENDENT VARIABLE

The methodology used: virtual immersive world vs. face-to-face traditional method.

3.6.1 DEPENDENT VARIABLE

The level of learning of a second language achieved through the Second Life tool as a virtual learning tool through a new thematic to be taught through the use of the Second Life platform as a virtual teaching too. (There will be two modalities to the teaching).

3.6.2 MODERATOR VARIABLE

Modern Languages students from the University of Quindío whose level of English is A2 based on the Common European Framework and that they can learn a new topic through the use of the Second Life platform as a virtual teaching tool.

3.7 VIRTUAL IMMERSIVE PLATORM ADAPTATION

3.7.1 Selection the virtual platform

One of the features of 3D immersive environments is that the users are represented through avatars. The user "lives" that world through a virtual "I" that is called avatar "[8]. Additional to this, an immersive virtual environment must guarantees us the characteristics of Corporeity of the avatars and the environment as minimum. Interaction between avatars and interaction with the elements of the virtual world and finally persistence; in other words, avatars do not disappear when you going out the virtual environment (Bath, 2012). Taking into account these characteristics and preliminary design of the experiment were evaluated 4 tools, they are: Open Sim, Second Life, Unity and Vastpark which compare their characteristics and is chosen the one with the best score obtained according to the case of use raised for the test in question. For that there has been used the Virtual tool World Finder, from the page: <http://www.daden.co.uk>, which offers the possibility to compare the 4 platforms listed according to the specific selection of parameters.

The consultation on that page showed as result that the appropriate environment was SecondLife, here there is attached the list of chosen parameters and the score obtained for each platform:

<i>Can build and customise in-world:</i>	<i>(rather than using an external 3D design tool or asking us to change everything)</i>
<i>Highest possible quality graphics:</i>	<i>(yes this is a use case not technical requirement, and note that not virtual world will currently match the best computer game)</i>
<i>NEED TO MODEL A LARGE AREA (> 1 sq km):</i>	
<i>Custom client:</i>	<i>(e.g. no vendor branding, only functions needed by user etc)</i>
<i>Engagement mode:</i>	<i>(This is about users per activity - it is assumed that there will always be multiple concurrent users)</i>
<i>Runs in browser (with plugin):</i>	<i>(no 3D virtual world runs yet in a browser without a plugin)</i>
<i>Runs on mobile:</i>	
<i>Deploy on own servers:</i>	<i>(i.e. behind firewall to keep data secure)</i>
<i>Robustness/security of code:</i>	<i>(i.e. minimal chance of code failures or exploitation)</i>
<i>Import of existing 3D models:</i>	<i>(e.g. from Collada, 3D Studio max etc)</i>
<i>Lowest Cost Possible:</i>	

Security of Supply: (combination of size of user base and likelihood of vendor still being in business in 5 years)

The best match for your requirements is Second Life with a score of 257

Second Life scored 257

Unity scored 243

OpenSim scored 245

Vastpark scored 217

Those scores were obtained from <http://www.daden.co.uk/world-finder/>.

As additional argument, the more active MVI (Mundo virtual inmersivo) and used in higher education is SecondLife (SL), launched in 2003 by Linden Lab2 where universities make presence not only as a pedagogical tool, but also to make known to the world and attend to different educational plans[10]. Furthermore, this platform was chosen because its physics engine is advanced (Havok 4), users can hear and see the video and audio streaming within SecondLife which is compatible with MPEG audio and Ogg Vorbis formats (it is required to install Quicktime).

The negative point is the necessity of the machine, which, in order to run smoothly with the platform must fit with the minimum characteristics required by www.secondlife.com.

Internet Connection: Cable or DSL Cable or DSL Operating System: XP, Vista or Windows 7.
CPU with SSE2 support, including Intel Pentium 4, Pentium M, Core or Atom, AMD Athlon 64

or higher. 1.5 GHz (XP), 2-GHz (Vista) 32-bit (x86) or higher. RAM: 1 GB or more. Screen Resolution: 1024x768 pixels or higher graphics card and XP or higher operating system.

3.7.2 Adequacy or searching of appropriate environments for the development of the thematic to be implemented

Depending on how the environment is adequate and be developed, this will be attractive or not to the student (in this case user), which "receive plants of implementation in small groups. Instructors use these plans to determine the work on Secondlife and the selection of learning tools that students, as a group, are introduced according to their position"[17].

SecondLife is based on a metaphor of real estate located in an ocean, in which the users can buy islands. These islands can be "developed", which means that any 3D artifact such as buildings, cars, clothes, etc ... can be built using scripting language for SecondLife [12]. However, the use of environments already recreated and that fit to the purpose of teaching and a simple construction, and that have similar characteristics to those of a virtual classroom such as: using interaction tools such as discussion forums, live chats and email, and that offer us certain advantages as: a more friendly environment for users, ease of configuration and the use of integrated tools (email, forums, chat, etc.). Integration on Internet. Management of a single program: the browser. Ease of adapting of content. [18], are sufficient to obtain good results. It is so to set a section within an island we use prims (primitive object) or primitive (generally cubes extracted from an environment). Keep in mind that each island has an area of 512 m², and that has a total of 15,000 prims (on SecondLife the term "prim" is used to refer

to primitive objects. Except your avatar (AV or AVI), the floor of the simulator and the trees, all the objects on SecondLife are made of Prims. - http://wiki.secondlife.com/wiki/Acerca_de_los_Primis) to build approximately 117 new objects.

3.7.2.1 Defining shape, size and content of the screen Prims for our experiment.

For this experiment we need to build four screens previously designed each one for a specific function and all of them represented on a blog. To start the process of its construction we right-click on the floor or wall of the environment and choose the option build to extract the prim in which it will form the first screen (Figure 2).

After having extracted the primitive we use dialog box with the options that SecondLife provides construction and contains the tabs: General, Objects, Character, texture, content, to move, to adjust, to construct or to modify terrain.

Then, we use the texture tab to fill the screen with the content of one of the pages of the blog and then we modify the object's location on the island by the lines available in the Move option, which are represented by blue arrows (to raise or lower the object), green (to move horizontally) and red (to move to depth).

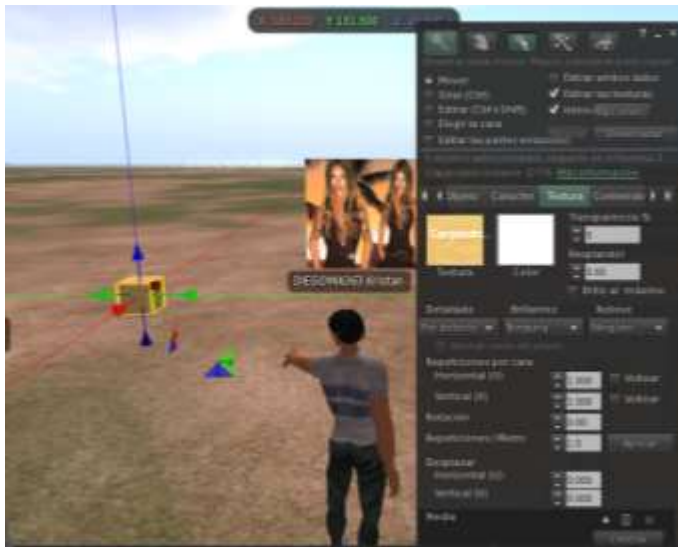


Figure 2: Extraction of a primitive

The stretch option (Figure 3) is used to extend our screen horizontally and vertically our screen until the desired size, this is based on an array of boxes of colors: Blue (to lengthen or shorten the object vertically - X axis), green (to stretch or pick up the object in the horizontally – Y axis) and red (for thicker or thinner the object in depth - Z axis). Additionally, in the corners of the object we have access to gray nodes which allow the free stretching of the object in any of the directions already indicated. This can be done manually holding click on the point we want to stretch and move in the direction that each color arrow or changing the values for the axes in the dialog box displayed for such purpose.



Figure 3: Expand or close the prim



Figure 4: Indicator or size guide in meters

When we try to stretch the elements, an indicator or guide appears which shows us, in real time, the size in meters that we are expanding or reducing the size of the modeled prim (Figure 4).

This guide allows us to be accurate in modeling the size because it displays a visual scale in meters through which we move and that remains visible while running this operation.

After you have located and expanded the screen, and if necessary, we can implement measures to rotate or tilt our wall (Figure 5), in order to place it perpendicular to the ground, which is not always flat (like in the real world).

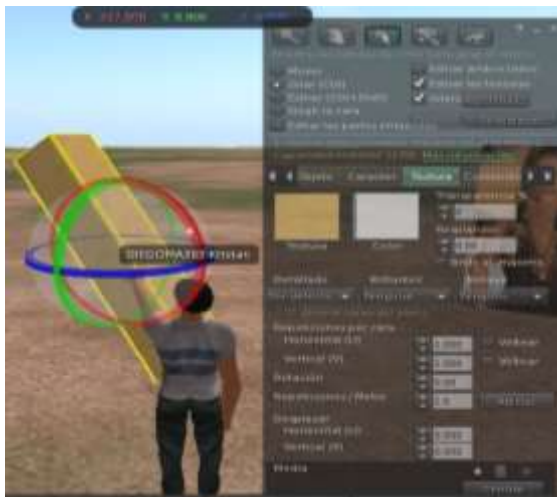


Figure 5: rotation prim axis

This process as well as the others mentioned can be performed with pressed click on any of the three axes of rotation arranged: Blue (for the horizontal axis), red (for the vertical axis) and green (for the depth axis), or typing manually to change the values of the axes specified in the dialog box displayed for these effects.

When attempting to perform this operation turning to SecondLife, it makes visible a transporter of 360 degrees which allows us to correct the turns degree by degree as shown in the figure below (Figure 6).



Figure 6: Guide for rotation in degrees

Finally, we use the texture tab. There we choose face of the object that we want to fill (by clicking on the option Choose face and then in the face of the object we want to fill), then we click on the button with the icon "+" (at the bottom of the displayed dialog box) and in the options box that appears we write the web address or blog where we want to load the contents of the object (Figure. 7).

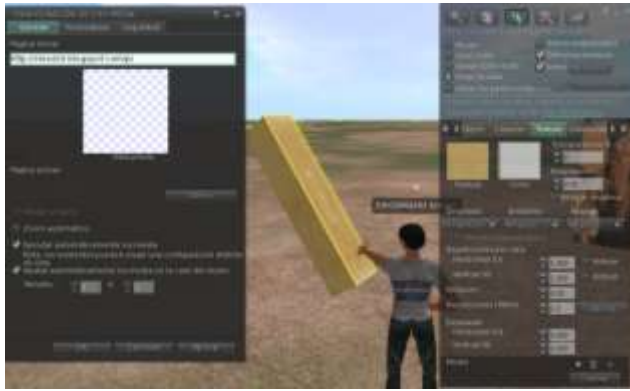


Figure 7: Texture Tab

SecondLife will offer us a real-time view of the face of the object with the filling chosen. We apply the changes and agree to close the configuration options of prim and ready, and we already have created our first window. We proceed in the same way for the other three windows required to run the experiment.

We can also make constructions in applications such as SIMM ON A STICK, which simulates a 3D environment and permit to convert my team on served and user, build and export these constructions. Use OpenSimm, open Crocket or other creating programs of 3D objects that allow us to export or do rezzing (create or put something from your inventory to the virtual world) such as Maya or 3D MAX, as well as use public Sandboxes (places where you can build and then make a copy of the work to save in an inventory or apply on an avatar or island) to make buildings to be reused. However, when choosing this option it must take into account that Secondlife charges us for calculating the amount of object prims we want to load.

Additionally, there is a large market of components (reusable buildings or objects) that are readily available via the web or on SecondLife Marketplace [26] and other related pages.

3.7.2.2 *Using the created screens.*

For this adaptation of specific environment we rely on the concept of active learning route proposed by us in the method in development called 3D LIMMEN, a strategy which in this case proposes the implementation of 4 screens based on the development of a blog (<http://sleedch.blogspot.com>) or web page about the thematic chosen to treat. Each one of the 4 windows must fulfill with a specific mission within the teaching-learning context planned as: window 1 (presentation of the language thematic to develop with its corresponding grammatical aspects), window 2 (presentation of a context or character with base on which to develop the thematic), window 3 (Trip of the learning route and activities to develop during it within the 3D world - chosen environments) and window 4 (Links with the thematic test). Here there are attached the windows models built and the blog base (Figure 7):





Figure 8: Created Screens at EAFIT - SL

The final result of the LIMMEM 3D method implementation for this experiment generates the following implementation for each window:

Second Life English Experience

Progress: 100% | 1. INTRODUCTION TO BE - PRESENT TENSE | 2. Character MICHAEL JACKSON | 4. COMMENTS

SCREEN 2: Activities to do online... | SCREEN 4: Test your knowledge | 3. HOMEWORK: Listening game

SCREEN 1: Review - Grammatical structures

SPELLING OF THE THIRD PERSON

1. Verbs ending in *-O, -CH, -SH, -SS, -X, or -Z*, add *-ES* in the third person.
Go - goes / Catch - catches / Wash - washes / Kiss - kisses / Fix - fixes / Dance - dances

2. Verbs ending in a consonant + *-Y* remove the *Y* and add *-IES*.
Marry - marries / Study - studies / Carry - carries / Worry - worries

NOTE: Verbs ending in a vowel + *-Y*, just add *-S*. Play - plays / Enjoy - enjoys / Say - says

3. Irregular Verbs
Be - is / Have - Has

4. The rest of the verbs just add *-S*.
Get up - gets up / Sleep - sleeps / Know - knows

EXAMPLES

- Luke goes to work at eight o'clock.
- She takes a shower before she eats breakfast.
- Sarah studies English.

NEGATIVE SENTENCES IN THE SIMPLE PRESENT TENSE

Use *Do not* or *Does not* with all verbs EXCEPT "To Be" and "Modal verbs" (can, might, should etc).

Figure 9: window 1. Grammatical structure

Window 1: Third Person Rules. Grammatical Structures Review

(<http://sleedch.blogspot.com/p/screen-1.html>)

Second Life English Experience

Home Page | INTRODUCTION TO BE - PART THREE | Chapter MICHAEL JACKSON | SUBSCRIBERS | SCREEN 1: Be

SCREEN 2: Activities to develop | **SCREEN 2: Topic presentation** | SCREEN 3: Activities to develop

SCREEN 2: Topic presentation

What is a daily routine?

A **daily routine** is an action that you usually do in your life. For example, wake up, have breakfast, go to school, etc. The action or actions represents a routine in your daily life.

To talk about **daily routines**, you need to know some grammatical aspects which are the simple present and third person.

Jin's Daily Routine

I **wake up** at 6 every morning and **take** my dog. He **is** a flower shop and he is at the flower market at four.

Then when he **comes** back we **take** all the flowers into the shop. I **take** the telephone orders for him so he **knows** what he **needs** to deliver that day. Then I **make** a list of his for my mate while she's still in bed, then I **go** my breakfast and **go** to school. My mother **has** a vet, there, she **gives** some of the pills around my city. She **is** not an animal but I make she love them so much.

On weekends, on Saturday I **work** in the shop and **help** my mother arrange the flowers in the church for Sunday. Then on Sunday I **go** to church in the morning. Later, I **play** football with some friends although some of them **don't** like that sport.

So, **do** your father have a flower shop? Or **do** your mum have a vet? **Do** you do the same activities like me?

- USE THE PRESENT SIMPLE TO DESCRIBE A DAILY ROUTINE (NO 3RD PERSON BEEN APPLIED)**
- USE THE PRESENT CONTINUOUS TO DESCRIBE A DAILY ROUTINE (1ST PERSON)**
- USE THE PRESENT PERFECT TO DESCRIBE A DAILY ROUTINE (1ST PERSON WITH ADJECTIVES)**

Remember the link in the text and write again to express similar sentences in different contexts. You can take you want read how to use grammar in your daily routine.

This lesson English online at <http://www.sleedch.com/eng/online/2011/01/21/>

Figure 10: Window 2. Topic introduction

Window 2: Topic Presentation, Daily Routine.

(<http://sleedch.blogspot.com/p/screen-2-topic-presentation.html>)

Second Life English Experience

Home Page | INTRODUCTION TO BE - PART THREE | Chapter MICHAEL JACKSON | SUBSCRIBERS | SCREEN 1: Be

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SCREEN 3: Activities to develop

- Write a list of activities for your daily routine and why you choose each one (simple sentences).
 Example: I wake up at 6 every morning and take my dog. He is a flower shop and he is at the flower market at four.
 Expected product: A list of activities for your daily routine and why you choose each one (simple sentences). Read this to read this (readable your own activities).
- Write a list of activities for your daily routine (to use 'I' and 'we') and then write a list of activities for your daily routine (to use 'he', 'she', 'it', 'they', 'you', 'we', 'they').
 Expected product: A list of activities for your daily routine (to use 'I' and 'we') and then write a list of activities for your daily routine (to use 'he', 'she', 'it', 'they', 'you', 'we', 'they').
- Write a list of activities for your daily routine (to use 'I' and 'we') and then write a list of activities for your daily routine (to use 'he', 'she', 'it', 'they', 'you', 'we', 'they').
 Expected product: A list of activities for your daily routine (to use 'I' and 'we') and then write a list of activities for your daily routine (to use 'he', 'she', 'it', 'they', 'you', 'we', 'they').

Figure 11: Window 3. Activities to develop

Window 3: Activities to be developed, places visit and expected products.

(<http://sleedch.blogspot.com/p/screen-3-activities-to-develop.html>)



Figure 12: Window 4. Testing their knowledge

Window 4: Testing their knowledge, exercises

(<http://sleedch.blogspot.com/p/screen-4-test-your-knowledge.html>)

In the window 1 is intended that the student has the summary of grammatical elements to be learned and to be used from the second language.

The window 2 introduces the grammatical elements seen in window 1 through application of them within a context in particular.

The window 3 proposes to visit different places within the immersive world in order to carry out various activities that will be tested and used as evidence in the training process.

Finally, the window 4 proposes a series of pages through which we can, through a test, evaluate the new knowledge learned.

The learner interaction with the screens is done throughout the whole process, either as a consultation (Screen 1), as applied example (screen 2), and calendar of activities to follow (Screen 3) or as part of the training of the learning (Screen 4). During the tour given on

screen 3 students will generate deliverables that his/her teacher checks at the same time and to be able to keep constant communication via chat, teleport to a particular place in real time or use of email.

3.8 DESIGN OF EXPERIMENT

Pretest and post-test designs are widely used in behavioral research. The principal objective of this kind of model is to compare groups (figure 13) and/or measure change resulting from experimental treatments. The focus of this document is on comparing two groups of students of the same classroom with pretest and post-test data and related to the same language learning English topics. According to Dimiter m. Dimitrov and Phillip D. Rumrill (2003), in rehabilitation research, change is commonly measured in dependent variables such as employment status, income, empowerment, assertiveness, self-advocacy skills, and adjustment to disability. The measurement of change provides a vehicle for assessing the impact of rehabilitation services, as well as the effects of specific counseling and allied health interventions.

This kind of model is the one we used in our research project because it allowed the comparison between the two groups, the experimental and control ones.



Figure 13: Students in a virtual session

3.9 ORGANIZATION OF STUDY

The control and experimental groups for the pretest / post-test stages were composed by a group of participants in the research (Students of first semester of modern languages career in a Public University), of experimental character, which presented a pretest about one new topic from the English subject (dependent variable); next, both groups were separated according to the independent variable. In this case, the experimental group, using the Second Life platform as a mechanism for learning a second language and the control group, working over traditional teaching method. Then, the study proceeds to make one class session, one for the traditional teaching method and the same one under the Second Life platform, which had the same topic to be studied. After performing this first session, the experimental and control groups were post-tested in the dependent variable (about the topic studied). The pretest and post-test data were compared and analyzed using different scores, analysis of covariance, or a statistical technique called analysis of covariance, based on a mixed model

to determine if the independent variable produced a different or similar effect to the dependent variable.

3.10 TIMETABLE

In order to achieve all the activities to be performed, it was necessary to design a timetable taking into account the participants' free time plus the our own time with the purpose of doing the tasks in mind in a chronological time sequence:

2010						2011										
Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
CI	CI	CI	CI	SA	SA	SA	CD	ED	ID	ID		IM	IM	DA	DA	FC

CI	Collection of information
SA	State of the Art
CD	Conceptual Design
ED	Experiment Design
ID	Instruments Development
IM	Implementation
DA	Data Analysis
FC	Findings and Conclusions

Chart 1: Timetable

3.10.1 INSTRUMENTS AND TECHNIQUES

The following instruments and techniques were handled with the purpose of getting relevant data suitable for this research project.

3.10.1.1 SURVEY

The objective of this survey was to determine the knowledge level about 2.0 webs and immersive environments in order to determine our intervention to train in the management of the Second Life Platform. See the format in table 1 in the appendices.

3.11 PRETEST

The pretest was about the “Present Simple”, especially to analyze students’ knowledge about the third person. This pretest was composed by five elements. In the first part, the students would need to fill some blanks with some verbs in order to know if they knew when to apply the third person. The second part searched for the students’ level in reading comprehension as well as the grammatical structure to answer some questions according to the reading in charge. The third part consisted on completing a chart to check students’ knowledge of the rules that compose the third person. The fourth part was a multiple choice task aiming at showing the students’ ability to reject wrong structures among some sentences illustrated. And the fifth part was related to the students’ writing production using the simple present, especially their understanding of the third person.



Figure 14: Students using social network

3.11.1.1 SECOND LIFE INTRODUCTION

Students were introduced into the use of the tool through the following steps:

- A. Download the installer (Second Life Viewer latest version)
- B. How to the install the product
- C. How the product runs
- D. How to enter into the Second Life platform
- E. How to create and to personalize the avatar
- F. How to move into the platform (walk, run, fly, teleport)
- G. How to use gestures and objects
- H. How to interact with others (chat, I.P. Voice, invitations)

All of this was done in two hours approximately.



Figure 15: Interaction on Second Life

3.12 POST-TEST

The post-test aimed at determining the students' final knowledge about Present Simple, especially in the application of the third person. This post-test was composed by five elements similarly to the pretest. In the first one, as in the pretest, the students needed to fill some blanks with some verbs, however, there were less blanks than the pretest. The second one was a short text to check students' both reading comprehension and the grammatical structure to answer some questions of that text. The third one, which was a chart, showed students' understanding of the third person rules. The fourth one was a multiple choice task of answers and sentences to see the students' capacity to identify the right sentence. And the fifth one showed the students' writing production level for using the simple present, and especially, for applying the third person when necessary.



Figure 16: First class sesión

3.12.1.1 USER EXPERIENCE EVALUATION

The evaluation was developed as a test composed by 10 questions oriented to know how the tested students felt with the interaction of the Second Life platform, favorite tools, communication between classmates and professor, points of view about the requested places and activities, what was the idea about every single avatar which represented them and how they felt when they had to use the second language on the platform. The questionnaire is included in the appendix 6.

The following chart illustrates different instruments that we developed based on known techniques in order to evaluate the performance of both testing environments (virtual and traditional):

NAME	DESCRIPTION	OBJECTIVE	CRITERIA
SURVEY	This survey had 11	<ul style="list-style-type: none"> To determine the 	The criteria taken for evaluating this

<p>(Appendix 2, page 67)</p>	<p>questions in which the student needed to answer in 3 different ways: multiple choice, yes-no or open answers.</p>	<p>students' actual level in the usage of some TICs for the learning of a foreign language in an immersive virtual environment.</p>	<p>survey was in the following manner:</p> <ul style="list-style-type: none"> • To classify the options given by the students in the multiple choice questions. • To count the number of yes and no answers. • To classify the answers given in the open questions into sections.
<p>PRETEST (Appendix 3, page 68)</p>	<p>This pretest was composed by 5 units about the Present Simple in which students needed to complete some verbs with the inflexion of the third person, answer some questions and write a short paragraph.</p>	<ul style="list-style-type: none"> • To check students' knowledge about the inflexion of the third person either isolated or within a context. • To analyze students' discrimination about wrong sentences. 	<p>They were the following:</p> <ul style="list-style-type: none"> • To verify the correct use of the third person inflexion through quantity of hits obtained. • To analyze students' writing sentences taking into account the third person inflexion, using a grid (appendix) that evaluate coherence, cohesion, and sentence structure. • To check students' match between a question and its correct answer in every single question proposed.
<p>POST-TEST (Appendix 4, page 71)</p>	<p>This post-test was composed by 5 units about the Present Simple similarly to the units in the pretest. They were about</p>	<ul style="list-style-type: none"> • To check students' improvement about the inflexion of the third person either isolated or within a 	<p>They were the following:</p> <ul style="list-style-type: none"> • To verify the correct use of the third person inflexion. • To analyze students' writing sentences taking into account

	the use of the third person inflexion, the matching between a question and its appropriate answer and the writing of a paragraph.	context. <ul style="list-style-type: none"> To check how much the students improved regarding discrimination of wrong sentences. 	the third person inflexion, coherence, cohesion, and sentence structure. <ul style="list-style-type: none"> To check students' match between a question and its correct answer.
<p style="text-align: center;">USER EXPERIENCE</p> <p style="text-align: center;">(Appendix 5, page 74)</p>	The user experience was applied through a video tape recorder.	<ul style="list-style-type: none"> To check students' reactions after the experience of learning an English topic on an immersive virtual environment. 	<ul style="list-style-type: none"> To categorize students' answers between advantages and disadvantages about the learning an English topic on an immersive virtual environment.

Chart 2: Instruments and Techniques

3.12.1.2 MATERIALS

The technical elements which were required for this research project are listed below:

- The Second Life platform
- Blog with relevant information for our experiment
- Web pages about the thematic of study
- Computer's room
- Web connection and computers
- Virtual learning method based on virtual immersive environments
- Pretest document

- Post-test document
- Survey document
- Implementation
- User experience video tape recording

3.13 IMPLEMENTATION

We took a group of students of modern languages who were in first semester from a public university in Colombia and we divided them randomly into two groups. We chose the same topic for both groups, which was, in this case, the Present Simple Tense. The first group (the control group) studied the proposed topic in the traditional environment in the classroom. The second group (the experimental group), was trained under the Second Life platform and attended to some class sessions with that platform to work the Present Simple Tense. Both groups used the same lesson plan (Appendix 1, page 71), the same thematic and were pretested and post-tested with the instruments already mentioned. Finally, data was tabulated and compared with the objective of observing the results of both environments.

The sessions that were applied are explained below:

- First session, training about the new platform (Second Life) (figure 17).
- Second and third sessions were used to explain the thematic in context. In other words, it was the application of the lesson plan.

- The fourth session was used to assign the experimental students to fulfill a series of activities called “map of activities” in which the learners needed to do it step by step until everything was done.



Figure 17: Training Session

3.14 POPULATION DESCRIPTION

The population taken for this study was composed by students from a public university in Colombia (figure 18) who were based on an A2 European Common framework level. Their ages varied between 16 and 25 years old. The Socio-economical status was between 1 and 3 according to the SISBEN¹ level, and they were influenced by their native language which was Spanish.

¹ SISBEN: Potential Beneficiary Identification System for social programs used by Colombian Government.



Figure 18: Tested students

3.15 TECHNIQUES

In order to recreate an experimental environment in virtual sceneries, we developed two different branches in this work, the first was a “role playing201D in a planned scenery. The Second one is called “Learning path”. Both are based on the same principles, method and approach.

Role playing is defined as a useful technique for thinking about difficult situations before they occur, so that you have good pre-prepared responses for the different eventualities that can arise. Role-playing can also be used to analyze problems from different perspectives, to spark brainstorming sessions, to experiment with different solutions to a problem, to develop team work, and help group problem-solving.

Role-playing happens when a group of people act out roles in a particular scenario. The scenario is usually based on a problem that needs a solution, a situation that needs to be more closely examined, or a case or issue that demands a different perspective.

By acting the scenario through, participants can pre-experience the likely reactions to different approaches, and can get a feel for the approaches that will work and those that might be counter-productive.

They can get a good feel for what people are likely to be thinking and feeling in the situation. (Mindtools.com)

Learning path is defined as follows: The chosen route, taken by a learner through a range of (commonly) e-learning activities, which allows them to build knowledge progressively. With learning pathways, the control of choice moves away from the tutor to the learner. "The sequence of intermediate steps from preconceptions to target model form what Scott (1991) and Niedderer and Goldberg (1995) have called a learning pathway. For any particular topic, such a pathway would provide both a theory of instruction and a guideline for teachers and curriculum developers" [27].

As Jih, H.J. mentioned in the "Journal of Network and Computer Applications" that "Interactive courseware aids learners to access information and tools by which they can construct personalized transitions between the information to be accessed and their own cognitive structures. The process of navigation enables learners to experience the content of interactive courseware. Learning pathways also reveal the learning trails while learners traverse any interactive environment. Since learners have unique knowledge structures based upon their experiences and abilities, the ways that they choose to access, interact, and

interrelate messages in interactive courseware also vary. Studies on pathways help us to explore and explain human behaviors during learning processes" [28].

CHAPTER 4

4 THE EXPERIMENT

4.1 DATA COLLECTION

The collection was obtained over various days to apply the instruments suitable for this research project.

4.1.1 DATA ANALYSIS AND RESULTS

The following data collected was analyzed taking into account the students' results before (pretest) and after (post-test) the implementation and the obtained results were compared and analyzed through comparative grids and statistic charts.

4.1.1.1 SURVEY ANALYSIS

For a deeper analysis, both the experimental and the control group-results were analyzed according into their sex genres and that data showed the following:

4.1.1.1.1 EXPERIMENTAL WOMEN'S GROUP

In this group, 87% of the surveyed students showed a tendency towards the use of social network called Facebook as the most used.

However, 62.5% of the surveyed students claimed that the chosen social network mentioned previously did not serve them to their learning process.

50% of the surveyed students answered YouTube as an optimums tool to learn a second language

75% of the surveyed students affirmed to have studied English via Web and 37% affirmed to have used Messenger for such purpose.

The 75% of the surveyed students claimed that if there had existed a tool that combined the social network capacities, this one would have been the most used to study a second language.

62% of the experimental learners did not know the virtual worlds and only the 37% knew about Second Life.

Finally, 87.5% of the surveyed students said that they preferred to study in a classroom under the traditional teaching method.

4.1.1.1.2 EXPERIMENTAL MEN'S GROUP

In this group, 83.3% of the surveyed students showed a tendency towards the use of social network called Facebook as the most used.

However, 66.6% of the surveyed students claimed that the chosen social network mentioned previously did not serve them to their learning process.

50% of the surveyed students answered YouTube as an optimums tool to learn a second language

50% of the surveyed students affirmed to have studied English via Web and 33.3% affirmed to have used Google Talk for such purpose.

The 83.33% of the surveyed students claimed that if there had existed a tool that combined the social network capacities, this one would have been the most used to study a second language.

66.66% of the experimental learners did not know the virtual worlds and only the 16% knew Sofia as a virtual world, showing that they were confused with this aspect.

Finally, the 100% of the surveyed students said that they preferred to study in a classroom under the traditional teaching method.

4.1.1.1.3 CONTROL WOMEN'S GROUP

In this group, 71.4% of the surveyed students showed a tendency towards the use of social network called Facebook as the most used.

In this case, 42.8% of the surveyed students claimed that the chosen social network mentioned previously did not serve them to their learning process.

The 100% of the surveyed students answered YouTube as an optimal tool to learn a second language

71.4% of the surveyed students affirmed to have studied English via Web and 28.5% affirmed to have used Google Talk and another 28.5% Messenger for such purpose.

The 100% of the surveyed students claimed that if there had existed a tool that combined the social network capacities, this one would have been the most used to study a second language.

71.42% of the control learners did not know the virtual worlds and a 28.5 did not answer, showing that this subject was very new for them.

Finally, the 100% of the surveyed students said that they preferred to study in a classroom under the traditional teaching method.

4.1.1.1.4 CONTROL MEN'S GROUP

In this group, 66.66% of the surveyed students showed a tendency towards the use of social network called Facebook as the most used.

However, 66.66% of the surveyed students claimed that the chosen social network mentioned previously did not serve them to their learning process.

83.3% of the surveyed students answered YouTube as an optimums tool to learn a second language

Only 16.6% of the surveyed students affirmed to have studied English via Web and 50% affirmed to have used Google Talk for such purpose.

The 100% of the surveyed students claimed that if there had existed a tool that combined the social network capacities, this one would have been the most used to study a second language.

66.66% of the control learners did not know the virtual worlds and 16.5 said to have known Open Line.

Finally, the 100% of the surveyed students said that they preferred to study in a classroom under the traditional teaching method due to they had the impression that such method was more effective.

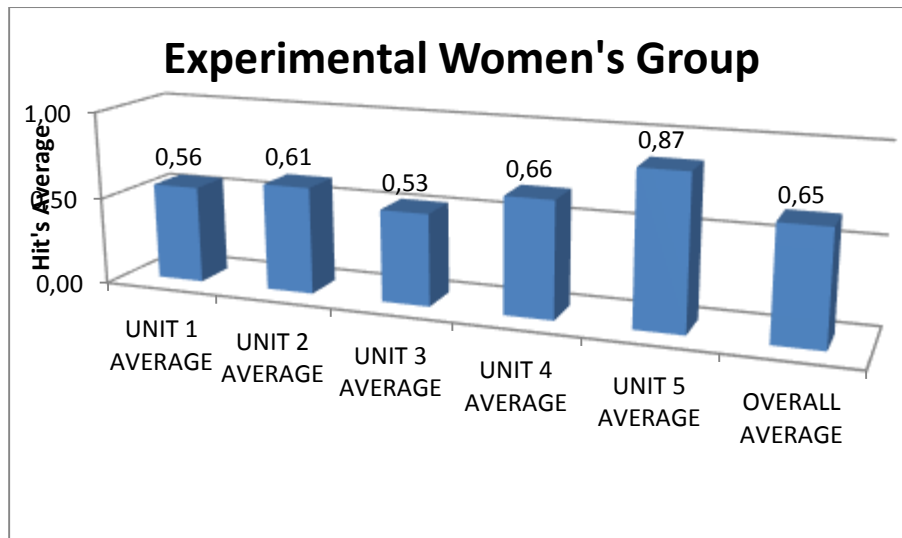
In summary, all groups have used social networks such as Facebook and video archives such as YouTube; however, it had not necessarily had not helped in their learning process of a second language. Over 60% didn't have previous experience in the use of immersive environments. The students' percentage that believed that traditional environments are more comfortable and effective for studying purposes is almost 100% in men as in women.

4.1.1.2 PRETEST ANALYSIS

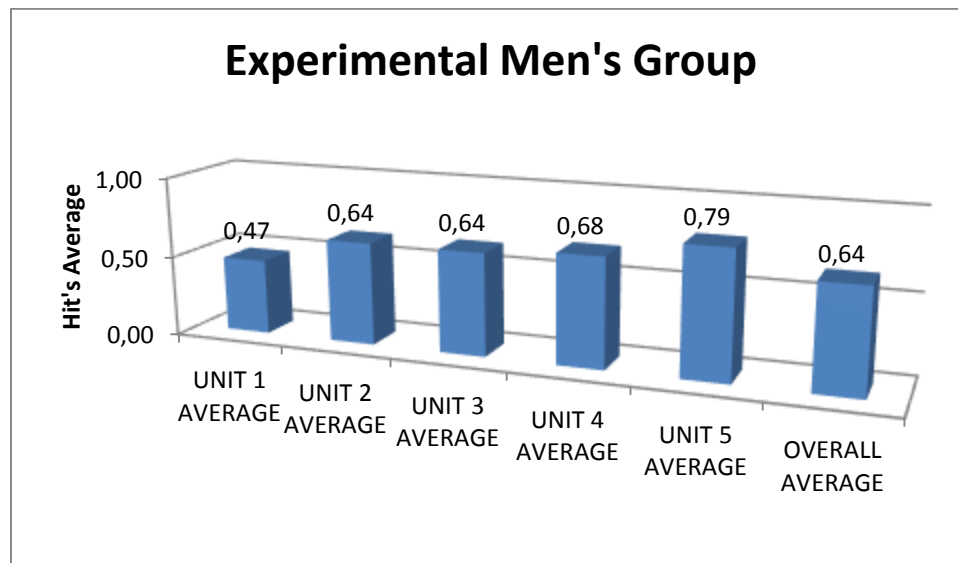
Data was collected in order to analyze the level of the tested students concerning the topic in charge, which was the present simple; especially, in the use of third person inflexion. Secondly, the analyzed results were obtained on one hand, through group work, and on the other hand, through individual work. It was done for both the experimental and control groups. Also, a deeper analysis was done through the division of the groups by their sex genre having as referent not only the score obtained but also the percentage obtained through pretest knowledge about the thematic in charge. The results are illustrated on the following diagrams.

4.1.1.2.1 EXPERIMENTAL GROUP BY SEX GENRES

The following 2 figures show the average the experimental male and female students obtained in every unit of the pretest and their overall average:



Graph 1: Pretest Average per unit-Experimental Women's Group



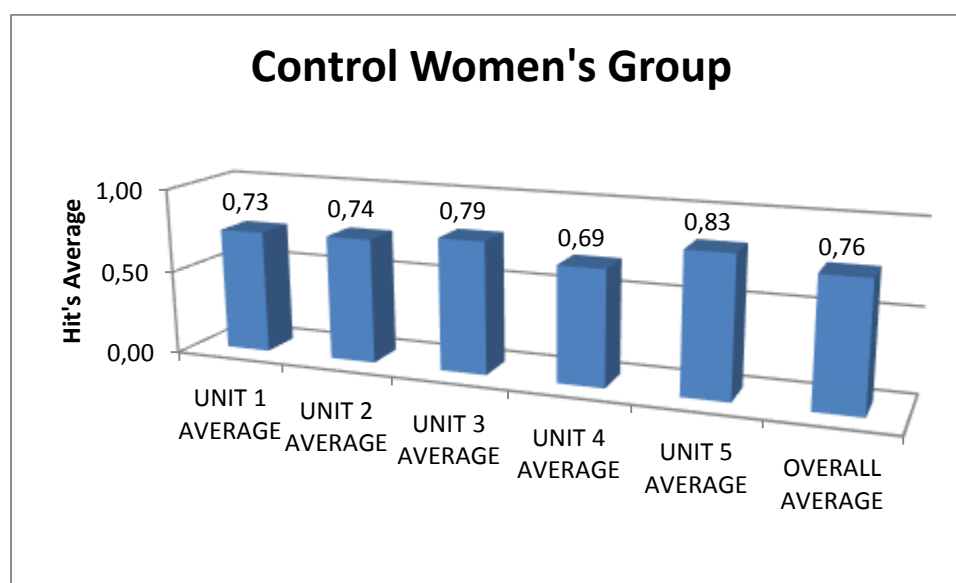
Graph 2: Pretest Average per unit-Experimental Men's Group

The hit's averages in both groups were similar. However, unit 1 and 5 had a certain advantage in the women's group regarding the use of the third person and the writing of a small paragraph using the same concept.

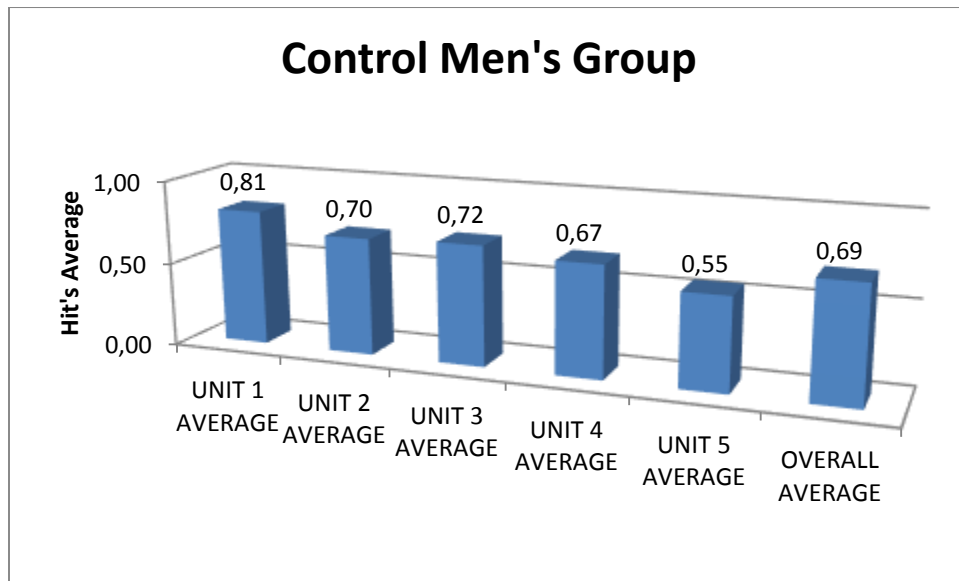
In contrast, the units 2, 3 and 4 had an advantage for the men's group, indicating that they were better in the application of the third person in contexts.

4.1.1.2.2 CONTROL GROUP BY SEX GENRES

The following 2 figures show the average of the control male and female students obtained in every unit of the pretest and their overall average:



Graph 3: Pretest Average per unit-Control Women's Group



Graph 4: Pretest Average per unit-Control Men's Group

To this group the pretest showed the following particularities:

The women's group kept a stable line in the thematic used, being better in the units 3 and 5; in other words, in the use of the third person and in the structure of paragraphs.

The men's group was marked by a low line from the unit 2 (1 as the maximum score) to unit 5 (0 as the minimum score) indicating us that they were better in the use of inflexion and not as able to the use of thematic within a context, even more if it is written.

As particularity, it was necessary to take into consideration that this group always showed a higher knowledge in relation to the thematic to be applied

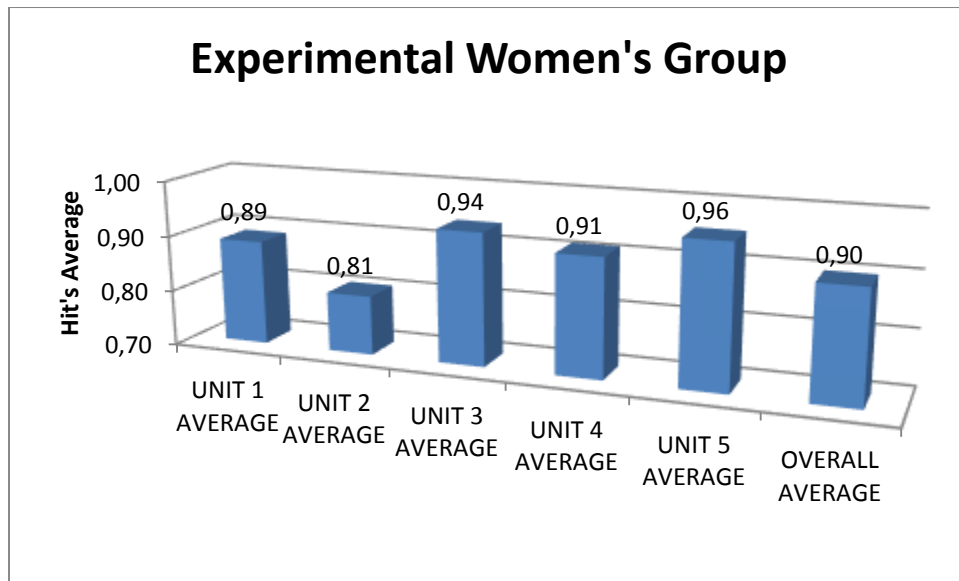
4.2 POST-TEST ANALYSIS

This data was collected in the same way as the pretest; in other words, it was divided by five parts. The students, in first one of that post-test, needed to fill some blanks with some verbs, however, there were less blanks than the pretest. The second one was a short text to check students' both reading comprehension and the grammatical structure to answer some questions of that text. The third one, which was a chart, showed students' understanding of the third person rules. The fourth one was a multiple choice task of answers and sentences to see the students' capacity to identify the right sentence. And the fifth one showed the students' writing production level for using the simple present, and especially, for applying the third person when necessary.

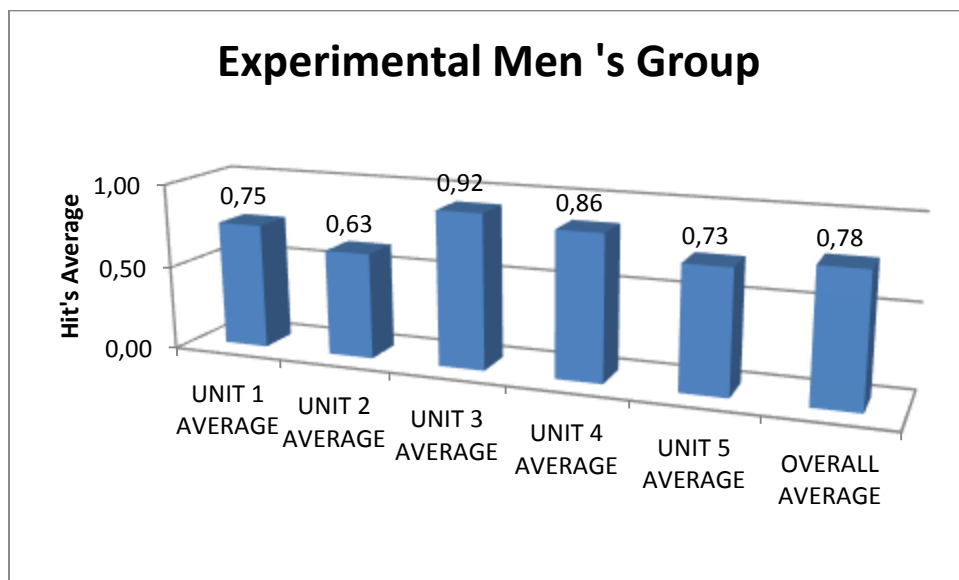
Secondly, it was analyzed the results obtained in a group and individual manner as for the experimental group as for the control group and divided into sex genre having as referent not only the score obtained but also the percentage obtained through a pretest knowledge about the thematic in charge. The results are illustrated on the following diagrams.

4.2.1 EXPERIMENTAL GROUP BY SEX GENRES

The following 2 graphs show the average the experimental male and female students obtained in every unit of the post-test and their overall average:



Graph 5: Post-test Average per unit-Experimental Women's Group



Graph 6: Post-test Average per unit-Experimental Men's Group

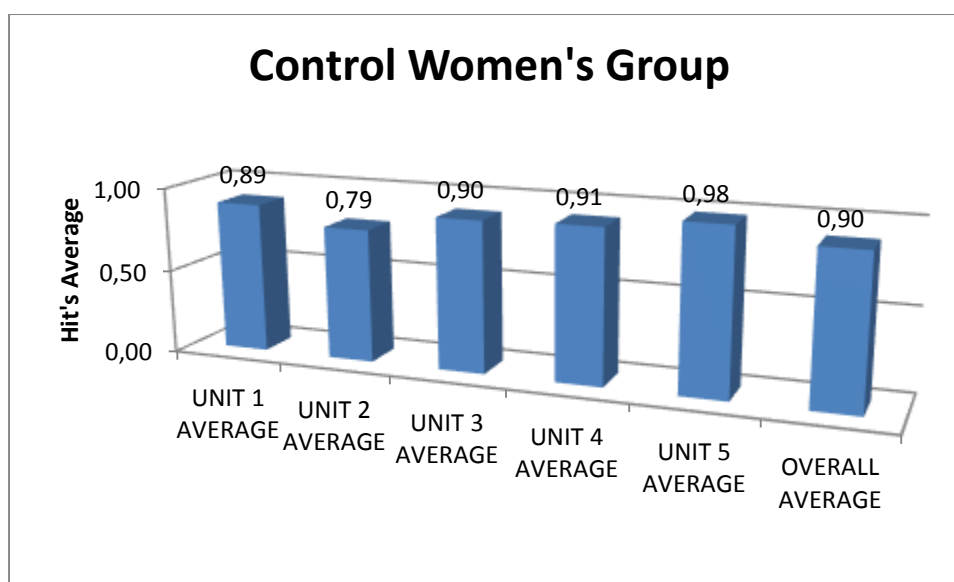
The experimental group data shows that:

- The experimental women got a better performance than the experimental men in almost all the tested units. This differed between 10 and 15 percentage values.

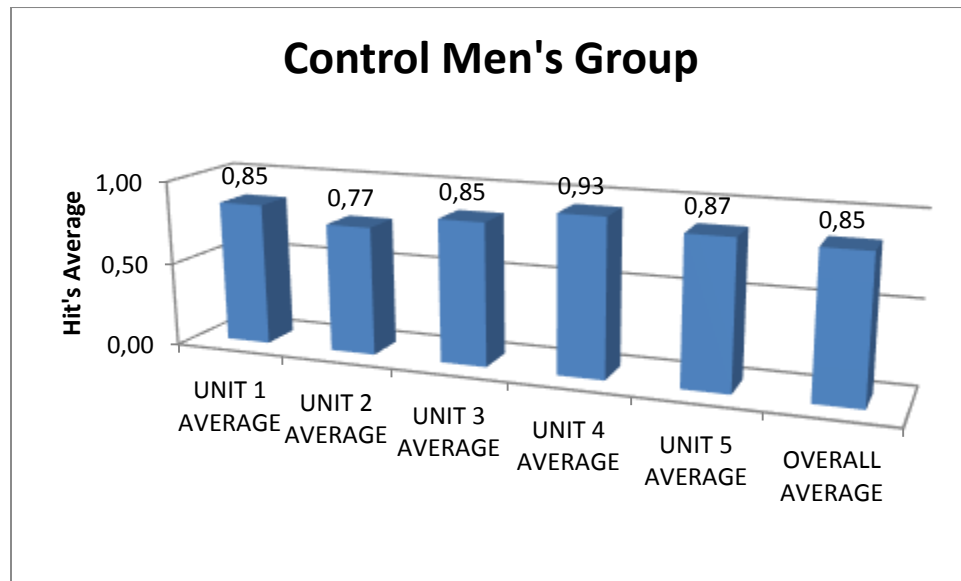
- In the women's group, we saw that they were better in the production of a short paragraph while the men's group highlighted in the use of the third person inflexion.

4.2.2 CONTROL GROUP BY SEX GENRES

The following 2 graphs show the average the control male and female students obtained in every unit of the post-test and their overall average:



Graph 7: Post-test Average per unit-Control women's group



Graph 8: Post-test Average per unit-Control Men's Group

When analyzed the control group we observed that:

- The women got a better performance than men, but in this case, that difference was from 2 to 10 percentage values; in other words, they were very similar.
- In the women's group, we saw that they were better in the production of a short paragraph as the experimental women's group while the men's group highlighted in choosing the best answer for a question posed.

4.3 CONTRAST

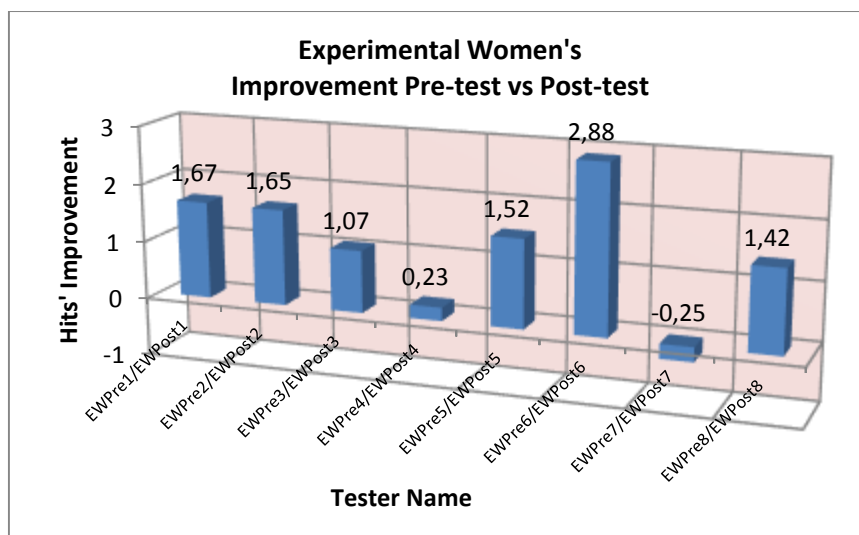
In the following chart, we analyzed the comparative values for every single student in the pretest and post-test in the experimental women's group and their corresponded quantity

and percentage of improvement. The real names of the students who were involved in this research were changed by codes in order to protect real identity.

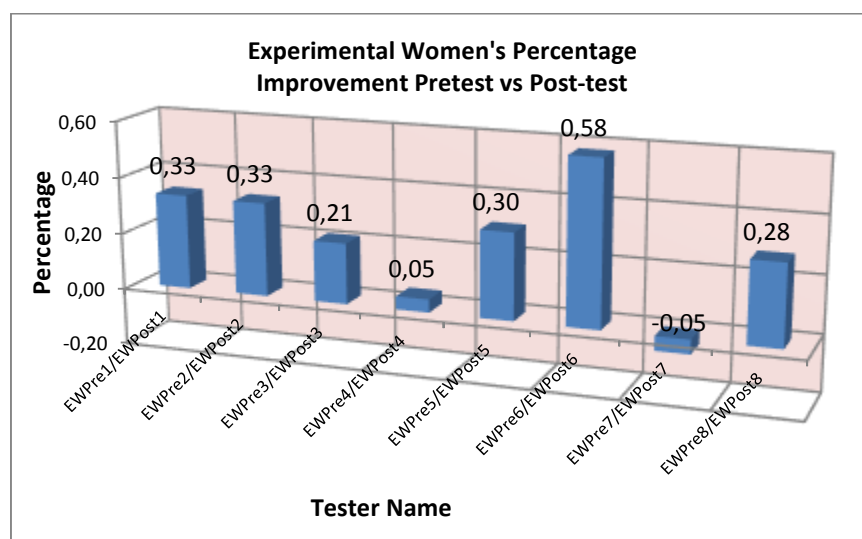
	PRETEST	POST-TEST			
TESTER	EXPERIMENTAL WOMEN'S GROUP	EXPERIMENTAL WOMEN'S GROUP	IMPROVEMENT	PERCENTAGE IMPROVEMENT	
NAME	FINAL SCORE	FINAL SCORE		%	
EWPPre1/EWPost1	2,78	4,45	1,67	0,33	
EWPPre2/EWPost2	3,06	4,71	1,65	0,33	
EWPPre3/EWPost3	2,50	3,57	1,07	0,21	
EWPPre4/EWPost4	4,57	4,80	0,23	0,05	
EWPPre5/EWPost5	3,43	4,95	1,52	0,30	
EWPPre6/EWPost6	1,53	4,41	2,88	0,58	
EWPPre7/EWPost7	5,00	4,75	-0,25	-0,05	
EWPPre8/EWPost8	2,94	4,36	1,42	0,28	
	3,23	4,5	1,27	0,25	AVERAGE

Chart 3: Contrast Experimental Women Pretest/Post-test

There was one significant improvement between first score and the last one, it means that the topic was taught with effectiveness and students (Experimental women) showed us a significant difference that was a range between 21% and 58% in the majority of the cases. Here you can see the information graphically:



Graph 9: Contrast Pretest/Post-test Experimental Women's Hits' Improvement



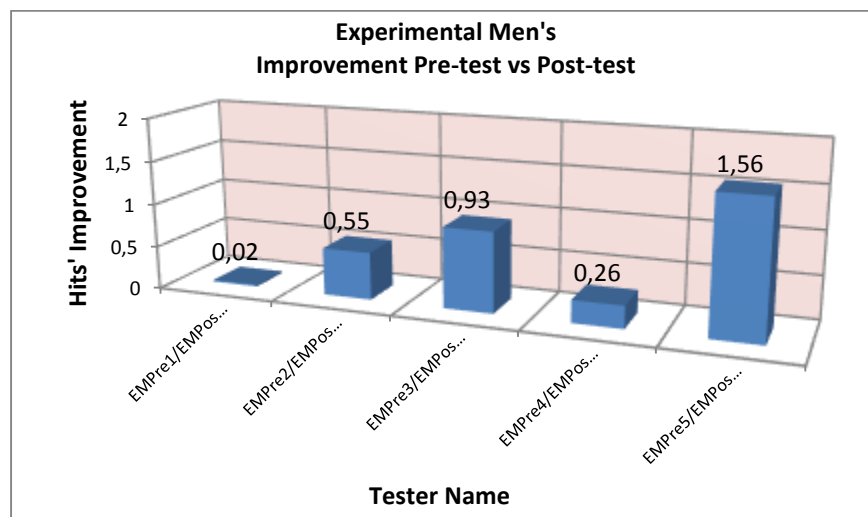
Graph 10: Contrast Pretest/Post-test Experimental Women's Percentage Improvement

In this chart, we analyzed the comparative values for every single student in the pretest and post-test in the experimental men's group and their corresponded quantity and percentage of improvement.

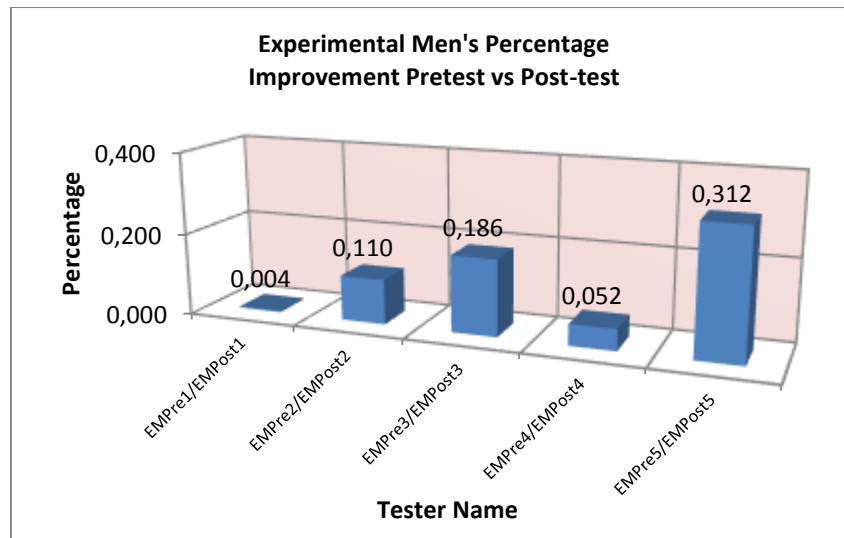
TESTER NAME	PRETEST	POST-TEST	IMPROVEMENT	PERCENTAGE	AVERAGE
	EXPERIMENTAL MEN'S GROUP FINAL SCORE	EXPERIMENTAL MEN'S GROUP FINAL SCORE		IMPROVEMENT %	
EMPre1/EMPost1	4,53	4,55	0,02	0,004	
EMPre2/EMPost2	1,56	2,11	0,55	0,110	
EMPre3/EMPost3	3,92	4,85	0,93	0,186	
EMPre4/EMPost4	2,82	3,08	0,26	0,052	
EMPre5/EMPost5	3,27	4,83	1,56	0,312	
	3,22	3,88	0,66	0,13	

Chart 4: Contrast Experimental Men Pretest/Post-test

The experimental men's group offered different level of improvement between pretest and post-test hits. It was ranked between 5% and 31%, with only one exception. Here you can see the information graphically:



Graph 11: Contrast Pretest/Post-test Experimental Men's Hits' Improvement



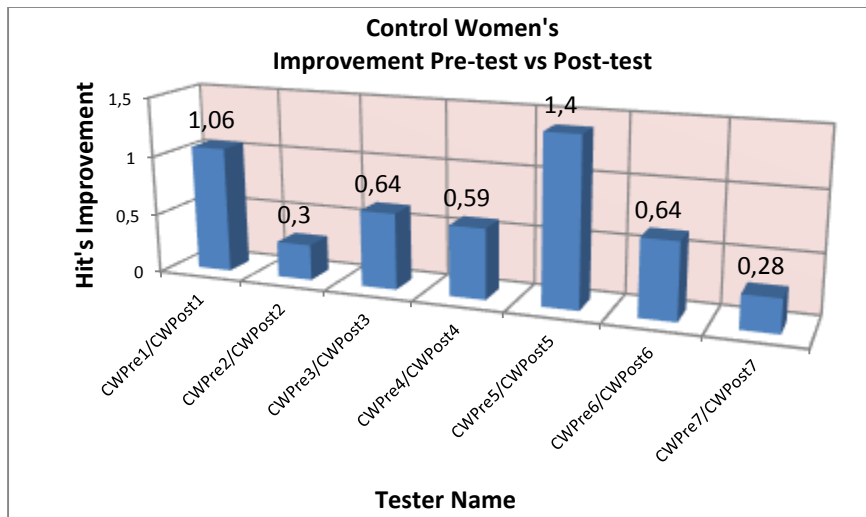
Graph 12: Contrast Pretest/Post-test Experimental Men's Percentage Improvement

The chart below shows the comparative values for every single student in the pretest and post-test in the control women's group and their corresponded quantity and percentage of improvement.

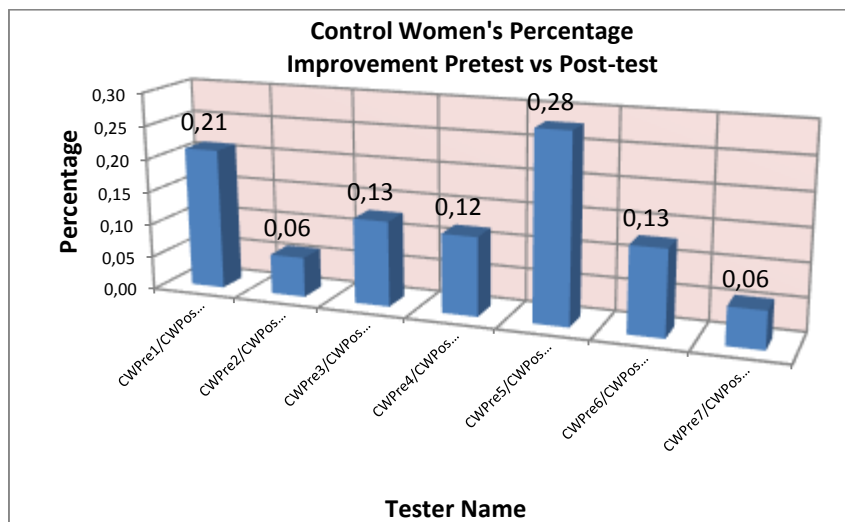
TESTER NAMES	PRETEST	POST-TEST	IMPROVEMENT	PERCENTAGE	AVERAGE
	CONTROL WOMEN'S GROUP FINAL SCORE	CONTROL WOMEN'S GROUP FINAL SCORE		IMPROVEMENT %	
CWPre1/CWPost1	3,19	4,25	1,06	0,21	
CWPre2/CWPost2	4,56	4,86	0,3	0,06	
CWPre3/CWPost3	4,00	4,64	0,64	0,13	
CWPre4/CWPost4	3,61	4,20	0,59	0,12	
CWPre5/CWPost5	3,00	4,40	1,4	0,28	
CWPre6/CWPost6	4,20	4,84	0,64	0,13	
CWPre7/CWPost7	3,88	4,16	0,28	0,06	
	3,78	4,48	0,70	0,14	AVERAGE

Chart 5: Contrast Control Women Pretest/Post-test

Based on the 2 previous groups, this one (control women's group) had less advancement. It was because its percentage improvement was between 0.6 % and 0.28%. Here you can see the information graphically:



Graph 13: Contrast Pretest/Post-test Control Women's Hits' Improvement



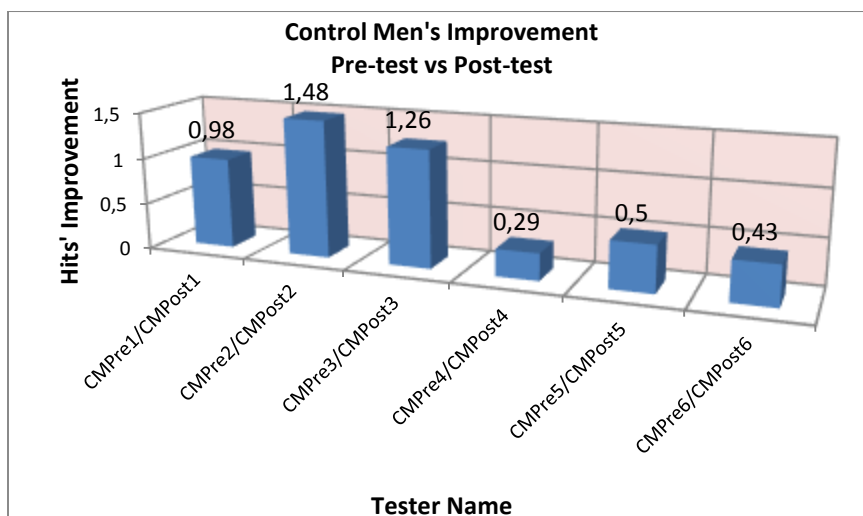
Graph 14: Contrast Pretest/Post-test Control Women's Percentage Improvement

In this case, the chart illustrates the comparative values for every single student in the pretest and post-test in the control men's group and their corresponded quantity and percentage of improvement.

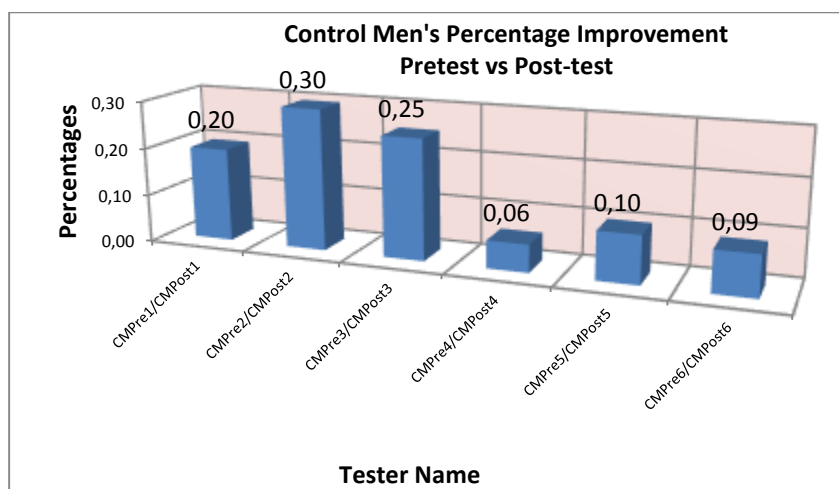
TESTER NAMES	PRETEST	POST-TEST	IMPROVEMENT	PERCENTAGE	
	CONTROL MEN'S GROUP FINAL SCORE	CONTROL MEN'S GROUP FINAL SCORE		IMPROVEMENT %	
CMPre1/CMPPost1	2,35	3,33	0,98	0,20	
CMPre2/CMPPost2	3,42	4,90	1,48	0,30	
CMPre3/CMPPost3	2,69	3,95	1,26	0,25	
CMPre4/CMPPost4	4,56	4,85	0,29	0,06	
CMPre5/CMPPost5	3,64	4,14	0,5	0,10	
CMPre6/CMPPost6	4,03	4,46	0,43	0,09	
	3,45	4,27	0,82	0,16	AVERAGE

Chart 6: Contrast Control Men Pretest/Post-test

This group (Control Men's Group) had a percentage improvement between 0.6 and 0.30. This showed us that this group had a similar rank than the previous group (Control Women's Group).



Graph 15: Contrast Pretest/Post-test Control Men's Hits' Improvement



Graph 16: Control Pretest/Post-test Control Men's Percentage Improvement

4.4 OVERALL ANALISYS (CONTRAST PRETEST – POST-TEST) BY GENRES

This Analysis shows the overall improvement obtained by the students in both groups (Experimental and Control) in terms of improvement they got through the process of this investigation. Moreover, it was by genres in those groups.

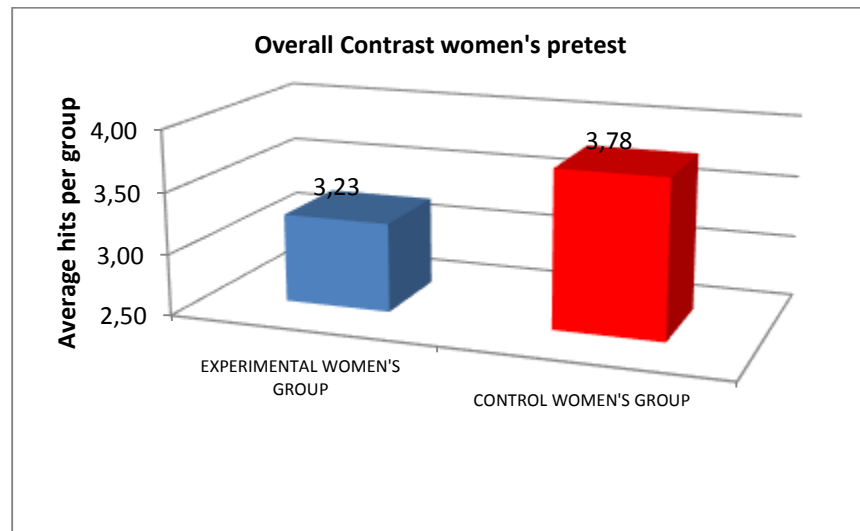
4.4.1 PRETEST BETWEEN WOMEN'S GROUPS

This chart shows the contrast between the experimental and control women's group results and the level of improvement (difference between them). In the last column, the positive numbers indicate that the cipher is in favor of the control group; on the other case, negative ciphers indicate the contrary. The Last row shows: average per group and the differences of percentages between the experimental and control group.

TESTER NAME	PRETEST	PRETEST	
	EXPERIMENTAL WOMEN'S GROUP FINAL SCORE	CONTROL WOMEN'S GROUP FINAL SCORE	
EWPPre1/CWPPre1	2,78	3,19	0,41
EWPPre2/CWPPre2	3,06	4,56	1,5
EWPPre3/CWPPre3	2,50	4,00	1,5
EWPPre4/CWPPre4	4,57	3,61	-0,96
EWPPre5/CWPPre5	3,43	3,00	-0,43
EWPPre6/CWPPre6	1,53	4,20	2,67
EWPPre7/CWPPre7	5,00	3,88	-1,12
EWPPre8/	2,94	3,78	0,84
	3,23	3,78	4,41
	0,55	0,11	

The pretest results show big hits difference (4.41) in favor of control group; it means that this group had a superior knowledge level in comparison with experimental group.

The following graph illustrates the situation above:



Graph 17: Overall contrast women's pretest

4.4.2 POST-TEST BETWEEN WOMEN'S GROUPS

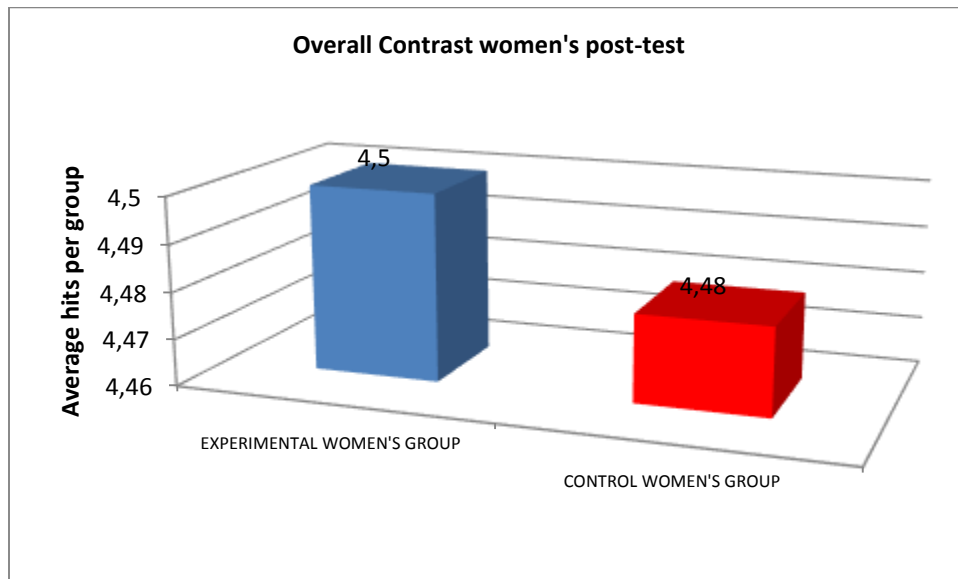
This chart also shows the contrast between experimental and control women's group results and the level of improvement (difference between them). In the last column, the positive numbers indicate that the cipher is in favor of the control group; on the other case, negative ciphers indicate the contrary. The Last row shows: average per group and the differences of percentages between the experimental and control group.

TESTER NAME	POST-TEST		
	EXPERIMENTAL WOMEN'S GROUP FINAL SCORE	CONTROL WOMEN'S GROUP FINAL SCORE	
EWPost1/CWPost1	4,45	4,25	-0,2
EWPost2/CWPost2	4,71	4,86	0,15
EWPost3/CWPost3	3,57	4,64	1,07

EWPost4/CWPost4	4,80	4,20	-0,6
EWPost5/CWPost5	4,95	4,40	-0,55
EWPost6/CWPost6	4,41	4,84	0,43
EWPost7/CWPost7	4,75	4,16	-0,59
EWPost8/	4,36	4,48	0,12
	4,5	4,48	-0,17
	0,02	0,0043	

The post-test results showed a little difference (0.17) in hits in favor of experimental group; it means that this group had a superior knowledge level in comparison with experimental group; in other words, the virtual immersive environment was more effective than traditional teaching method.

The following graph illustrates the situation described above:



Graph 18: Overall Contrast Women's Post-test

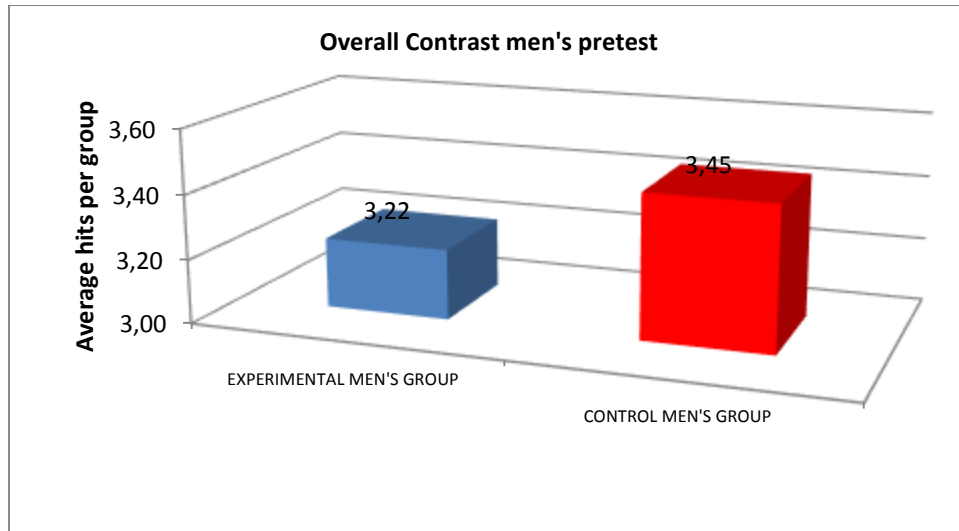
4.4.3 PRETEST BETWEEN MEN'S GROUPS

This chart as well as the women's groups in the charts above, shows the contrast between experimental and control men's groups results and the level of improvement (difference between them). In the last column, the positive numbers indicate that the cipher is in favor of the control group; on the other case, negative ciphers indicate the contrary. The Last row shows: average per group and the differences of percentages between the experimental and control group.

TESTER NAME	PRETEST	PRETEST	
	EXPERIMENTAL MEN'S GROUP FINAL SCORE	CONTROL MEN'S GROUP FINAL SCORE	
EMPre1/CMPre1	4,53	2,35	-2,18
EMPre2/CMPre2	1,56	3,42	1,86
EMPre3/CMPre3	3,92	2,69	-1,23
EMPre4/CMPre4	2,82	4,56	1,74
EMPre5/CMPre5	3,27	3,64	0,37
/CMPre6	3,22	4,03	0,81
	3,22	3,45	1,37
	0,23	0,05	

The pretest results show 1.37 as difference in favor of control men's group; it means that this group had a superior knowledge level in comparison with experimental group in the use of the proposed thematic.

Here you can see graph results:



Graph 19: Overall Contrast Men's Pretest

4.4.4 POST-TEST BETWEEN MEN'S GROUPS

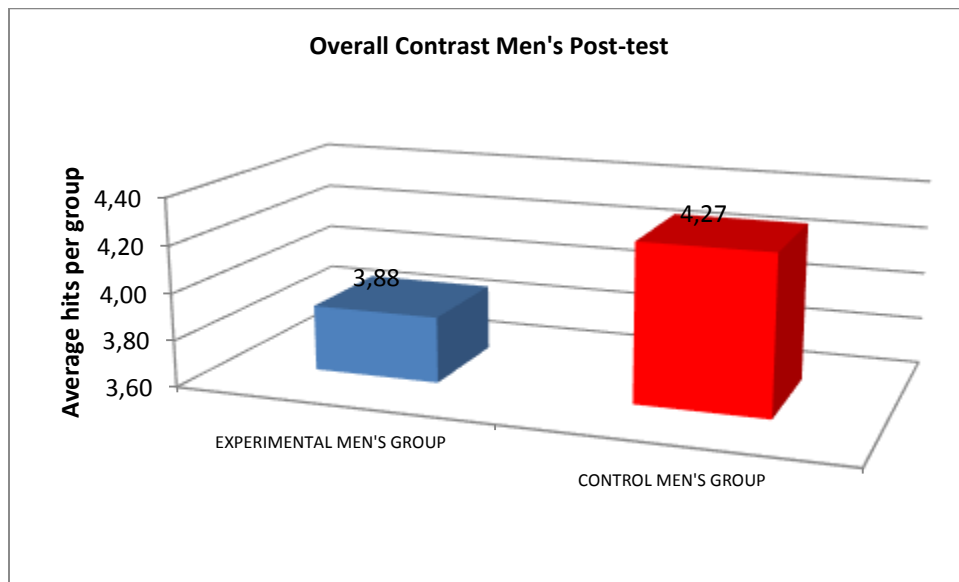
This chart shows the contrast between experimental and control men's group results and the level of improvement (difference) between them in the post-test stage. In last column can find positive numbers when difference benefit control group or negative if it is at the contrary. Last row show us: average per group and sum (experimental group minus control group) of hits for winner group (negative value for experimental and positive value for control).

TESTER NAME	POST-TEST	POST-TEST	
	EXPERIMENTAL MEN'S GROUP FINAL SCORE	CONTROL MEN'S GROUP FINAL SCORE	
EMPre1/EMPost1	4,55	3,33	-1,22
EMPre2/EMPost2	2,11	4,90	2,79
EMPre3/EMPost3	4,85	3,95	-0,9
EMPre4/EMPost4	3,08	4,85	1,77

EMPre5/EMPost5	4,83	4,14	-0,69
/EMPost6	3,88	4,46	0,58
	3,88	4,27	2,33
	0,39	0,078	

The post-test results show a hits difference in favor of control men's group of 2.33; it means that this group had a superior knowledge level in comparison with experimental group in the use of the proposed thematic.

The following graph illustrates the situation:



Graph 20: Overall Contrast men's Post-test

In this case, the virtual immersive environment was less effective than the traditional teaching method.

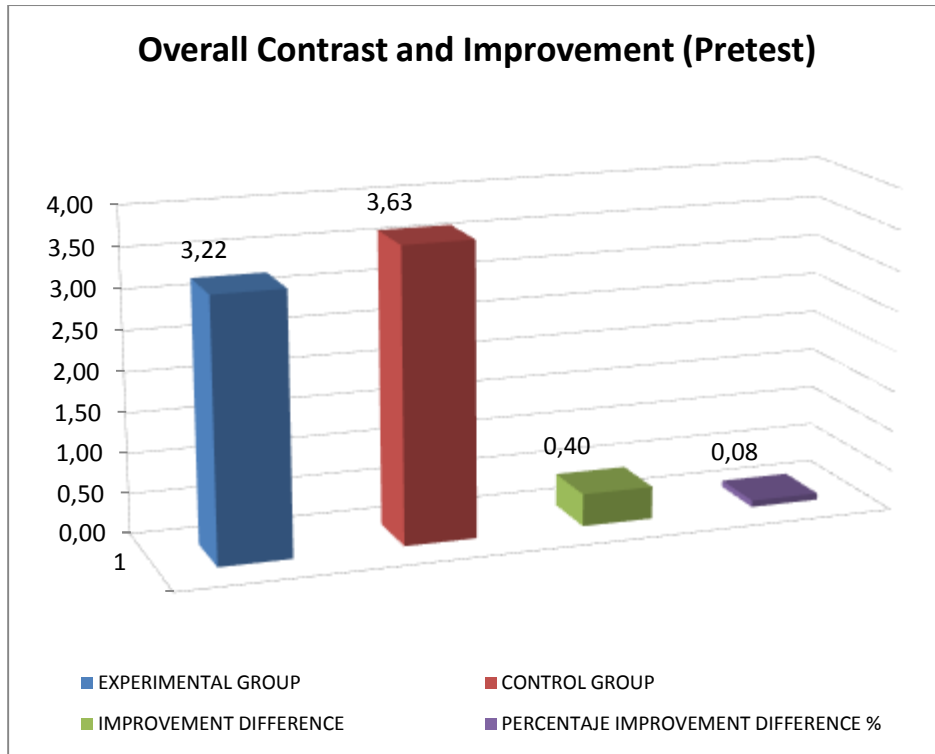
In conclusion, we could see that in both cases the women reached results with higher levels than men. Both groups (experimental and control) and in both genres (women and men) obtained a significant improvement of hits between in the pretest and post-test. In contrast to the men’s genre (who got better results in traditional teaching method), for women it was more effective the use of the immersive environment on the Second Life Platform.

4.4.5 GENERAL OVERALLS

In general, we affirm that when contrasting the final results between the experimental and control groups, we noticed that both methods (traditional and virtual) presented an improvement in the quantity of hits got. Moreover, both methods offer (in a scale from one to five) as result a high level of effectiveness and they were practically equal. As you can see, the following overall charts and graphs:

EXPERIMENTAL GROUP	CONTROL GROUP	IMPROVEMENT	PERCENTAJE IMPROVEMENT DIFFERENCE %
3,22	3,63	0,40	0,08

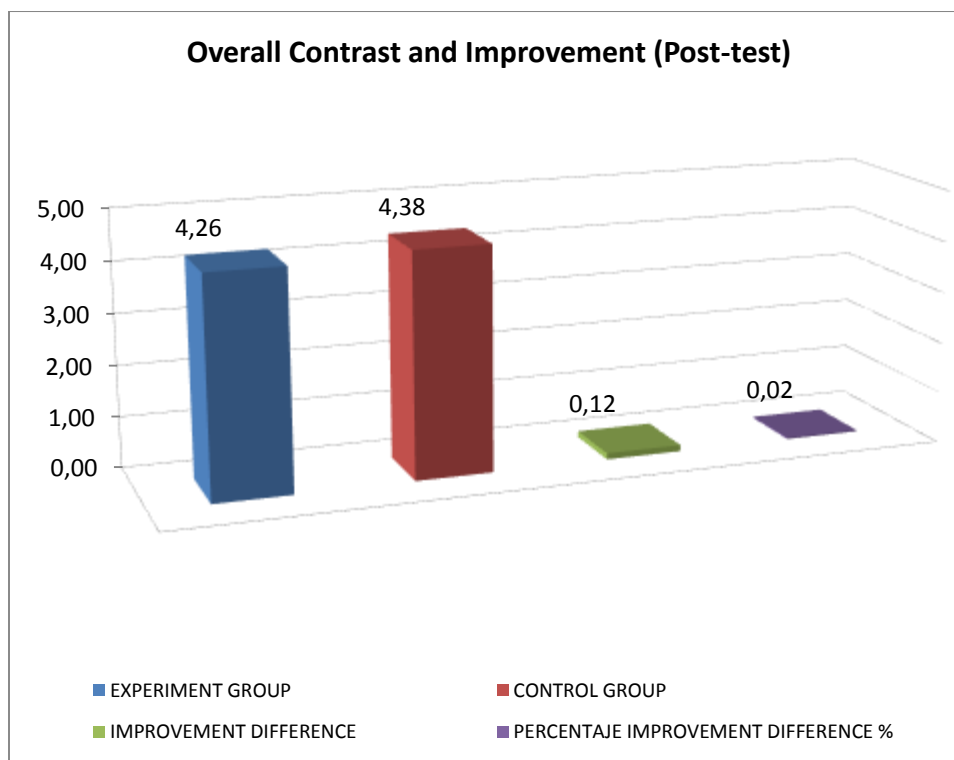
Chart 7: Overall Average in the Pretest by Groups



Graph 21: Overall Contrast and Improvement (Pretest)

EXPERIMENT GROUP	CONTROL GROUP	IMPROVEMENT	PERCENTAJE IMPROVEMENT DIFFERENCE %
4,26	4,22	0,12	0,02

Chart 8: Overall Average in the Post-test by Groups



Graph 22: Overall Contrast and Improvement (Post-test)

To see an analysis by showing the individual students results in accordance to what was mentioned above, look at the Appendix 10 by genres and look at the Appendix 11 by groups.

4.5 USER EXPERIENCE EVALUATION ANALYSIS

According to the answers given by the users we could conclude that:

1. Users enjoyed the experience on the Second Life platform because it was almost very similar to role play or computer game, environments and avatars were so real.
2. Starting the experience was so difficult, after training for a period of time it changed from difficult to easy and enjoyable.
3. Interaction between Classmates was more enjoyable than normal relationships because they could share different and fun situations such as fly or walk under water without consequences.
4. All of them were comfortable with their avatars; however, it would be better if they could have changed their avatars' appearance.
5. All people thought that used material was appropriate for the topic; and the tasks were enough for reinforcing knowledge.
6. In general, interaction with the material was easy because they could access those tips through the platform or through the web browser without any problems. If it would be necessary, they could print the material.
7. It was somewhat difficult because the IP Voice was less used than they expected; however, chat was a grateful experience. The most interesting part was that they had to face the use of other languages different to English at the same time from some avatars.

8. Gestures, photos and chat were the favorite tools in their respective order. People considered gestures as fun as real jokes, and they made poses constantly for photos (illustration 8).
9. The interaction with the professor was very good, principally in order to teleport to other places. As a guide, in order for helping the students to solve different situations such as: communications with classmates, interaction with other avatars, help for searching places, among others.
10. It was more comfortable because we were relaxed all the time visiting places and taking photos. The professor was all the time ready for helping us through the platform.



Illustration 1: User Experience Evaluation

CHAPTER V

5 FINDINGS AND CONCLUSIONS

5.1 FINDINGS

Through this experiment, the Second Life platform showed to be at least very similar to traditional teaching class of a second language due to the fact that the percentages in the increment of hits were in general similar but showing a slightly larger difference in favor to control group, finding some differences by groups that we will explain in the next paragraphs of this chapter.

In relation to the specific objectives, the ciphers showed that a 40.3% of the surveyed students agreed that a program such as Facebook was appropriate for learning a second language; however, a 66.7% did not have any idea about immersive virtual worlds, and only a 25.9% knew a suitable virtual environment for the teaching and learning a second language.

According to the overall averages (from 0 to 1) got in order to compare the students' baseline knowledge about one specific English thematic by the two groups and sex genres, the control women's group was higher than experimental women's group (0.76 against 0.65). On the other hand, in the men's groups, the results demonstrated, in a similar manner that in the women's groups, that the control men's group was superior to the experimental men's group (0.69 against 0.64).

Based on the averages obtained for answering students' final knowledge about a specific English thematic by the experimental and control group and sex genres, we found that both the control and experimental women's group had the same overall averages (0.90) in contrast to men's groups. The control men's group was higher than the experimental men's group (0.85 against 0.78).

According to the analysis of the students in relation to their preferences about learning a second language, they pointed out that the preference for studying under the traditional teaching method is very high in relation to an immersive virtual environment. The results showed that 96.9% of the students who were involved in this research project preferred to the method they were following (traditional teaching method) against only a 3.1% who argued that virtual environments were suitable for the teaching and learning of a second language.

The plumb of the user experience on the 3D immersive environment explained that the tested students in this research agreed that they had some troubles using the platform at the beginning; however, as time passed by, they mastered it and started to enjoy it. They affirmed that the tools provided on the platform (chat, gestures, photographs, movements, sounds) were suitable for teaching and learning a second language as well as for communicating with classmates and instructor. And they claimed to feel comfortable with the role of being an avatar student to study a second language on an immersive virtual environment.

5.2 CONCLUSIONS

According to the results of the different activities that we could apply through this research, we can affirm that the Second Life platform (teaching through a virtual immersive environment) has a similar level of effectiveness to the traditional teaching method in class as a way to implement a successful second language learning process. This affirmation is based on the fact that both men and women, in the use of a virtual learning environment (Second Life), increased their knowledge level regarding to a specific topic, principally in women who could exceed their baseline of hits in both groups (students who take classes on the immersive virtual environment and students who take classes in the traditional teaching classroom). On the other hand, the improvement hits in the men's groups exceeded their baseline as the women's, but it was smaller than the female groups.

However and to be featured, on the immersive virtual environment, the learning is more practical and enriching because it is focused on a specific learning into a specific context, it is that people learn through one lived experience.

The success of the learning and teaching process on an immersive virtual environment rests on the fact of a planning, design and construction of appropriate environments according to the learning objectives to be achieved or the competences to be developed, added to a great technological richness, or instead searches for the most similar possible environment according to the planned topic.

In this case, the Second Life platform shows us a superior percentage difference in relation to the traditional class attendance average; it was 0.8 % more effective than the

traditional method, it means that in fact one virtual immersive environment is more useful and operative for the teaching and learning process in a second language.

5.3 IMPLICATIONS

Based on this research, we may affirm that an educational center about languages should implement the building of an immersive environment according to their needs having as basis the objectives, methodology and thematic to be developed; however, for practical purposes and high level of interactions it is more useful to use all entire 3D world as a classroom, not only an specific and limited space but also some islands related to the subject.

Moreover, at the moment of building or searching for one appropriate environment we need to be clear all learning aims and the way in which we go to use every single thing in those virtual immersive environments.

The success in those teaching–learning activities implies to reduce or if it is possible eliminate the technical fails before starting the process.

The fact that using an immersive platform makes in the user a reality sensation which makes it easier that they can be placed within a context and use the language tools in relation to it and its interactions proposed and with the other participants; a fact that is difficult to recreate in real environments.

5.4 LIMITATIONS OF THE STUDY

Within the framework of the situations or resources that limit this study are the followings:

1. The technological part: The need for machines (hardware) with the technical characteristics required to optimal run on the Second Life platform, computer equipment that at least has 80 GB hard drive, RAM memory with a minimum of 1 gig, speed processor higher than 2.4 gigahertz and possibly a video accelerator that has at least 512 megs. To this, we must add an operating system like Windows XP Service Pack 2 or a higher version of the same one.

The final user must also have installed on his/her computer the software needed to run the platform; in other words, the Second Life Viewer version 2, flash plug-ins and the Quick Time program.

This is one of the main constraints for normal development of the research.

2. Access to a broadband connection to Internet, either through wired (twisted pair multiplexer signal bandwidth), cable via 5e catUTP, wireless modem or modem with Wi-Fi technology (which offers better performance) with at least access to a mega broadband.

3. Basic knowledge about the computer use (interaction with the machine - keyboard, mouse and other devices – as well as its software - operating system and applicable to the Second Life Viewer version 2).

4. Access to a credit card which allows us to buy virtual resources (linden dollar), which allows us a higher degree of interaction with virtual objects, commercial transactions via Second Life, location in any destination (public or private) or buying of a virtual ground for placing it according to the needed environment for the experimentation.

5. The academic staff collaboration, its receptiveness towards the project and its possible continuity during the period of testing and assessment required.

6. The students' and teachers' refusal to the use new information technologies and computer TIC's, preferring, in many cases, the traditional teaching that the new educational paradigms. This conceptual crash is one of the most difficult ones to overcome at the level of human computer interaction.

7. The development of two Second Life environment models efficient for the experimental stages, for doing so it would require a group of analysts, designers and programmers trained in the use of development tools such as Java 3D, OpenSim or any other similar features that allow us create a Second Life style development, which would cost about twenty million pesos (\$ 20'000 .000, oo) and an estimated time of development of four (04) months. Otherwise, it would be used the available public environments with its corresponding limiting interaction.

5.5 SUGGESTION FOR FURTHER THE EXPERIENCE

- To choose the environments according the specific results and competences to be achieved and the activities to be developed.
- To test the immersive environments either created or found on the platform with the purpose of checking major technical problems in its use.
- To create tasks to be done in pairs even more than in groups or individual. It is recommended to assign this with a female and male pair to balance the development level.
- To design the virtual environments with actual topics that call students' interest.
- To design few activities, no more than three, but they are easy to carry out.
- To give wide, simple and clear webgraphy according to the thematic in charge.
- It would be important to see if the fact that getting involved smelling in the interaction, improve or not the language production.
- To investigate if it is more productive to interact in simulation on real environments or in simulations on fantasy environments.
- To see what possibilities offer the fact of combining an immersive platform with the tradition class attendance.

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7 APPENDIX

APPENDIX 1: IMPLEMENTATION (LESSON PLAN)

Name: Diego Mauricio Torres Arias		Institution: Universidad EAFIT	City: Armenia, Quindio
Date: September 11, 2011		Time: 7 A.M.	Length: Four hours (approximately)
Grade: First Semester	Age: 16-22	Level: Elementary	CEF level: A2
<p>Students will be able to express their daily routines as well as recognizing when people talk about it.</p>			
<p>Reading and Writing will be taken into account in the Second Life English class.</p> <p>The English language will focus on vocabulary about verbs that express daily routines as well as furniture and parts of a house.</p> <p>The functional expressions that will be used are the followings:</p> <p>Do you...?</p> <p>Does she...?</p> <p>What do you do?</p> <p>What does he/she do?</p> <p>The grammatical aspect considered for this lesson is the Third Person Rules, negative sentences and yes-no questions.</p>			

READING

Identifico palabras clave dentro del texto que me permiten comprender su sentido general. 1, 2

Identifico los valores de otras culturas y eso me permite construir mi interpretación de su identidad. 2

Utilizo variedad de estrategias de comprensión de lectura adecuadas al propósito y al tipo de texto. 2

Hago inferencias a partir de la información en un texto. 2

Comprendo variedad de textos informativos provenientes de diferentes fuentes. 2

WRITING

Contesto, en forma escrita, preguntas relacionadas con textos que he leído. 1, 2

Parafraseo información que leo como parte de mis actividades académicas. 1, 2

Organizo párrafos coherentes cortos, teniendo en cuenta elementos formales del lenguaje como ortografía y puntuación. 1, 2

Edito mis escritos en clase, teniendo en cuenta reglas de ortografía, adecuación del vocabulario y estructuras gramaticales. 1, 2, 3

MY DAILY ROUTINES

The topic consists on discussing which are the activities a person normally does when he/she is at his/her house, work or on his/her free time.

<p>MATERIALS</p> <p>Computers/laptops</p> <p>Computer's accessories</p> <p>Internet connection</p> <p>Second Life Viewer 2 Program</p> <p>Systems Requirements necessary for launching Second Life</p> <p>Second Life platform access</p> <p>TAKEN FROM</p> <p>www.second Life.com</p> <p>University EAFIT</p>			
Stage, Timing, interaction	Procedure & Instructions		Stage aim
T-SS, S-S	What is the Teacher's proposal	What the Students will DO & learn	The Aim of the Stage
Introduction To The Topic	The teacher will give a text to be downloaded in order to explain the use of present simple (third person rules, affirmative, negative and yes-no question forms).	The students will download and pose some questions about certain doubts they may have during the reading.	Students will be able to understand the Present Simple mechanism.
<u>Warm up</u>	The teacher will let students know the steps to be followed during the trip, remarking that the trip consists of four virtual screens to explore them and complete certain tasks.	The students will take a look at the screens in charge and clarify any question they may have.	Learners will understand how the mechanism is to move around the virtual platform and what to do there.

<p><u>1st screen:</u></p> <p><u>Topic introduction</u></p>	<p>The teacher will ask his learners to go to the first screen which has some relevant grammatical aspects about Present Simple (third person).</p>	<p>The learners will be able to review some previous ideas they have about Present Simple.</p>	<p>Learners will have the opportunity of understanding better the topic.</p>
<p><u>2nd screen:</u></p> <p><u>Environment or character</u></p>	<p>The teacher will tell the students to take a look at the second screen to explain the students why daily routines are important and how they work with the Present Simple. The teacher will ask for daily routines his students perform in their real lives.</p>	<p>The students will practice with the teacher some daily routines they usually do in their lives. Also, the students will look at the second screen which is a reading about a person's daily routines.</p>	<p>Student will be involved with the use of Present Simple as a tool to express daily routines.</p>
<p><u>3rd screen:</u></p> <p><u>Map of activities</u></p>	<p>The teacher will ask his students to follow him to see an empty house. Then, he will ask them how they could decorate it to use daily routines there.</p>	<p>Students will look at the house and will imagine which things are necessary to decorate the house and how to use them to express daily routines.</p>	<p>The students will be able to practice the daily routines learned before with through the immersion of different places and interactions with other avatars.</p>
<p><u>Feedback</u></p> <p><u>About the map of activities</u></p>	<p>Later, the teacher will make them go the third screen to see the tasks to be done.</p> <p>The teacher will meet with his students in the two-floor house with the students to discuss about how they will have decorated the house and how they will have applied them to use daily routines. At the same</p>	<p>Students will see the tasks on the third screen which regard to the empty house.</p> <p>The students will present their ideas about how to decorate the house through some photographs and how they will have applied those decorations to use the daily routines learned during the lesson.</p>	<p>Students will reinforce the thematic through the sharing of ideas and corrections of some possible mistakes given by the teacher.</p>

	time, the teacher will be correcting some mistakes the students may have at that time.		
<u>4th screen:</u> <u>Exercises</u>	The teacher will make his students go to the fourth screen to see some links posted there to practice specific grammatical aspects of the Present Simple.	The students will be doing each exercise that will be on the fourth screen about some specific parts of the topic in charge.	The learners will test their knowledge acquired about the Present Simple.
<u>Final Feedback</u>	The exercises will be solved again as a whole group with the help of the teacher to check participation and knowledge.	Students will analyze and participate in the solving of the exercises with the teacher. Each student will have to do a part.	The final feedback will help learners clarify some doubts and misunderstandings.

Chart 9: Implementation - Lesson plan

APPENDIX 2: SURVEY

UNIVERSIDAD EAFIT
FACULTAD DE INGENIERÍA
MAESTRIA EN INGENIERÍA DE SISTEMAS E INFORMÁTICA
ENCUESTA: TICs ASOCIADAS AL APRENDIZAJE DE UNA SEGUNDA LENGUA

ELABORADO POR: DIEGO MAURICIO TORRES ARIAS

NOMBRE: _____ . FECHA: _____ .

EDAD: _____ . SEXO: _____ . SEMESTRE: _____ .

1. Cuál de los siguientes programas utiliza con más frecuencia en la red:

a. YouTube. b. Facebook. C. Twitter d. HI5 e. Qué pasa? F. Zooks g. Otro

2. Considera usted que este programa le ha ayudado en su proceso de aprendizaje de una segunda lengua? SI _____. NO _____.

3. Cuál de los programas antes mencionados piensa usted será óptimo para aprender una segunda lengua? _____.

4. Ha estudiado inglés vía web? SI _____. NO _____.

5. Cuál herramienta web ha utilizado para este fin? _____.

6. Ha utilizado alguno de los siguientes programas para estudiar o practicar su inglés on-line?

a. Messenger. B. Skype. C. Google Talk D. Otro _____.

7. Si existiera una herramienta que le permitiera combinar las propiedades de las herramientas anteriores en una sola la utilizaría para estudiar una segunda lengua?

SI _____. NO _____.

8. Ha escuchado hablar de los mundos virtuales o metaversos? SI _____. NO _____.

9. Si su respuesta es si, cuáles de estos conoce?:

_____.

10. Le gusta más estudiar una segunda lengua:

A. en el salón de clase.

B. Utilizando herramientas TIC?.

11. Le parece que aprende más estudiando bajo el método tradicional presencial?

SI _____. NO _____.

APPENDIX 3: PRETEST

UNIVERSIDAD EAFIT
FACULTAD DE INGENIERÍA
MAESTRIA EN INGENIERÍA DE SISTEMAS E INFORMÁTICA
PRETEST

ELABORADO POR: DIEGO MAURICIO TORRES ARIAS

Name: _____ Semester: _____ Date: _____

1. Read the text and write the verbs in the correct form.

Hi! My name is Lucy. This is my daily routine on Wednesdays.

I _____ (get up) at half past seven and I _____ (have) breakfast with my parents and my younger sister Paula. I _____ (like) cereals but my sister _____ (like) bacon and eggs. My parents _____ (eat) coffee and toast. We _____ (go) to school by bus, but my father _____ (go) by train. My mother _____ (work) at home, she _____ (be) a journalist.

We _____ (have) lunch at school, because in the afternoons we _____ (do) activities: I _____ (sing) in the choir and _____ (play) basketball, my sister _____ (go) to art class and _____ (play) badminton.

After school we _____ (go) home and my mother _____ (help) us with the homework. We also _____ (help) at home, I _____ (clean) the rooms and my sister _____ (wash) the dishes. In the evenings we

_____ (watch) TV, _____ (play) games and _____ (talk) about our day. My sister and _____ (go) to bed at nine o'clock.

On weekends we _____ (get up) later, around nine o'clock. We _____ (play) outdoors games, in the park or our garden. Then we _____ (visit) our grandmother, I _____ (like) her very much! She _____ (make) us cakes and we _____ (play) all afternoon with our cousins. It's great fun!

2. Read the following short text and answer the questions

TOM'S DAILY ROUTINES

Tom wants to eat breakfast. He goes to the restaurant. He is hungry. He orders a slice of pizza, a cup of tea and a carton of milk. The waiter asks Tom if he wants something else. Tom says, he wants a piece of cheese and a bowl of soup. Tom eats all his food and pays the bill. He is full now. He goes to work.

QUESTIONS

1. Does Tom go to the restaurant? _____
2. Is Tom hungry? _____
3. Does Tom order a slice of pizza? _____
4. Is Tom at a bank? _____
5. Does Tom eat lunch? _____
6. Where does Tom go? _____
7. What does he order? _____
8. What does the waiter ask him? _____
9. How does Tom feel after eating? _____
10. Where does Tom go after eating? _____

3. Complete the chart

Bare Infinitive	Third (3 RD) Person	Bare Infinitive	Third (3 RD) Person
1. Relax	_____	Choose	_____
2. Carry	_____	Have	_____
3. Lie	_____	Match	_____
4. Crash	_____	Employ	_____
5. Give	_____	Be	_____

4. Choose the best answer:

- What time does he get up?
 - He gets up at 7 in the morning
 - He get up at 7 in the morning
 - He get ups at 7 in the morning

- Where does he work?
 - He work in a factory
 - He works in a factory

C. He work in a factorys

3. What does he usually eat?

A. He usually eat pizza

B. He usuallys eat pizza

C. He usually eats pizza

4. When does he study?

A. He studys on Fridays

B. He studyies on Fridays

C. He studies on Fridays

5

A. He doesn't lives with his family

B. He doesn't' live with his family

C. He don't live with his family

6.

A. Do he work?

B. Is he work?

C. Does he work?

7.

A. Sarah do not study in London

B. Sarah does not study in London

C. Sarah is not study in London

8.

- A. Is Marcos elegant?
- B. Does Marcos elegant?
- C. Do Marcos elegant?

9.

- A. Anny isnt very well.
- B. Anny's not very well.
- C. Anny doesn't very well.

10.

- A. Does he travel?
- B. She travels?
- C. Is he travels?

5. Write a short paragraph about what a member in your family does during the day

APPENDIX 4: POST-TEST

UNIVERSIDAD EAFIT
FACULTAD DE INGENIERÍA
MAESTRIA EN INGENIERÍA DE SISTEMAS E INFORMÁTICA
POST-TEST

ELABORADO POR: DIEGO MAURICIO TORRES ARIAS

Name: _____ Semester: _____ Date: _____

1. Read the text and write the verbs in the correct form.

Tim's Day

Tim _____ (work) for a company in Sacramento, California. He _____ (be) a customer service representative. He _____ (get up) at six o'clock each workday. He _____ (drive) to work and _____ (begin) his job at eight o'clock. He _____ (speak) to people on the telephone to help them with their banking problems. People _____ (telephone) the bank to ask questions about their accounts. He _____ (not give) information about accounts until people _____ (answer) a few questions. Tim _____ (ask) callers their birth date, the last four digits of their social security number and their address. If a person _____ (give) incorrect information, Tim _____ (ask) him to call back with the correct information. Tim _____ (be) polite and friendly with everyone. He _____ (have) lunch in a park next to his office. He _____ (return)

home at five o'clock in the evening. After work, he _____ (go) to the gym to work out. He _____ (have) dinner at seven o'clock. Tim _____ (like) watching TV after dinner. He _____ (go) to bed at eleven o'clock at night.

2. Read the following short text and answer the questions

Juan Gomez and his Daily Routines

Juan Gomez wakes up at six o'clock every morning. He gets up, takes a shower, gets dressed, and eats breakfast. After breakfast he reads the newspaper until 7:15, then he leaves for work.

He gets on the bus at the bus stop, rides it to University Avenue, gets off, and walks to his office. He works until five o'clock.

He usually goes and plays basketball with friends after work. Then he goes home. Juan leads a very boring life.

QUESTIONS

1. What time does Juan wake up? _____
2. Does Juan have an interesting life? _____
3. Does Juan work in the afternoon? _____

4. How does Juan go to work? _____
5. What does Juan do after he plays with his friends? _____
6. What does Juan usually do after work? _____
7. Does Juan play football with his friends? _____
8. Do the friends of Juan play basketball with him after work? _____
9. Is Juan tired after work? _____
10. Is Juan happy after work? _____

3. Complete the chart

Bare Infinitive	Third (3 RD) Person	Bare Infinitive	Third (3 RD) Person
1. Pray	_____	Fix	_____
2. Have	_____	Buy	_____
3. Come	_____	Watch	_____
4. Wash	_____	Talk	_____
5. Fly	_____	Go	_____

4. Choose the best answer:

1. Does he work in the mornings?

- A. Yes, he is
- B. Yes, he does
- C. Yes, he is does

2A. Danny is at home.

- B. Danny am at home.
- C. Danny am is at home.

3A. We don't in England.

- B. We doesn't in England.
- C. We aren't in England.

4A. He never travel in June

- B. He never is travel in June
- C. He never travels in June

5. Are Michael and Steven at home?

- A. Not, they are not
- B. Not, they aren't
- C. No, they aren't

6A. Anny and Danny lives in London.

- B. Anny and Danny live in London.
- C. Anny and Danny are lives in London.

7. What does Luis do on weekends?

- A. He go to the gym.
- B. He gos to the gym.
- C. He goes to the gym.

8. Do you work?

- A. I work
- B. Yes, I do.
- C. Yes, I am.

9 A. She is work a lot.

- B. She is works a lot.
- C. She works a lot.

10. Does Helen get up early?

- A. No, she isn't
- B. No, she doesn't
- C. No, she isn't does

5. Write a short paragraph about what a member in your family does during the day

APPENDIX 5: WRITING PRODUCTION GRID

UNIT	5	4	3	2	1	TOTAL
(STUDENT'S NAME)	VERY GOOD	GOOD	REGULAR	BAD	VERY BAD	
Verb Conjugation						
Sentence Structure						
Sense of Sentence						
Paragraph Coherence						
Paragraph Cohesion						

APPENDIX 6: USER EXPERIENCE EVALUATION

Plumb (Open Questions)

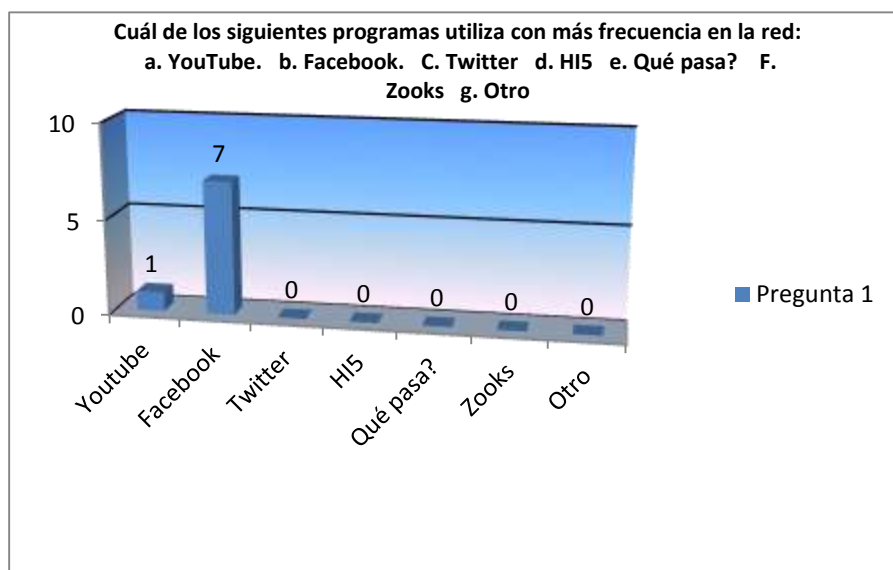
1. Did you like the experience on this platform? Why?
2. How did you feel with the use of the platform and its resources?
3. How did you feel the interaction with your classmates, good, normal, bad? Why?
4. How did you feel with your role as an avatar good, normal, bad? Why?
5. Do you think that the given material was appropriate to the topic? Why?
6. How did you feel with the interaction with the material good, normal, bad? Why?
7. How did you feel when you used the foreign language through the variety of mechanisms that the platform offered you good, normal, bad? Why?
8. What was your favorite device on the platform (chat, IP Voice, gestures) and why?
9. How was your interaction with your professor good, normal, bad? Why?
10. Did you feel the same with your professor on the platform than in real life? Why?

APPENDIX 7: SURVEY STATISTIC ANALYSIS

WOMEN'S SURVEY ANSWERS (EXPERIMENTAL)

NAME	SURVEY QUESTIONS										
	1	2	3	4	5	6	7	8	9	10	11
EWPre1/EWPost1	B	NO	NONE	NO		A	YES	NO		A	YES
EWPre2/EWPost2	B	NO	ALL	NO	NONE		NO	NO		A	YES
EWPre3/EWPost3	B	NO		NO	GAME COMMUNITIES	A	YES	YES	JUEGOS ON LINE-SECOND LIFE		YES
EWPre4/EWPost4	A	YES	YOUTUBE	YES	SENA VIRTUALES COURSES		NO	NO		A	YES
EWPre5/EWPost5	B	YES	YOUTUBE	YES	GOOGLE	D	YES	NO		A	YES
EWPre6/EWPost6	B	NO	YOUTUBE	NO	GOOGLE TRANSLAT OR	C	YES	YES	I DON'T REMEMBER	A	YES
EWPre7/EWPost7	B	NO		NO	NONE		YES	YES	NO USED		NO
EWPre8/EWPost8	B	YES	YOUTUBE	NO	NONE	A	YES	NO		A	YES
QUESTION 1	YOUTUBE 1	FACEBOOK 7	TWITTER 0	HIS 0	QUÉ PASA? 0	ZOOKS 0	OTHER 0				
QUESTION 2	YES 3	NO 5									
QUESTION 3	NONE 1	TODOS 1	YOUTUBE 4	NO ANSWER 2							
QUESTION 4	NO 6	YES 2									
QUESTION 5	NONE 3	EMPTY 1	GOOGLE 2	SENA 1	GAMES 1						
QUESTION 6	MESSENGER 3	SKYPE 0	GOOGLE TALK 1	OTHER 1	EMPTY 3						
QUESTION 7	NO 2	YES 6									
QUESTION 8	NO 5	YES 3									
QUESTION 9	NO REC 1	NO USED 1	S.L 1	EMPTY 5							
QUESTION 10	CLASSROOM 6	TIC 0									
QUESTION 11	NO 1	YES 7									

Chart 10 : Experimental Women's Survey Answers



To the question:

1. Cuál de los siguientes programas utiliza con más frecuencia en la red:

a. YouTube. b. Facebook.

c. Twitter d. HI5

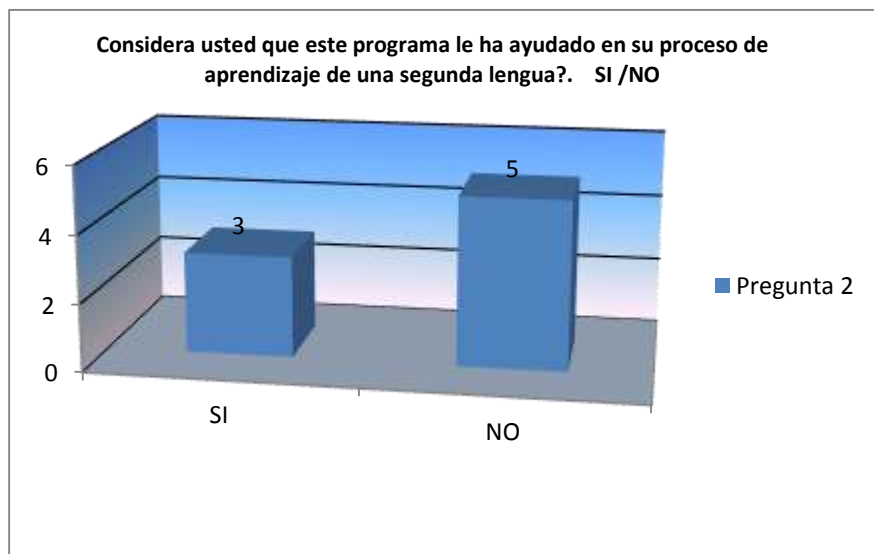
e. Quépasa? F. Zooks

g. Otro

Graph 23: Survey Question 1 -Experimental Women's Group

The 87% of the students answered Facebook

Only the 12.5% prefer YouTube



To the question:

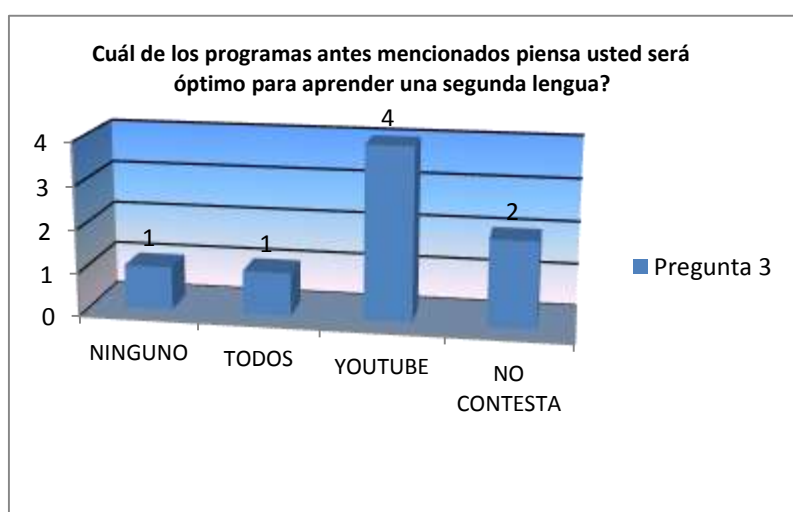
Considera usted que este programa le ha ayudado en su proceso de aprendizaje de una segunda lengua?

SI _____. NO _____.

Graph 24: Survey Question 2- Experimental Women's Group

37.5% considered that the program chosen in accordance with the first question had helped them in the process of learning a second language.

A 62.5% considered the contrary.



To the question:

Cuál de los programas antes mencionados piensa usted será óptimo para aprender una segunda lengua?

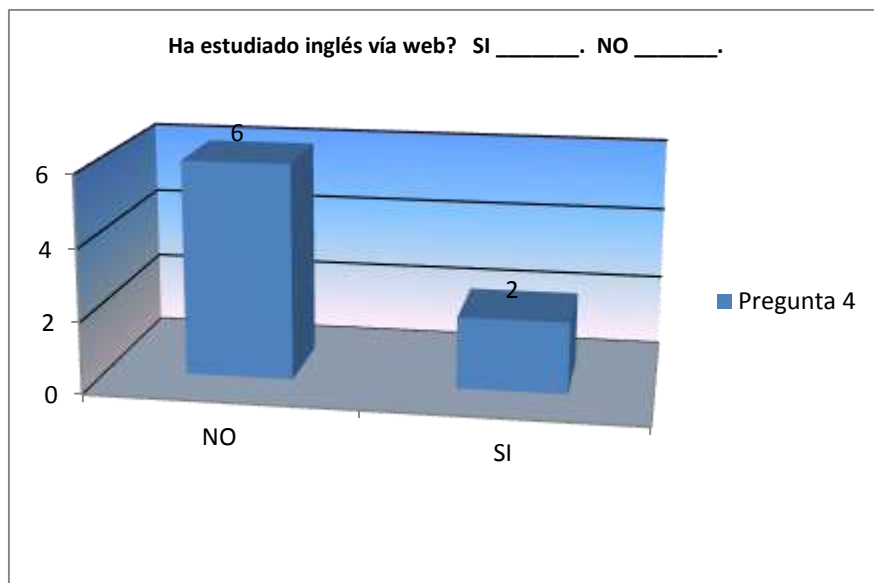
Graph 25: Survey Question 3- Experimental

Women's Group

50% of the surveyed students answered YouTube

25% did not answer

12% considered that the named programs are optimum for this learning process



12% considered that it does not work for such goals

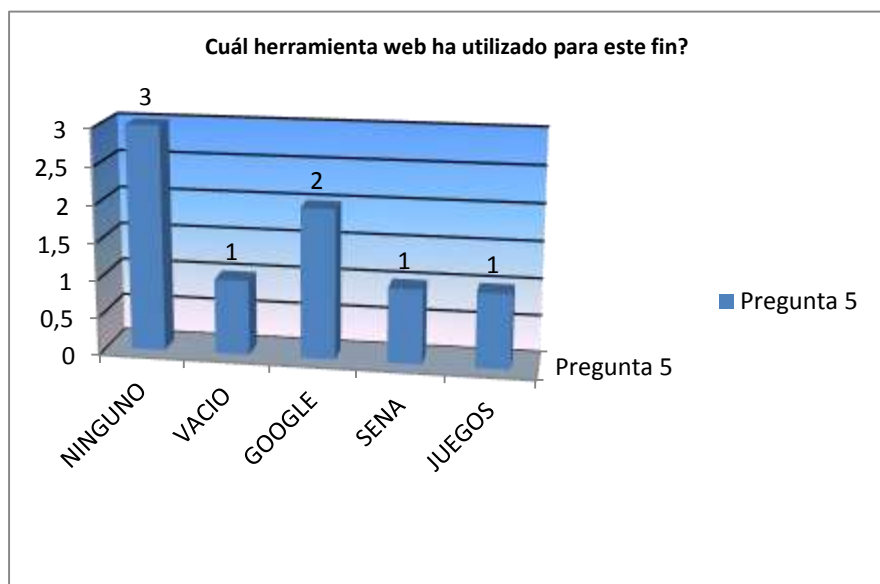
To the question:

Ha estudiado inglés vía web? SI _____. NO _____.

Graph 26: Survey Question 4- Experimental Women's Group

75% of the surveyed students affirmed not to have studied English via Web

24% of the surveyed students said that they have done it.



To the question:

Cuál herramienta web ha utilizado para este fin?

Graph 27: Survey Question 5- Experimental Women's Group

37.5% did not clarify anyone, 12.5% did not answer, and 25% affirmed to use Google, 12%

said to have studied at SENA

and the last 12% claimed to

have used games.



To the question:

Ha utilizado alguno de los siguientes programas para estudiar o practicar su inglés on-line?

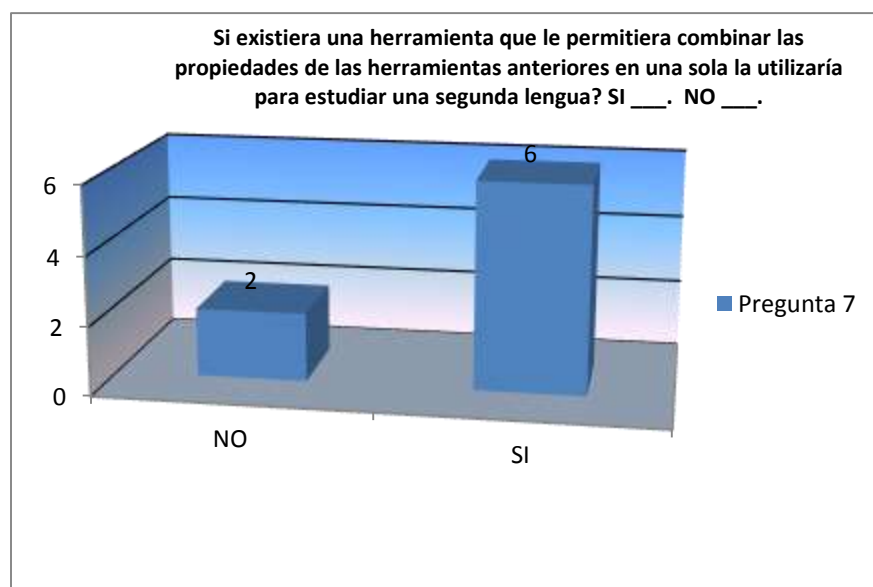
A. Messenger.

B. Skype. C. Google Talk

D. Otro _____

Graph 28: Survey Question 6- Experimental Women's Group

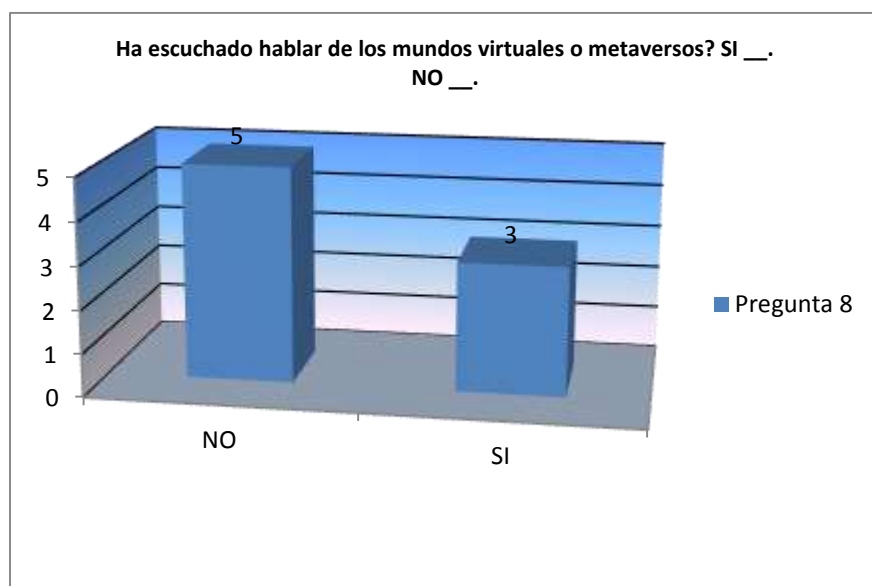
37% said to use Messenger to practice their English, 37% did not answer if they use any of these programs, 12% said to use Google Talk and 12% argued to use a different web tool in relation to the proposals.



To the question:

Si existiera una herramienta que le permitiera combinar las propiedades de las herramientas anteriores en una sola la utilizaría para estudiar una segunda lengua? SI ___. NO __.

Graph 29: Survey Question 7- Experimental Women's Group



75% of the surveyed students affirmed that they would use such tool.

25% indicated that they would not use such tool.

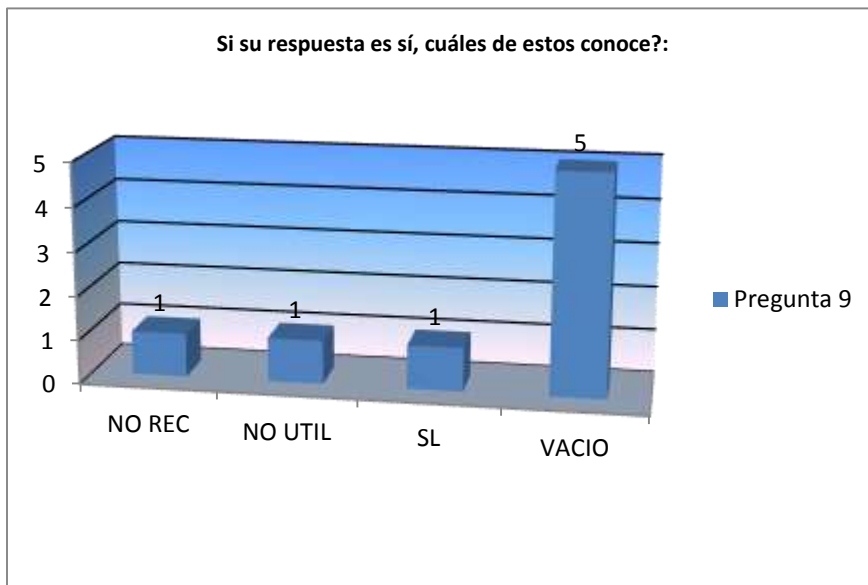
To the question:

Ha escuchado hablar de los mundos virtuales o metaversos? SI __. NO __.

Graph 30: Survey Question 8- Experimental Women's Group

62% said not to have heard about metaverse

37% affirmed to have heard about metaverse

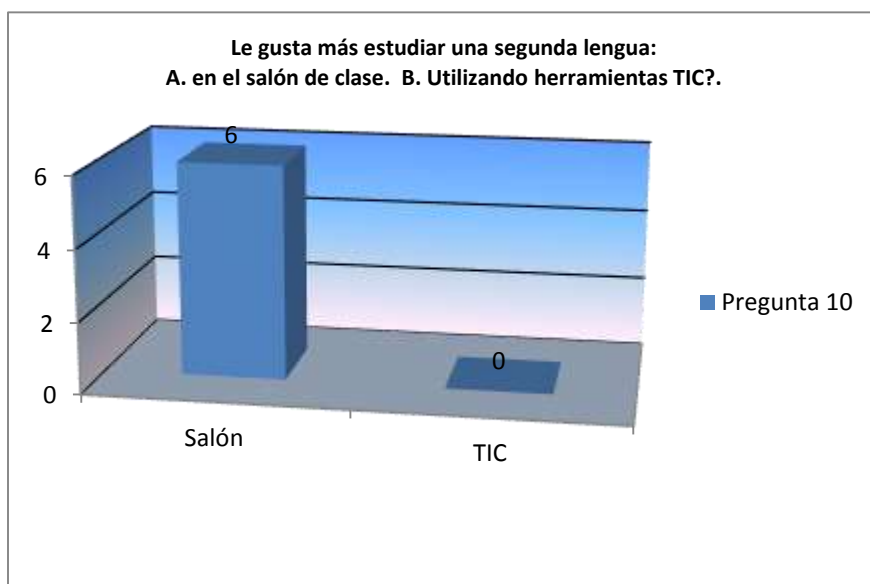


To the question:

Si su respuesta es sí, cuáles de estos conoce?:

Graph 31: Survey Question 9- Experimental Women's Group

12.5 % did not remember the name of the virtual world, 12.5 % did not use virtual worlds, 12, 5 % know Second Life and 62.5% did not answer



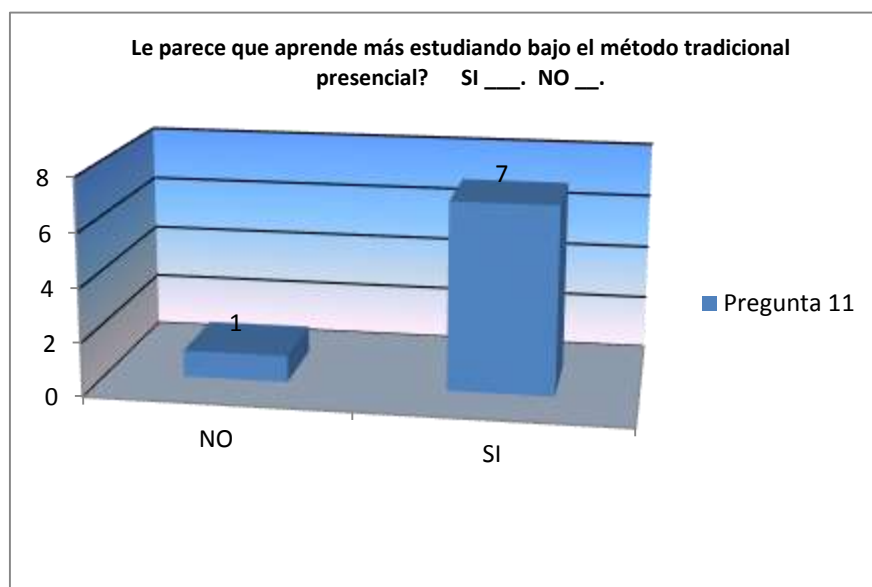
Graph 32: Survey Question 10- Experimental Women's Group

62.5% said to prefer to study in the traditional class attendance

To the question:

Le gusta más estudiar una segunda lengua:

A. en el salón de clase. B. Utilizando herramientas TIC?.



Graph 33: Survey Question 11- Experimental Women's Group

87.5 % had the impression they learned more under the traditional teaching method and only 12.5% affirms that it is the contrary.

The rest of the surveyed students did not answer

To the question:

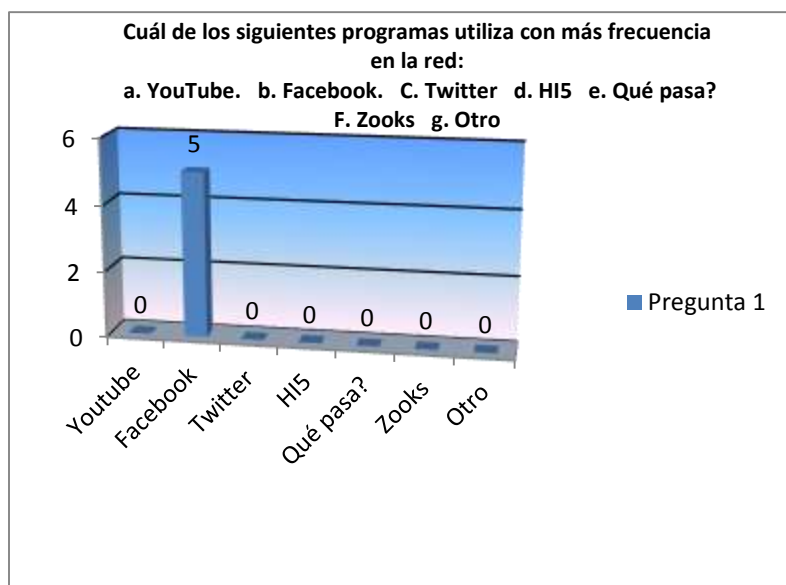
Le parece que aprende más estudiando bajo el método tradicional presencial?

SI ___. NO __.

CHART 3: MEN'S SURVEY ANSWERS (EXPERIMENTAL)

NAME	Survey Questions										
	1	2	3	4	5	6	7	8	9	10	11
EMPre1/EMPost1	B	YES	YOUTUBE	YES	TRADUCTOR GOOGLE	C	YES	YES	SOFIA PLUS	A	YES
EMPre2/EMPost2	B	NO	NINGUNA	NO	NONE		NO	NO		A	YES
EMPre3/EMPost3	B	NO	TODOS	YES	SENA	B	YES	NO		A	YES
EMPre4/EMPost4	B	NO	YOUTUBE	NO			YES	NO		A	YES
EMPre5/EMPost5	B	YES	YOUTUBE	YES	MESSENGER	A	YES	NO		A	YES
QUESTION 1	YOUTUBE	FACEBOOK	TWITTER	HIS	QUÉ PASA?	ZOOKS	OTHER				
	0	5	0	0	0	0	0				
QUESTION 2	YES	NO									
	2	4									
QUESTION 3	NONE	ALL	YOUTUBE	NO ANSWER							
	1	1	3	0							
QUESTION 4	NO	YES									
	3	3									
QUESTION 5	NONE	EMPTY	GOOGLE	SENA	MESSENGER						
	1	1	2	1	1						
QUESTION 6	MESSENGER	SKYPE	GOOGLE TALK	OTHER	EMPTY						
	1	1	2	0	2						
QUESTION 7	NO	YES									
	1	5									
QUESTION 8	NO	YES									
	4	2									
QUESTION 9	SOFIA	NO USED	S.L.	EMPTY							
QUESTION 10	CLASSROOM	TIC									
	5	1									
QUESTION 11	NO	YES									
	0	6									

Chart 11: Experimental Men's Survey Answers



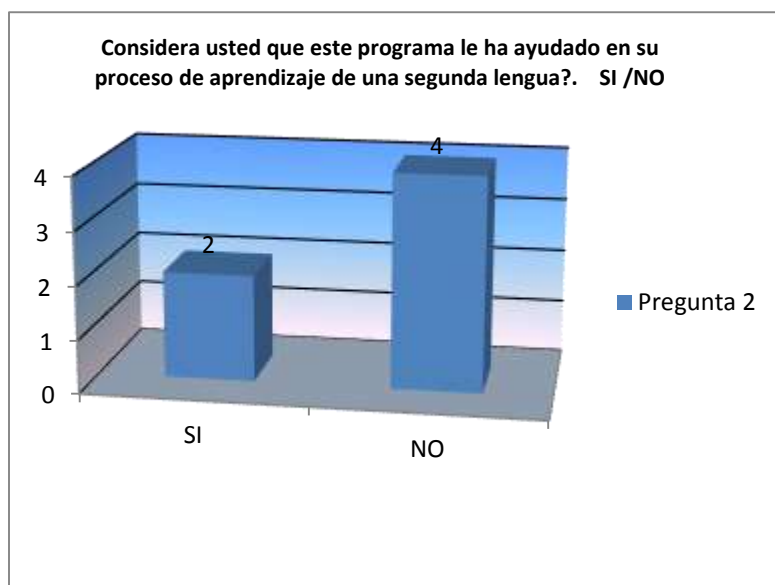
Graph 34: Survey Question 1- Experimental Men's Group

83.3% of the surveyed students answered Facebook, the others did not answer.

To the question:

Cuál de los siguientes programas utiliza con más frecuencia en la red:

a. YouTube. b. Facebook. C. Twitter d. HI5 e. Qué pasa?
F. Zooks g. Otro

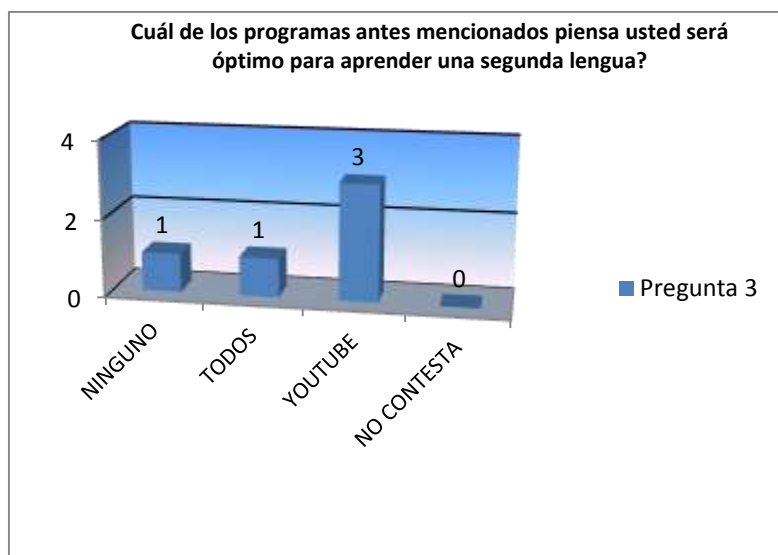


Graph 35: Survey Question 2- Experimental Men's Group

33.4 % considered that the program chosen in accordance with the first question had helped them in the process of learning a second language and 66, 6 % considered the contrary.

To the question:

Considera usted que este programa le ha ayudado en su proceso de aprendizaje de una segunda lengua? SI /NO

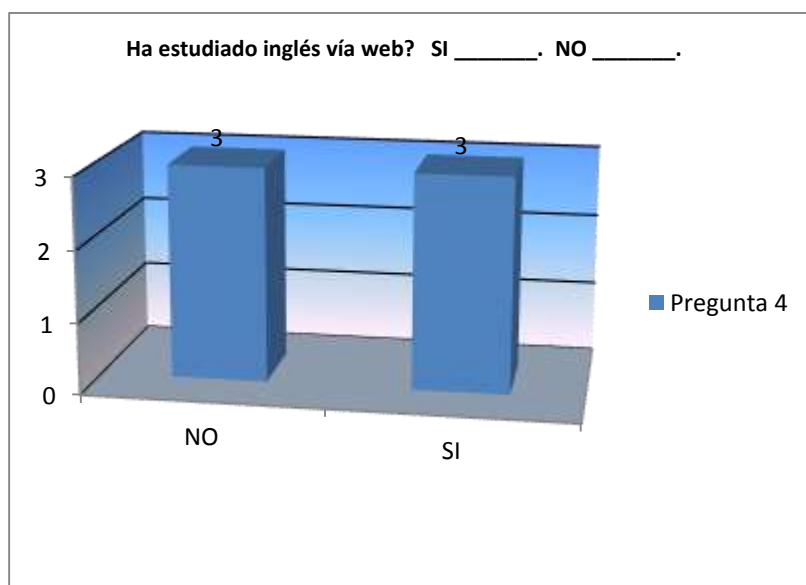


To the question:

Cuál de los programas antes mencionados piensa usted será óptimo para aprender una segunda lengua?

Graph 36: Survey Question 3- Experimental Men's Group

50% of the surveyed students answered YouTube, 16% considered that all the programs are optimum for this learning process and 16.6% considered that it does not work for such goals



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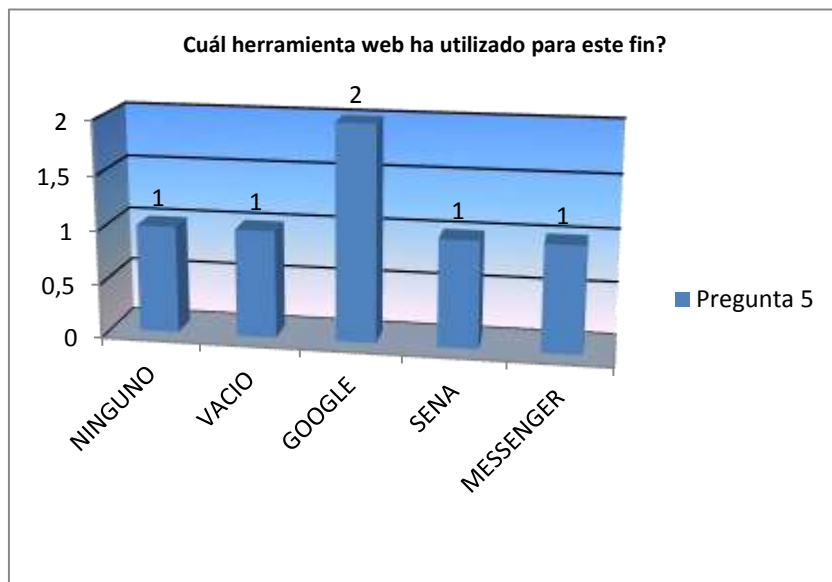
To the question:

Ha estudiado inglés vía web?

SI _____. NO _____.

Graph 37: Survey Question 4- Experimental Men's Group

50% of the surveyed students affirmed to have studied English via Web and the other 50% said that they have not done it.

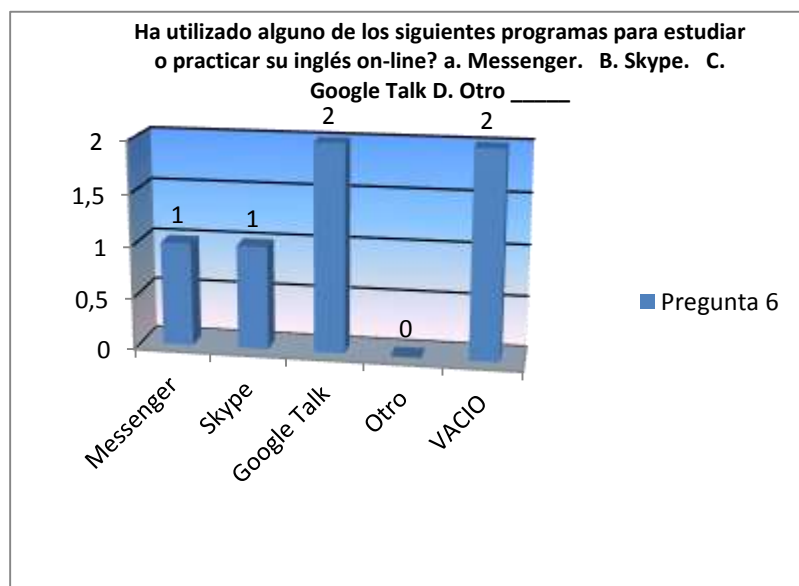


To the question:

Cuál herramienta web ha utilizado para este fin?

Graph 38: Survey Question 5- Experimental Men's Group

33% affirmed to use Google, 16% said to have studied at SENA, 16.6% claimed to have used messenger, 16% affirmed not to use anything and 16.6% did not answer.

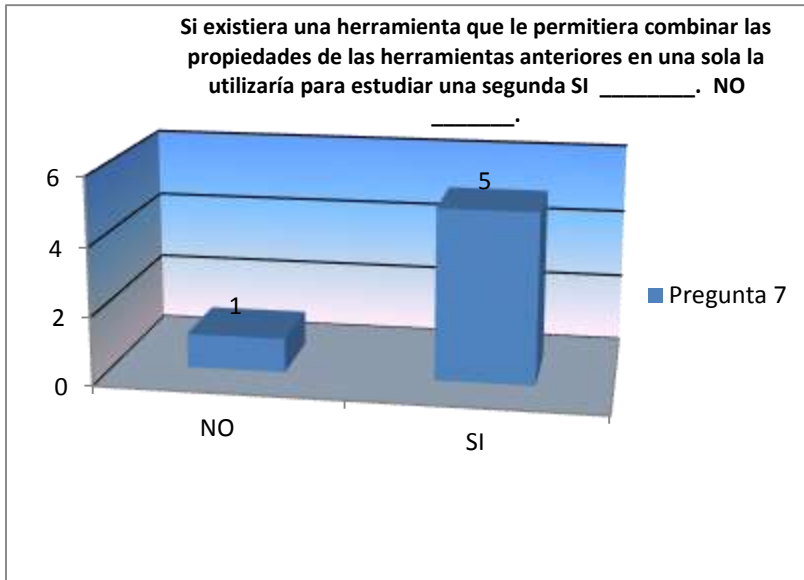


To the question:

Ha utilizado alguno de los siguientes programas para estudiar o practicar su inglés on-line? A. Messenger.
B. Skype. C. Google Talk
D. Otro _____

Graph 39: Survey Question 6- Experimental Men's Group

16.6% said to use Messenger to practice their English, 16.6% said to use Skype, 33.3% said to use Google Talk and 33.3% did not answer.

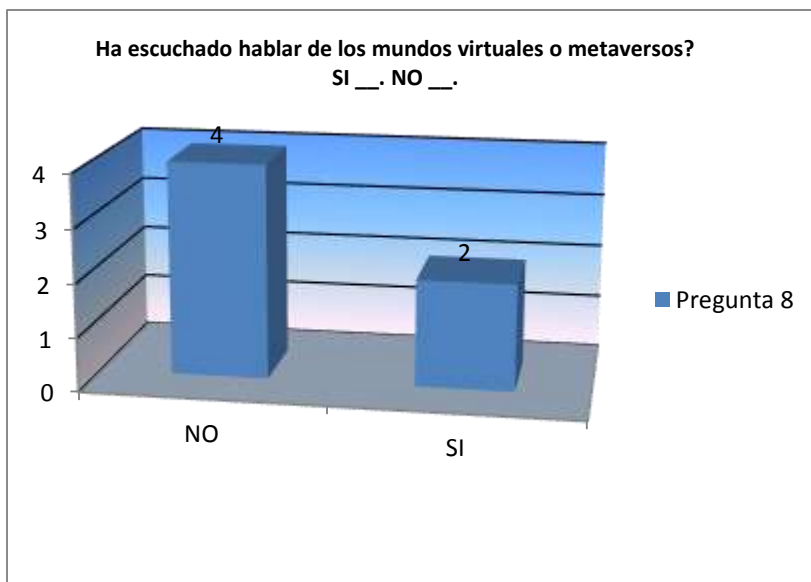


To the question:

Si existiera una herramienta que le permitiera combinar las propiedades de las herramientas anteriores en una sola la utilizaría para estudiar una segunda lengua? SI _____. NO _____.

Graph 40: Survey Question 7- Experimental Men's Group

83.33% of the surveyed students affirmed that they would use such tool and 16.66% indicated that they would not use such tool.



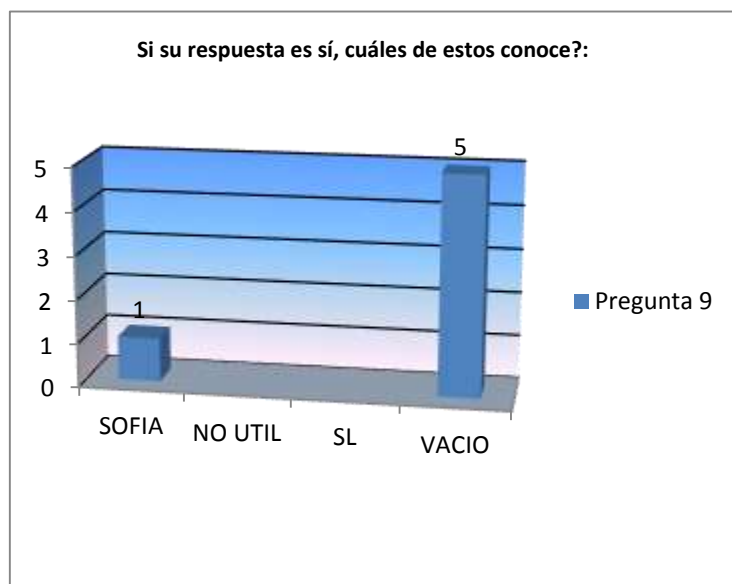
To the question:

Ha escuchado hablar de los mundos virtuales o metaversos? SI __. NO __.

Graph 41: Survey Question 8- Experimental Men's Group

66.66% said not to have heard about metaverse

33.33% affirmed to have heard about metaverse

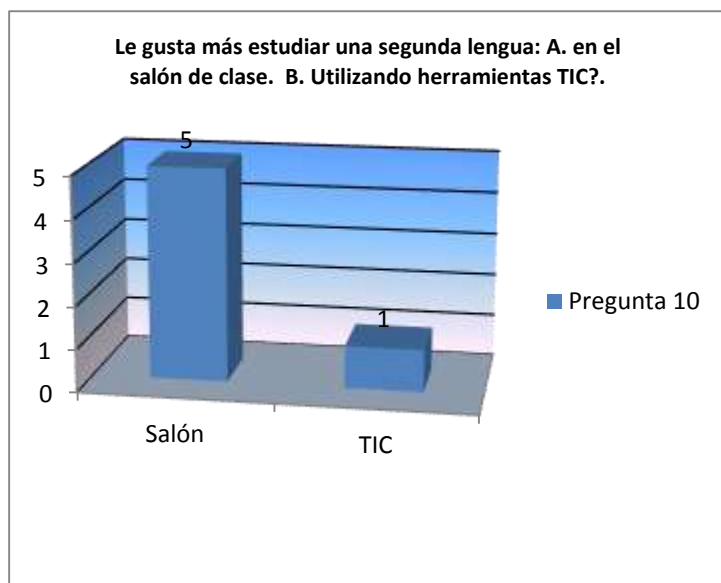


To the question:

Si su respuesta es sí, cuáles de estos conoce?:

Graph 42: Survey Question 9- Experimental Men's Group

16% affirmed that they know Sofia as a virtual world and 83, 33% did not answer



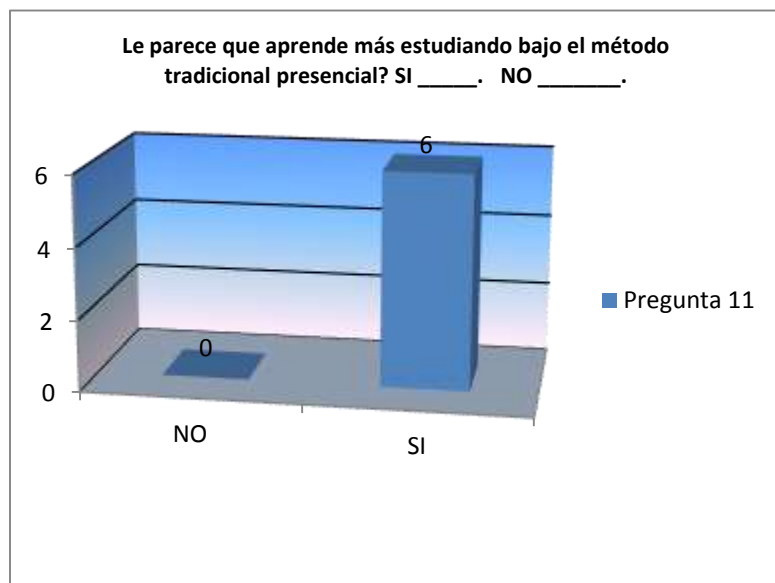
To the question:

Le gusta más estudiar una segunda lengua:
A. en el salón de clase. B. Utilizando herramientas TIC?.

Graph 43: Survey Question 10- Experimental Men's Group

83.33% said to prefer to study in the traditional class attendance

16.66% of the surveyed students said to prefer to learn English through TICs



Graph 44: Survey Question 11- Experimental Men's Group

The 100% of the surveyed students had the impression that they learn more under the traditional teaching method.

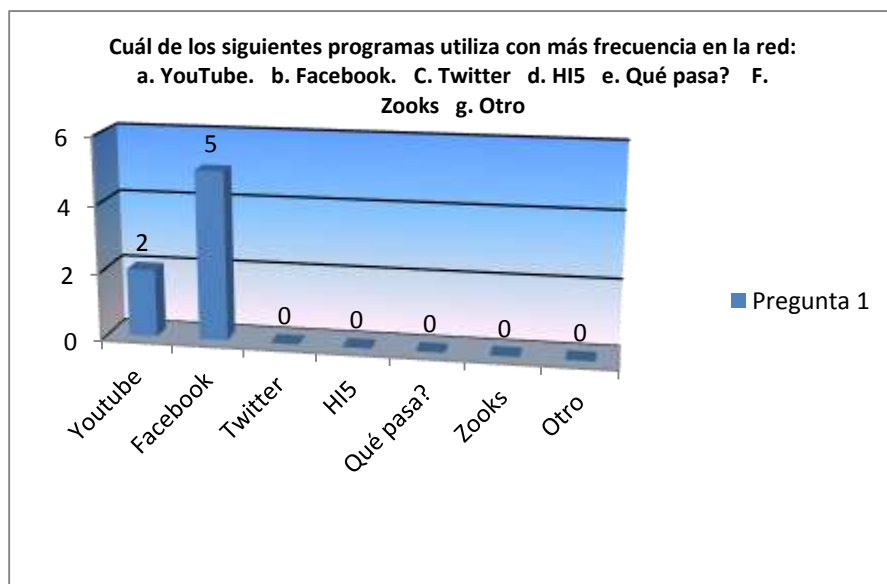
To the question:

Le parece que aprende más estudiando bajo el método tradicional presencial? SI _____. NO ____.

CHART 4: WOMEN'S SURVEY ANSWERS (CONTROL)

NAME	Survey Questions										
	1	2	3	4	5	6	7	8	9	10	11
CWPre1/CWPost1	B	YES	YOUTUBE	YES	LA MANYESON DEL INGLES	A	YES	NO		A	YES
CWPre2/CWPost2	B	NO	YOUTUBE	YES	CD INTERACTIVO	C	YES	NO		A	YES
CWPre3/CWPost3	B	NO	YOUTUBE	YES	CD INTERACTIVO	C	YES	NO		A	YES
CWPre4/CWPost4	B	YES	YOUTUBE	YES	WORD REFERENC E	A	YES	NO		A	YES
CWPre5/CWPost5	A	YES	YOUTUBE	NO			YES			A	YES
CWPre6/CWPost6	B	NO	YOUTUBE	NO			YES			A	YES
CWPre7/CWPost7	A	YES	YOUTUBE	YES	VOQ NEWS	D	YES	NO		A	YES
QUESTION 1	YOUTUBE	FACEBOOK	TWITTER	HIS	QUÉ PASA?	ZOOKS	OTRO				
	2	5	0	0	0	0	0				
QUESTION 2	YES	NO									
	4	3									
QUESTION 3	NONE	TODOS	YOUTUBE	NO ANSWER							
	0	0	7	0							
QUESTION 4	NO	YES									
	2	5									
QUESTION 5	NONE	EMPTY	MANSION DEL INGLES	INTERACTIVE CD	WORD REFERENCE	VOQ NEWS					
	0	2	1	2	1	1					
QUESTION 6	MESSENGER	SKYPE	GOOGLE TALK	OTHER	EMPTY						
	2	0	2	1	2						
QUESTION 7	NO	YES									
	0	7									
QUESTION 8	NO	YES									
	5	0									
QUESTION 9	NO REC	NO USED	S.L	EMPTY							
				7							
QUESTION 10	CLASSROOM	TIC									
	7	0									
QUESTION 11	NO	YES									
	0	7									

Chart 12: Control Women's Survey Answers



Graph 45: Survey Question 1- Control Women's Group

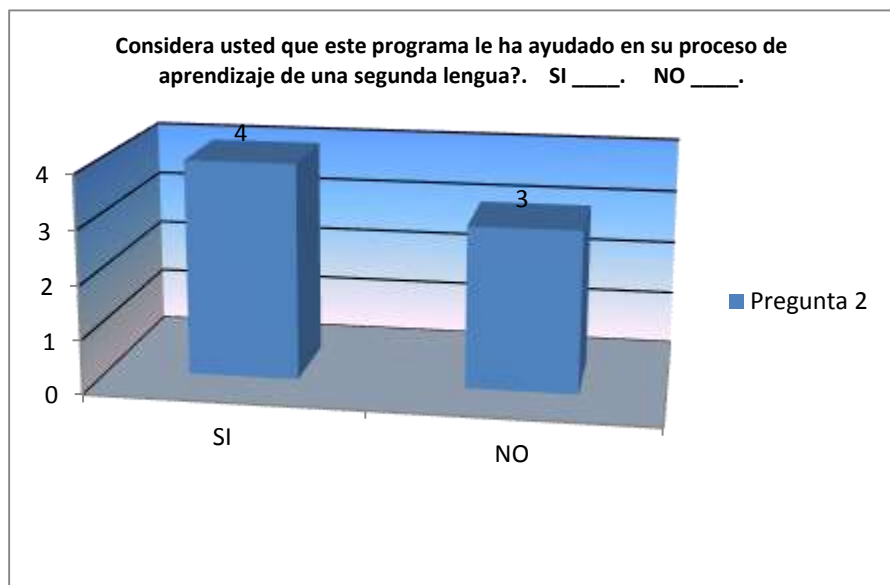
71.4% of the surveyed students answered to use Facebook with more frequency

28.5% said to use YouTube.

To the question:

Cuál de los siguientes programas utiliza con más frecuencia en la red:

- a. YouTube. b. Facebook.
C. Twitter d. HI5 e. Qué pasa?
F. Zooks g. Otro



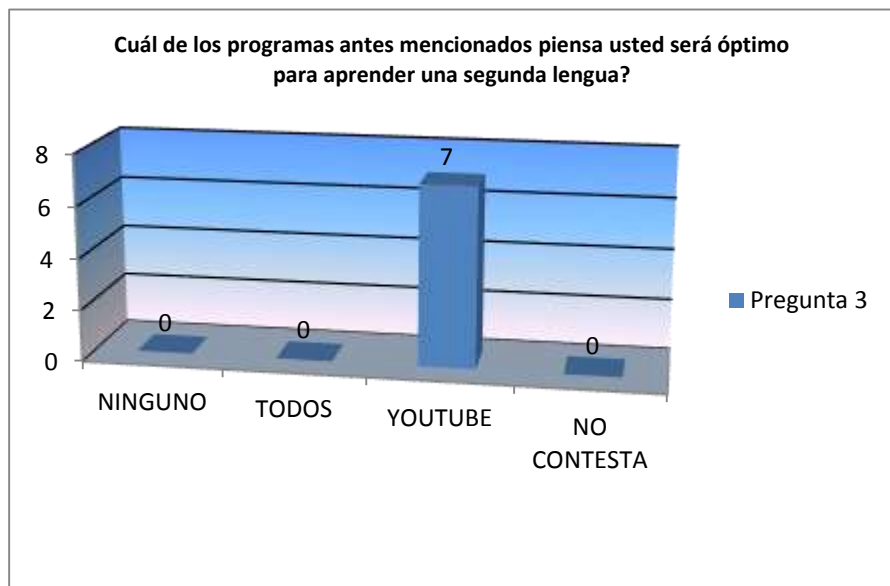
Graph 46: Survey Question 2- Control Women's Group

57.1% considered that the program chosen in accordance with the first question had helped them in the process of learning a second language.

To the question:

Considera usted que este programa le ha ayudado en su proceso de aprendizaje de una segunda lengua?
SI ____ NO ____.

42.8% considered the contrary.

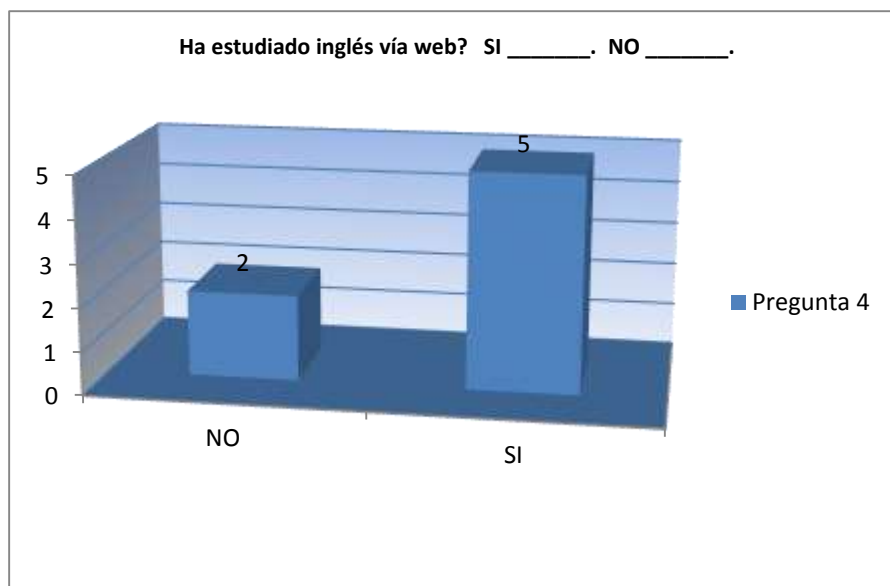


To the question:

Cuál de los programas antes mencionados piensa usted será óptimo para aprender una segunda lengua?

Graph 47: Survey Question 3- Control Women's Group

The 100% of the surveyed students answered YouTube.



To the question:

Ha estudiado inglés vía web?
SI _____. NO _____.

Graph 48: Survey Question 4- Control Women's Group

71.4% of the surveyed students affirmed to have studied English via Web

28.5% said that they have not done it.

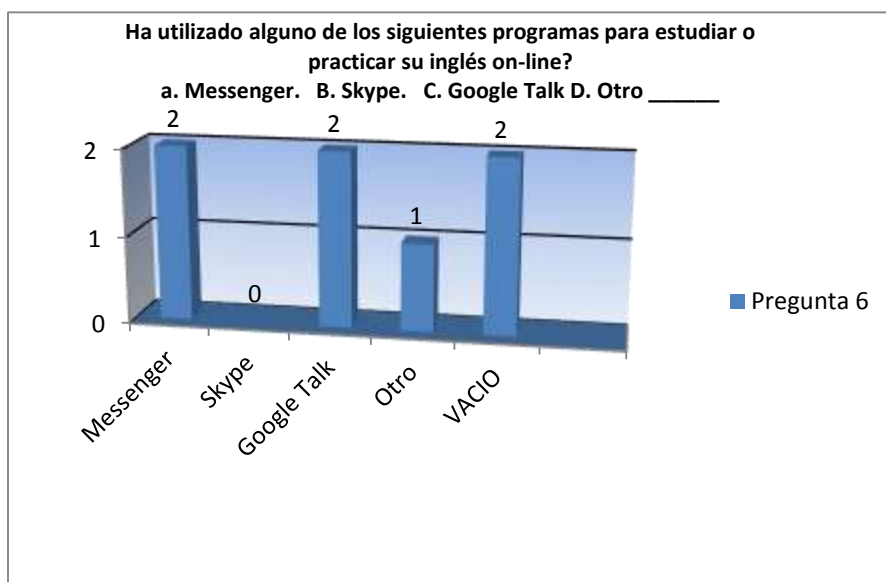


To the question:

Cuál herramienta web ha utilizado para este fin?

Graph 49: Survey Question 5- Control Women's Group

28% affirmed to use interactive CDs, 28.5% did not answer, 14.2% said to have been studying the English Mansion, 14.2% claimed to use word reference, and 14.2% affirmed to use Voq News.



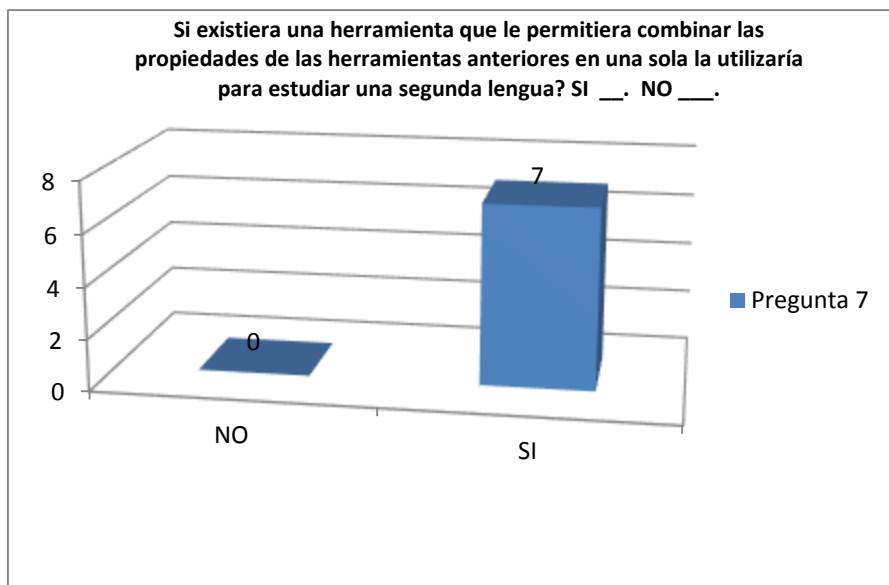
To the question:

Ha utilizado alguno de los siguientes programas para estudiar o practicar su inglés on-line?

- A. Messenger. B. Skype.
- C. Google Talk
- D. Otro _____

Graph 50: Survey Question 6- Control Women's Group

28.5% said to use Messenger to practice their English, another 28.5% claimed to use Google Talk, 14.2% said to use another program and 28.5% did not answer.

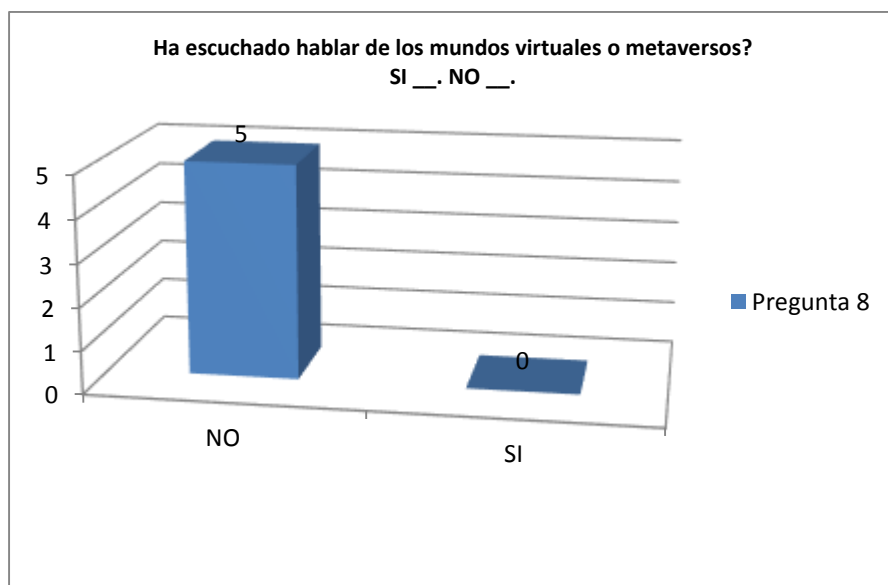


To the question:

Si existiera una herramienta que le permitiera combinar las propiedades de las herramientas anteriores en una sola la utilizaría para estudiar una segunda lengua? SI __. NO __.

Graph 51: Survey Question 7- Control Women's Group

The 100% of the surveyed students affirmed that they would use such tool.



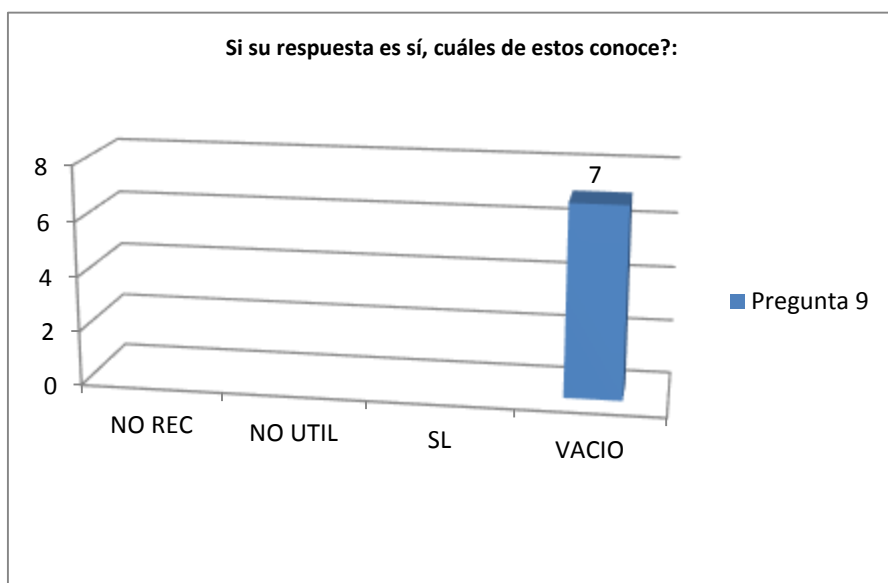
To the question:

Ha escuchado hablar de los mundos virtuales o metaversos?
SI __. NO __.

Graph 52: Survey Question 8- Control Women's Group

71.42% said not to have heard about metaverse

28.5% did not answer

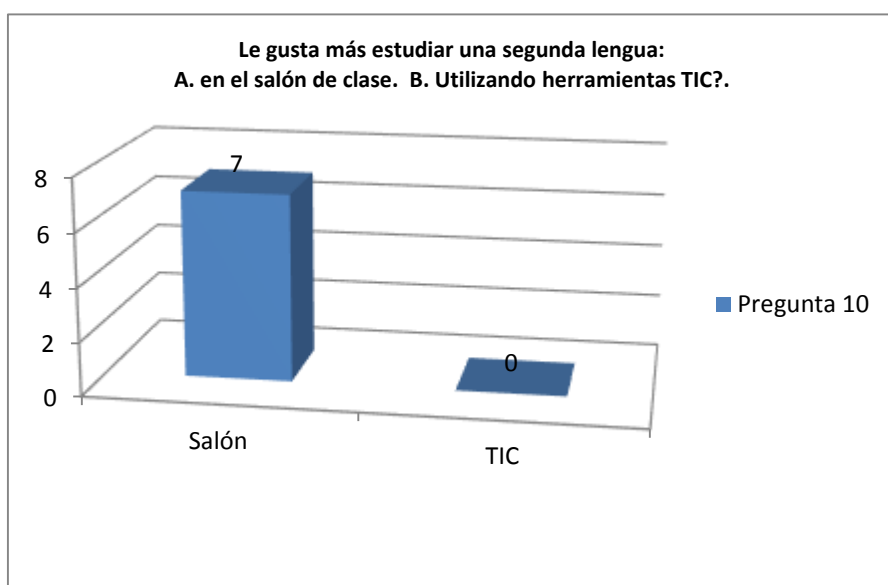


To the question:

Si su respuesta es sí, cuáles de estos conoce?:

Graph 53: Survey Question 9- Control Women's Group

The 100% of the surveyed students did not answer

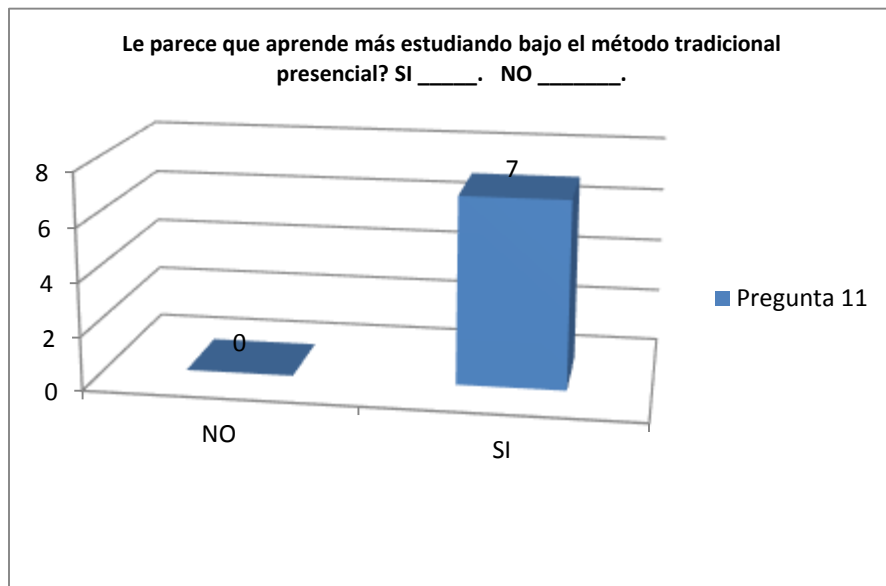


To the question:

Le gusta más estudiar una segunda lengua:
A. en el salón de clase. B. Utilizando herramientas TIC?.

Graph 54: Survey Question 10- Control Women's Group

The 100% said to prefer to study in the traditional class attendance



To the question:

Le parece que aprende más estudiando bajo el método tradicional presencial?
 SI _____. NO ____.

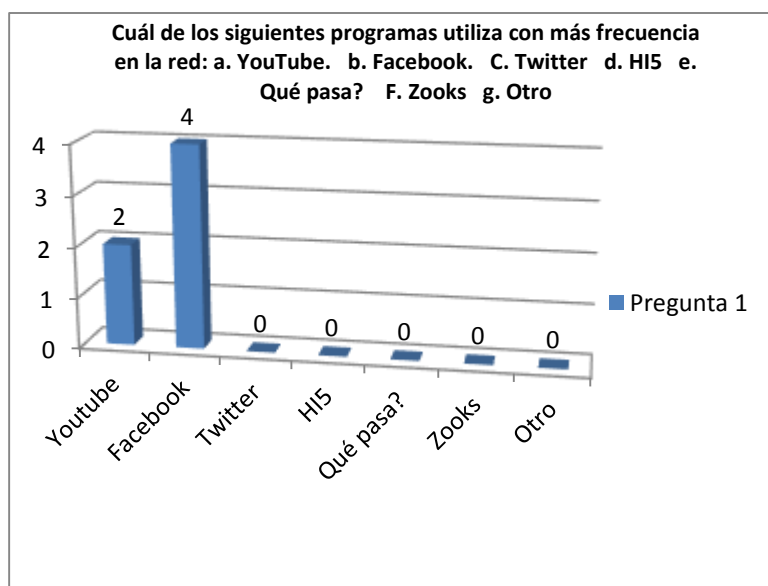
Graph 55: Survey Question 11- Control Women's Group

The 100% of the surveyed students had the impression that they learn more under the traditional teaching method.

CHART 5: MEN'S SURVEY ANSWERS (CONTROL)

NAME	Survey Questions										
	1	2	3	4	5	6	7	8	9	10	11
CMPre1/CMPost1	A	YES	FACEBOOK	NO	TRADUC GOOGLE	B	YES	NO		A	YES
CMPre2/CMPost2	A	YES	YOUTUBE	NO			YES	NO		A	YES
CMPre3/CMPost3	B	NO	YOUTUBE	NO		C	YES	NO		A	YES
CMPre4/CMPost4	B	NO	YOUTUBE	NO	GOOGLE	C	YES	NO		A	YES
CMPre5/CMPost5	B	NO	YOUTUBE	YES	NONE	C	YES	YES	OPEN LINE	A	YES
CMPre6/CMPost6	B	NO	YOUTUBE	NO	NONE	A	YES	YES		B	YES
QUESTION 1	YOUTUBE	FACEBOOK	TWITTER	HIS	QUÉ PASA?	ZOOKS	OTHER				
	2	4	0	0	0	0	0				
QUESTION 2	YES	NO									
	2	4									
QUESTION 3	NONE	ALL	YOUTUBE	FACEBOOK							
	0	0	5	1							
QUESTION 4	NO	YES									
	5	1									
QUESTION 5	NONE	EMPTY	GOOGLE								
	2	2	1								
QUESTION 6	MESSENGER	SKYPE	GOOGLE TALK	OTHER	EMPTY						
	1	1	3	0	1						
QUESTION 7	NO	YES									
	0	6									
QUESTION 8	NO	YES									
	4	2									
QUESTION 9	NO REC	NO USED	OPEN LINE	EMPTY							
			1								
QUESTION 10	CLASSROOM	TIC									
	5	1									
QUESTION 11	NO	YES									
	0	6									

Chart 13: Control Men's Survey Answer



To the question:

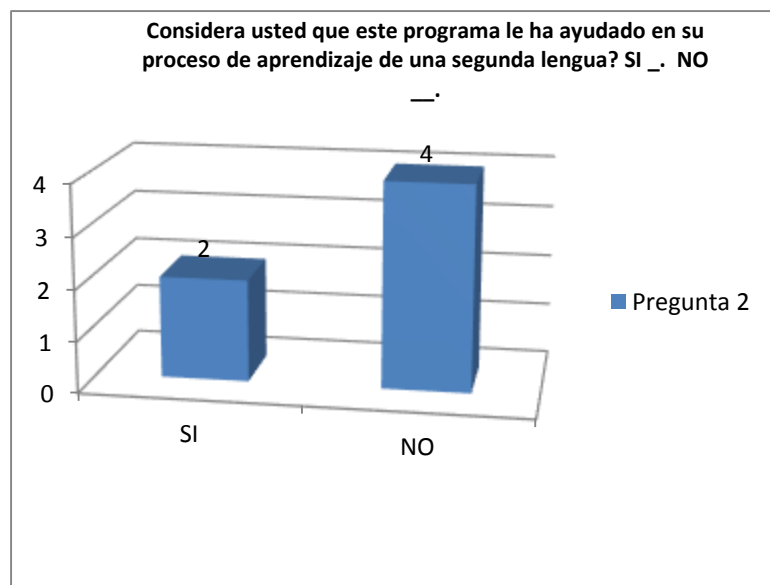
Cuál de los siguientes programas utiliza con más frecuencia en la red:

a. YouTube. b. Facebook. C. Twitter d. HI5 e. Qué pasa?
F. Zooks g. Otro

Graph 56: Survey Question 1- Control Men's Group

33.33% of the surveyed students answered to use YouTube

66.6% of the surveyed students answered to use Facebook.



To the question:

Considera usted que este programa le ha ayudado en su proceso de aprendizaje de una segunda lengua?

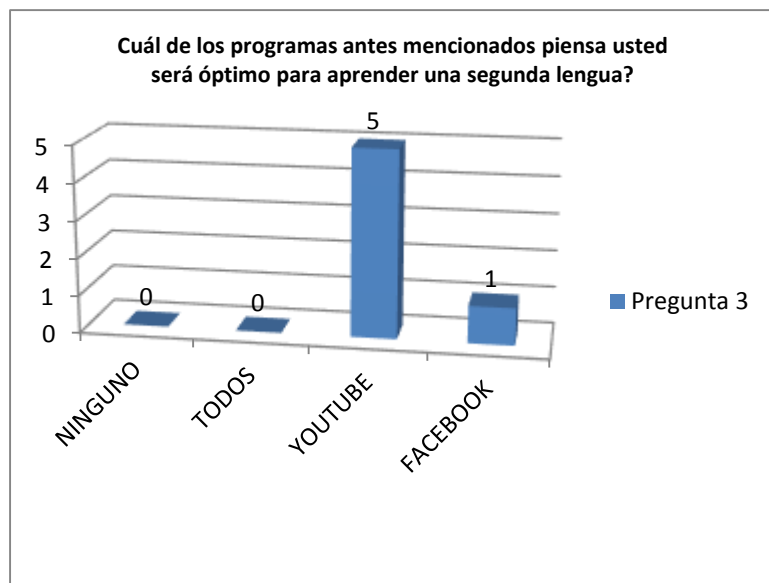
SI ____ NO ____.

Graph 57: Survey Question 2- Control Men's Group

66.6% considered that the program chosen in accordance with the first question had helped them in the process of learning a second language and 33.3% considered the contrary.

To the question:

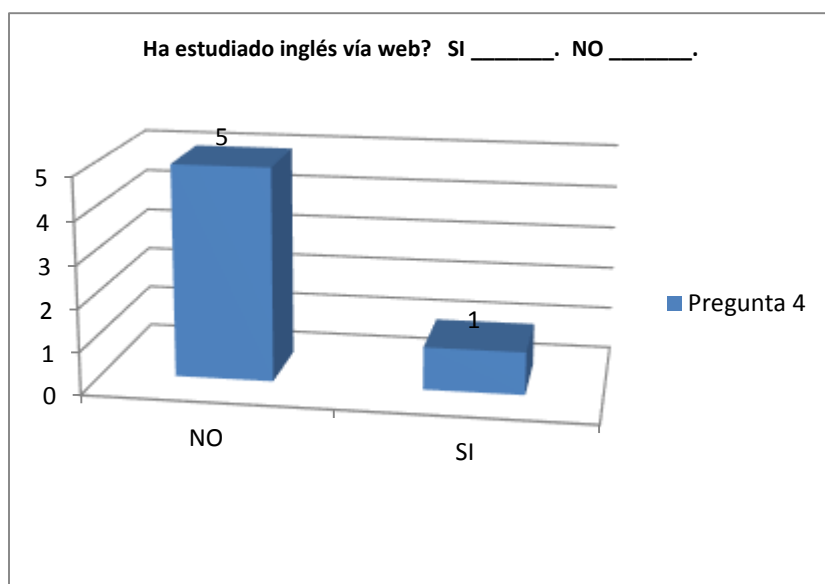
Cuál de los programas antes mencionados piensa usted será óptimo para aprender una segunda lengua?



Graph 58: Survey Question 3- Control Men's Group

83.3% of the surveyed students answered YouTube.

16.6% considered Facebook as the optimum one.



To the question:

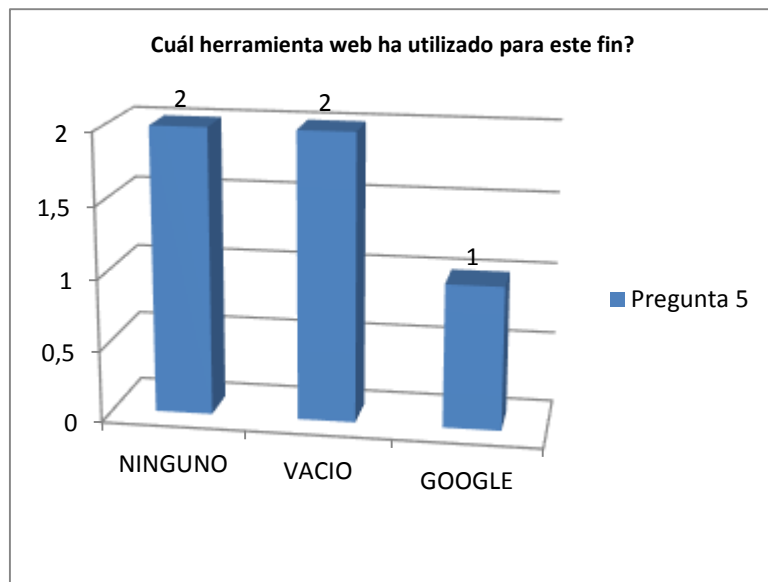
Ha estudiado inglés vía web?

SI _____. NO _____.

Graph 59: Survey Question 4- Control Men's Group

16.6% of the surveyed students affirmed to have studied English via Web

83.3% said that they have not done it.

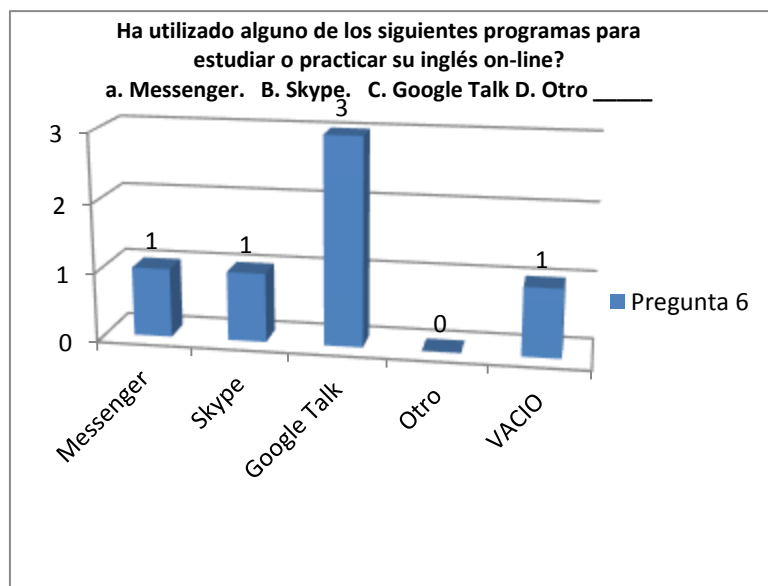


To the question:

Cuál herramienta web ha utilizado para este fin?

Graph 60: Survey Question 5- Control Men's Group

33.3% affirmed not to use anyone, 16.6% said to Google and 33.3% did not answer.



To the question:

Ha utilizado alguno de los siguientes programas para estudiar o practicar su inglés on-line?

A. Messenger. B. Skype.

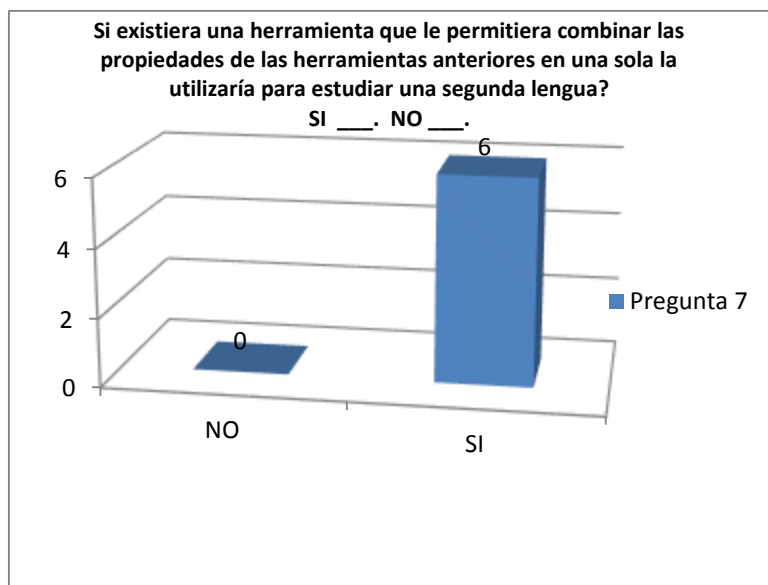
C. Google Talk D. Otro _____

Graph 61: Survey Question 6- Control Men's Group

16.6% said to use Messenger to practice their English, 16.6% said to use Skype, 50% claimed to use Google Talk, and 16.6% did not answer.

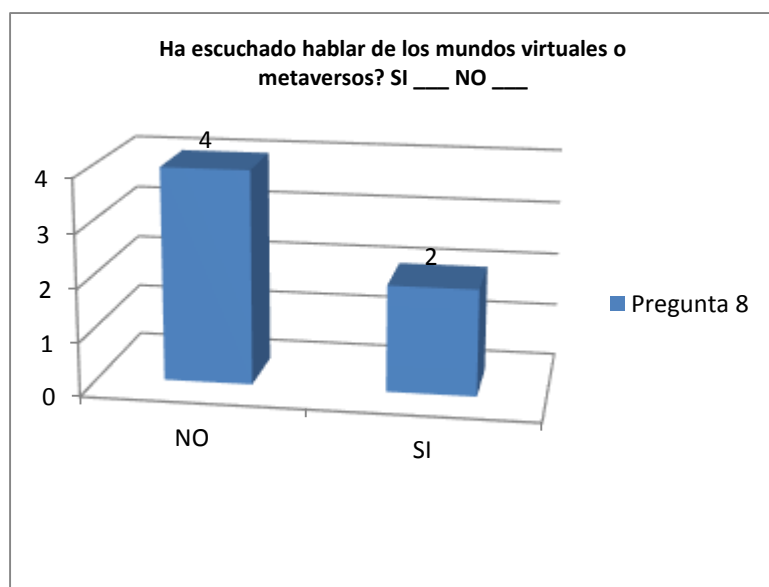
To the question:

Si existiera una herramienta que le permitiera combinar las propiedades de las herramientas anteriores en una sola la utilizaría para estudiar una segunda lengua? SI ____ NO ____.



Graph 62: Survey Question 7- Control Men's Group

The 100% of the surveyed students affirmed that they would use such tool.



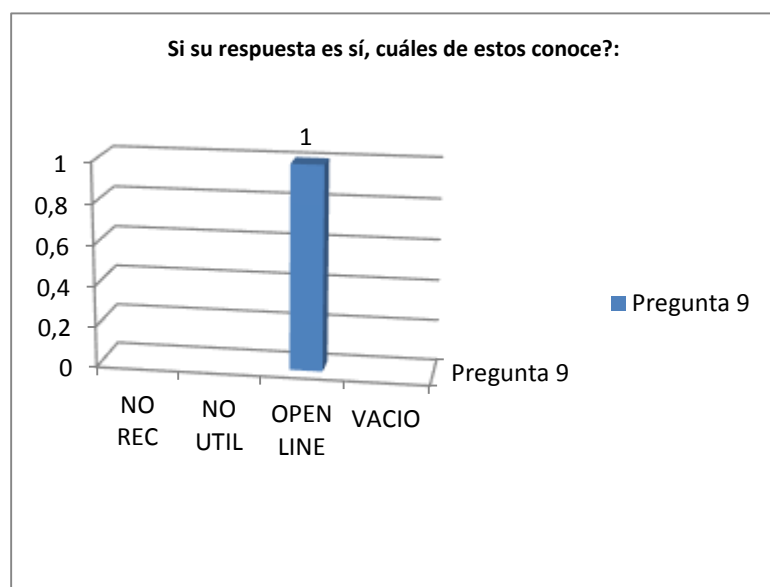
Graph 63: Survey Question 8- Control Men's Group

To the question:

Ha escuchado hablar de los mundos virtuales o metaversos?
SI ____ NO ____.

66.66% said not to have heard about metaverse

33.33% affirmed to have heard about metaverse



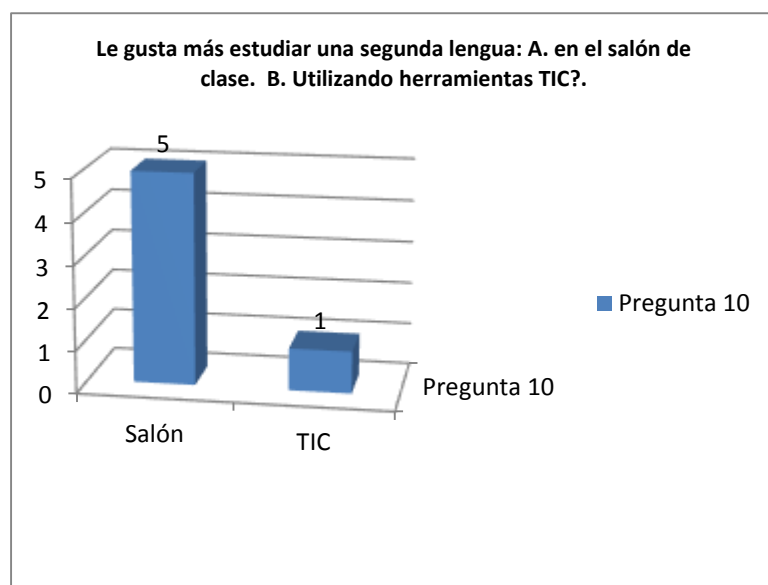
To the question:

Si su respuesta es sí, cuáles de estos conoce?:

Graph 64: Survey Question 9- Control Men's

Group

83.33% did not answer and 16.6% said to know Open Line



To the question:

Le gusta más estudiar una segunda lengua:

A. en el salón de clase. B. Utilizando herramientas TIC?.

Graph 65: Survey Question 10- Control Men's Group

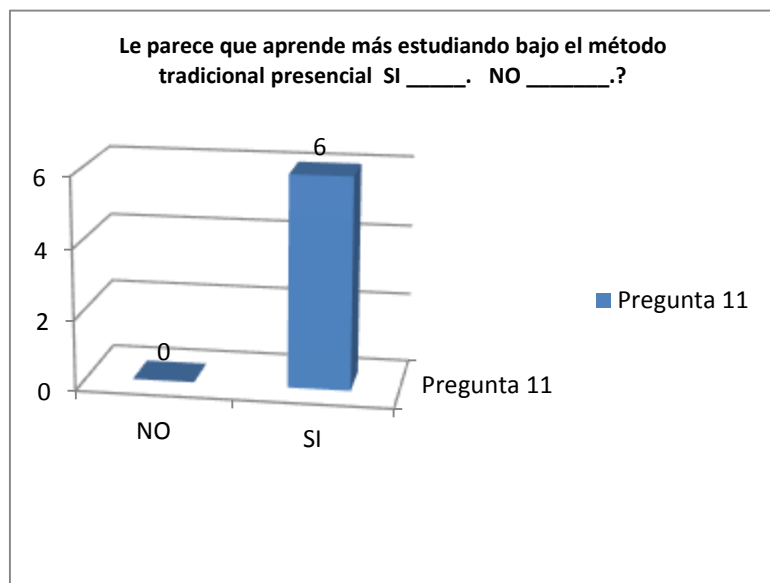
83.33% said to prefer to study in the traditional class attendance

16.33% said to prefer to learn English through the TICs

To the question:

Le parece que aprende más estudiando bajo el método tradicional presencial?

SI _____. NO _____.



Graph 66: Survey Question 11- Control Men's Group

The 100% of the surveyed students had the impression that they learn more under the traditional teaching method.

APPENDIX 8: STATISTIC PRETEST ANALYSIS

EXPERIMENTAL WOMEN'S GROUP (VIRTUAL ENVIRONMENT)

SCORE OBTAINED PER UNIT

NAME	PRETEST					GRADE
	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	
EWPre1/EWPost1	0,28	0,70	0,40	0,60	0,80	2,78
EWPre2/EWPost2	0,62	0,70	0,30	0,60	0,84	3,06
EWPre3/EWPost3	0,34	0,40	0,40	0,40	0,96	2,50
EWPre4/EWPost4	0,97	0,80	0,90	0,90	1,00	4,57
EWPre5/EWPost5	0,55	0,70	0,60	0,70	0,88	3,43
EWPre6/EWPost6	0,55	0,10	0,00	0,20	0,68	1,53
EWPre7/EWPost7	1,00	1,00	1,00	1,00	1,00	5,00
EWPre8/EWPost8	0,14	0,50	0,60	0,90	0,80	2,94

Chart 14: Pretest Score per unit-Experimental women's group

UNIT 1: This unit tested the ability of the student to apply the correct inflexion about a verb depending on the subject in accordance with the conjugated verb; it was always in present tense.

Of a total score of 1 point, 3 of the 8 students did not exceed the average and 5 exceeded it; 1 exceeded the two thirds and only 1 student achieved the perfect score. This indicated us that there were some problems with the identification of the type of person and the correct inflexion to be applied (S/ES/IES/NONE).

UNIT 2: In this unit we observed if the student chose the correct type of question (Yes-No Question / WH-Question), as well as if the chosen answer was consistent with the content of the posed reading.

Of a total score of 1 point (0.50 assigned to the choosing of the type of question and 0.50 assigned to grammar of it). From the 8 students tested: 3 students did not exceed the average, 4 exceeded the two thirds of the possible punctuation and 1 achieved the perfect score.

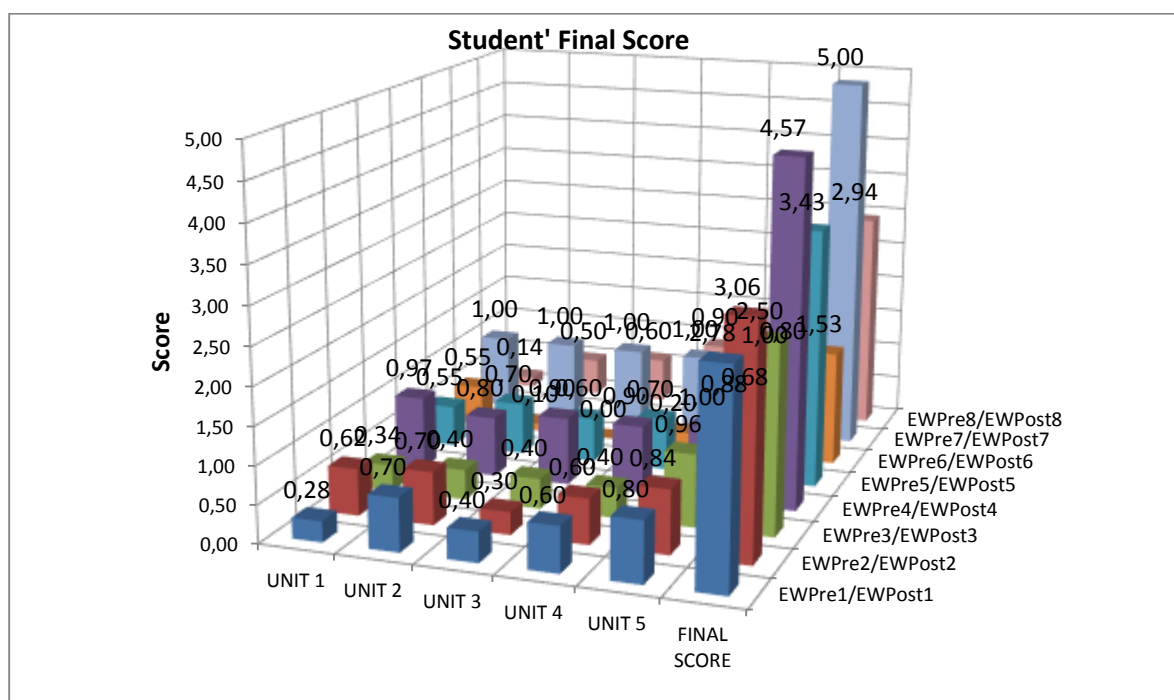
UNIT 3: This unit tested the use, from students, of the possible third person inflexions about a verb in particular, having in mind the present simple tense.

Of a total of 1 point, from a group of 8 students: 4 students exceeded the average, 2 exceeded the two thirds of the score, 1 obtained the perfect score and 1 did not get any score. This situation reinforced the idea that the students, still at that time, did not understand or did not interpret well the rules for applying the inflexion of a third person in English, coinciding with the finding in the **UNIT 1**.

UNIT 4: This unit tested if the student chose or not the correct decision of a series of answers in relation to a question posed (it needed to take into account the context and type of person used and its third person inflexion) or just if the student chose a correct sentence among three possible ones. It was identified that, in situations in which it was given the question and the answer, it was easier for the students to find the link between complete pairs and the identification of the correct third person inflexion.

Of a possible total value of 1 point, 6 students of 8 exceeded the average; only 2 did not achieve it, 4 students exceeded the two thirds of the score and 1 obtained the ideal score.

UNIT 5: This unit tested the student writing abilities, letting him/her work with the structure of the sentences freely, the choosing of the person to be used, the third person inflexion to be used as well as the general text congruence and the union between the sentences. The students did not take risks and in general they decided to build short paragraphs composed by short sentences. The paragraphs were consistent; and grammatically and logically well built.



Graph 67: Pretest Score per Unit Per Student - Experimental Women's Group

Table of percentage obtained per unit in the pretest, from the group of students in general

UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5
AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE
0,56	0,61	0,53	0,66	0,87

Chart 15: Pretest Overall Average-Experimental Women's Group

This table of percentages showed that for the 5 units, the general average from this group exceeded the average, and in particular, the question about the construction of a paragraph illustrated a high percentage of effectiveness in the structures and verb inflexion choosing.

Score table obtained per unit in the Pretest and its final score per student

EXPERIMENTAL MEN'S GROUP (VIRTUAL ENVIRONMENT)

SCORE OBTAINED PER UNIT

NAME	PRETEST					GRADE
	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	
EMPre1/EMPost1	0,83	0,80	1,00	0,90	1,00	4,53
EMPre2/EMPost2	0,34	0,40	0,20	0,30	0,32	1,56
EMPre3/EMPost3	0,86	0,80	0,70	0,80	0,76	3,92
EMPre4/EMPost4	0,14	0,70	0,60	0,50	0,88	2,82
EMPre5/EMPost5	0,17	0,50	0,70	0,90	1,00	3,27

Chart 16: Pretest Score per unit-Experimental Men's Group

UNIT 1: This unit tested the ability of the student to apply the correct inflexion about a verb depending on the subject in accordance with the conjugated verb; it was always in present tense.

Of a total score of 1 point, of the 5 students tested: only 2 exceeded the average. That finding indicated that, in that group, the problems regarding the identification of the type of person and the correct inflexion to be applied (S/ES/IES/NONE) were sharper than the experimental women's group.

UNIT 2: In this unit we observed if the student chose the correct type of question (Yes-No Question / WH-Question), as well as if the chosen answer was consistent with the content of the posed reading.

Of a total score of 1 point (0.50 assigned to the choosing of the type of question and 0.50 assigned to grammar of it). From 5 students tested: only 4 students exceeded the average, and 3 exceeded the two thirds of the possible punctuation. This fact equally indicated us that the experimental men's group from the students tested showed a relevant reading comprehension and they were congruent in the type of question application in relation to the question posed.

UNIT 3: This unit tested the use, from students, of the possible third person inflexions about a verb in particular, having in mind the present simple tense.

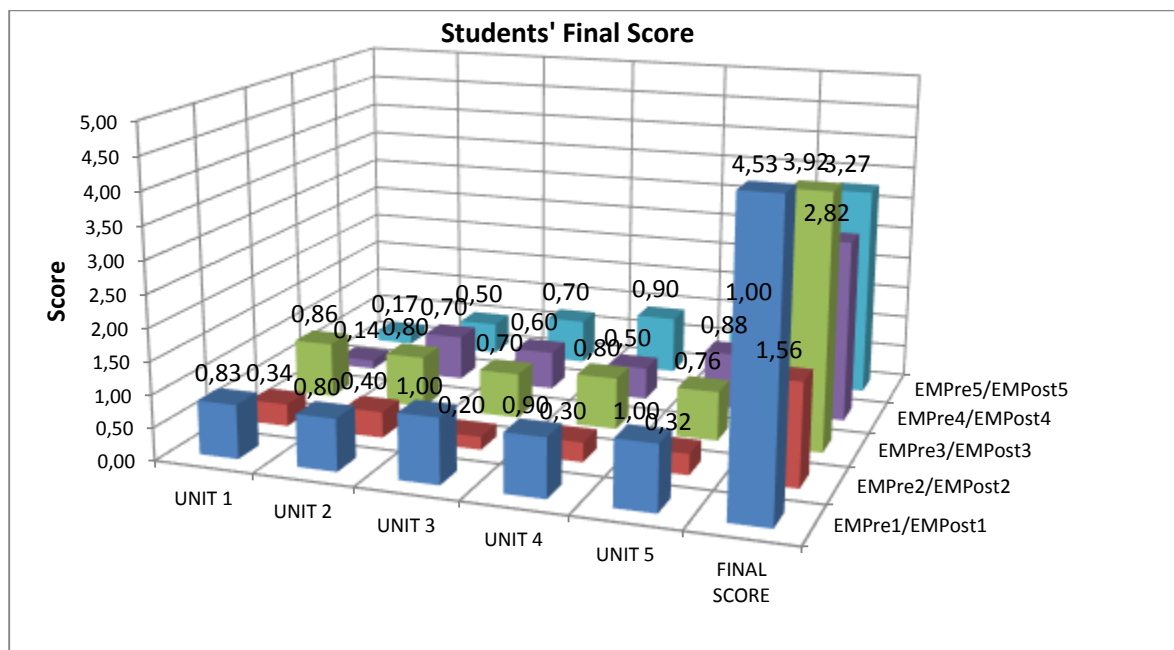
Of a total of 1 point, from a group of 5 students: 4 students exceeded the average, 3 exceeded the two thirds of the score, and 1 obtained the perfect score. In this case, the male students showed to comprehend or interpret better the rules for applying the inflexion of a third person in English separated of a context, in contrast with the finding in the **UNIT 1**.

UNIT 4: This unit tested if the student chose or not the correct decision of a series of answers in relation to a question posed (it needed to take into account the context and type of person used and its third person inflexion) or if the student chose a correct sentence among three possible ones. It was identified that, in situations in which it was given the question and the answer, it was easier for the students to find the link between complete pairs and the identification of the correct third person inflexion, similarly to what happened in the experimental women's group 1.

Of a possible total value of 1 point, 4 students of 5 exceeded the average; only 1 did not achieve it, and 3 students exceeded the two thirds of the score.

UNIT 5: This unit tested the student writing abilities, letting him/her work with the structure of the sentences freely, the choosing of the person to be used, the third person inflexion to be used as well as the general text congruence and the union between the sentences. The students from this group (a total of 5), did not take risks as well as the last group and, in general, they decided to build short paragraphs composed by short sentences. The paragraphs were consistent; and grammatically and logically well built.

Of a total group, 4 students of 5 exceeded the average, only 1 was under it and 2 obtained a perfect score.



Graph 68: Pretest Score per Unit Per Student - Experimental Men's Group

Table of percentage obtained per unit in the pretest, from the group of students in general

UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5
AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE
0,47	0,64	0,64	0,68	0,79

Chart 17: Pretest Overall Average-Experimental Men's Group

This table of percentages showed us that this group exceeded the general average of the 5 units, with exception to the unit 1.

Moreover, we observed that the general scores in the units 2 and 4 were very similar, in contrast with the average of the units 3 (higher for the men in this group) and 5 (higher for the experimental women's group). The question about building a paragraph offered a suitable percentage of effectiveness in the choosing of the structures and the verb inflexion.

Score table obtained per unit in the Pretest and its final score per student

CONTROL WOMEN'S GROUP (CLASS ATTENDANCE) – Score obtained by unit

NAME	PRETEST					GRADE
	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	
CWPre1/CWPost1	0,41	0,50	0,80	0,60	0,88	3,19
CWPre2/CWPost2	1,00	1,00	0,80	0,80	0,96	4,56
CWPre3/CWPost3	0,76	0,90	0,90	0,60	0,84	4,00
CWPre4/CWPost4	0,55	0,70	0,70	0,70	0,96	3,61
CWPre5/CWPost5	0,62	0,60	0,80	0,70	0,28	3,00
CWPre6/CWPost6	0,90	0,90	0,70	0,70	1	4,20
CWPre7/CWPost7	0,90	0,60	0,80	0,70	0,88	3,88

Chart 18: Pretest Score per unit-Control Women's Group

UNIT 1: This unit tested the ability of the student to apply the correct inflexion about a verb depending on the subject in accordance with the conjugated verb; it was always in present tense.

Of a total score of 1 point, of the 7 students tested: 6 exceeded the average. That finding indicated that, in that group, the problems regarding the identification of the type of

person and the correct inflexion to be applied (S/ES/IES/NONE) were minor, exceeding the scores in both experimental groups on a virtual world (men and women).

UNIT 2: In this unit we observed if the student chose the correct type of question (Yes-No Question / WH-Question), as well as if the chosen answer was consistent with the content of the posed reading.

Of a total score of 1 point (0.50 assigned to the choosing of the type of question and 0.50 assigned to grammar of it). From the 7 students tested: all of them exceeded the average, 4 exceeded the two thirds of the possible punctuation. We could interpret that with the fact that tested students showed a high level in reading comprehension and they were congruent in the type of question application in relation to the question posed.

UNIT 3: This unit tested the use, from students, of the possible third person inflexions about a verb in particular, having in mind the present simple tense.

Of a total of 1 point all the 7 students tested exceeded the average as well as the two thirds of the score. In this case, the female students showed to comprehend or interpret better the rules for applying the inflexion of a third person in English separated of a context, in accordance with the finding in the **UNIT 1**.

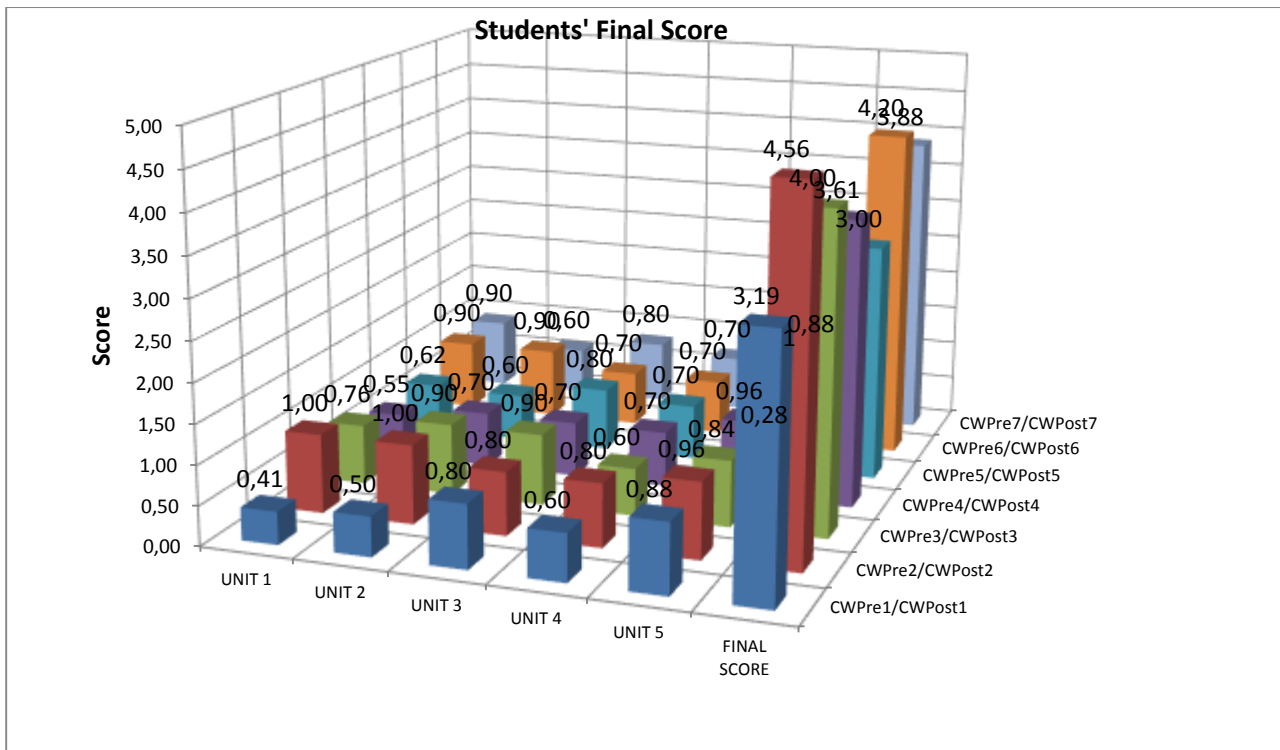
UNIT 4: This unit tested if the student chose or not the correct decision of a series of answers in relation to a question posed (it needed to take into account the context and type of person used and its third person inflexion) or if the student chose a correct sentence among

three possible ones. It was identified that, in situations in which it was given the question and the answer, similarly to what happened with the groups 1 and 2 (experimental on a virtual environment for men and women).

Of a possible total value of 1 point, all of the 7 students tested exceeded the average. From the total group, 5 students exceeded two thirds of the score.

UNIT 5: This unit tested the student writing abilities, letting him/her work with the structure of the sentences freely, the choosing of the person to be used, the third person inflexion to be used as well as the general text congruence and the union between the sentences. The students from this group (a total of 7), did not take risks as well as the previous groups and, in general, they decided to build short paragraphs composed by short sentences. The paragraphs were consistent; and grammatically and logically well built. Moreover, the scores of this group, except 1 student, exceeded the scores of the previous groups.

From the 7 students of the group: 6 exceeded the average, only 1 was under it and 6 obtained higher percentage than the two thirds.



Graph 69: Pretest Score per Unit Per Student - Control Women's Group

Chart of percentage obtained per unit in the pretest, from the group of students in general.

UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5
AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE
0,73	0,74	0,79	0,69	0,83

Chart 19: Pretest Overall Average-Control Women's Group

This table of percentages showed us that this group exceeded the general average of the 5 units.

Moreover, we observed that all overall scores in all the units exceeded a range between 4 and 6 points to the experimental groups on a virtual environment. Again, the unit

corresponded to the construction of a paragraph offered a higher percentage of effectiveness in the choosing of the structures and the verb inflexion.

Score table obtained per unit in the Pretest and its final score per student

CONTROL MEN'S GROUP (CLASS ATTENDANCE) – SCORE OBTAINED PER UNIT

NAME	PRETEST					GRADE
	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	
CMPre1/CMPPost1	0,45	0,40	0,80	0,70	0	2,35
CMPre2/CMPPost2	0,90	0,60	0,70	0,50	0,72	3,42
CMPre3/CMPPost3	0,79	0,50	0,80	0,60	0	2,69
CMPre4/CMPPost4	1,00	0,70	0,90	1,00	0,96	4,56
CMPre5/CMPPost5	0,76	1,00	0,60	0,60	0,68	3,64
CMPre6/CMPPost6	0,97	1,00	0,50	0,60	0,96	4,03

Chart 20: Pretest Score per unit-Control Men's Group

UNIT 1: This unit tested the ability of the student to apply the correct inflexion about a verb depending on the subject in accordance with the conjugated verb; it was always in present tense.

Of a total score of 1 point, 5 of the 6 students tested exceeded the average, and the same ones, exceeded the two thirds of total score. That finding indicated that, in this group, the problems regarding the identification of the type of person and the correct inflexion to be applied (S/ES/IES/NONE) were minor, exceeding the scores in both experimental groups on a virtual world (men and women) and agreeing, significantly, with the scores obtained by the women group 2 and the control group in class attendance.

UNIT 2: In this unit we observed if the student chose the correct type of question (Yes-No Question / WH-Question), as well as if the chosen answer was consistent with the content of the posed reading.

Of a total score of 1 point (0.50 assigned to the choosing of the type of question and 0.50 assigned to grammar of it). From the 6 students tested: 5 of them exceeded the average, 3 exceeded the two thirds of the possible punctuation and 2 obtained the perfect score. With this fact, we could interpret that the tested students showed a high level in reading comprehension and they were congruent in the type of question application in relation to the question posed. Moreover, they exceeded to the three previous groups already tested.

UNIT 3: This unit tested the use, from students, of the possible third person inflexions about a verb in particular, having in mind the present simple tense.

Of a total of 1 point, from a group of 6 students: all of them exceeded the average, but only 4 exceeded the two thirds of the score. In this case, the male students showed to comprehend or interpret better the rules for applying the inflexion of a third person in English separated of a context, almost totally in accordance with the finding in the **UNIT 1**.

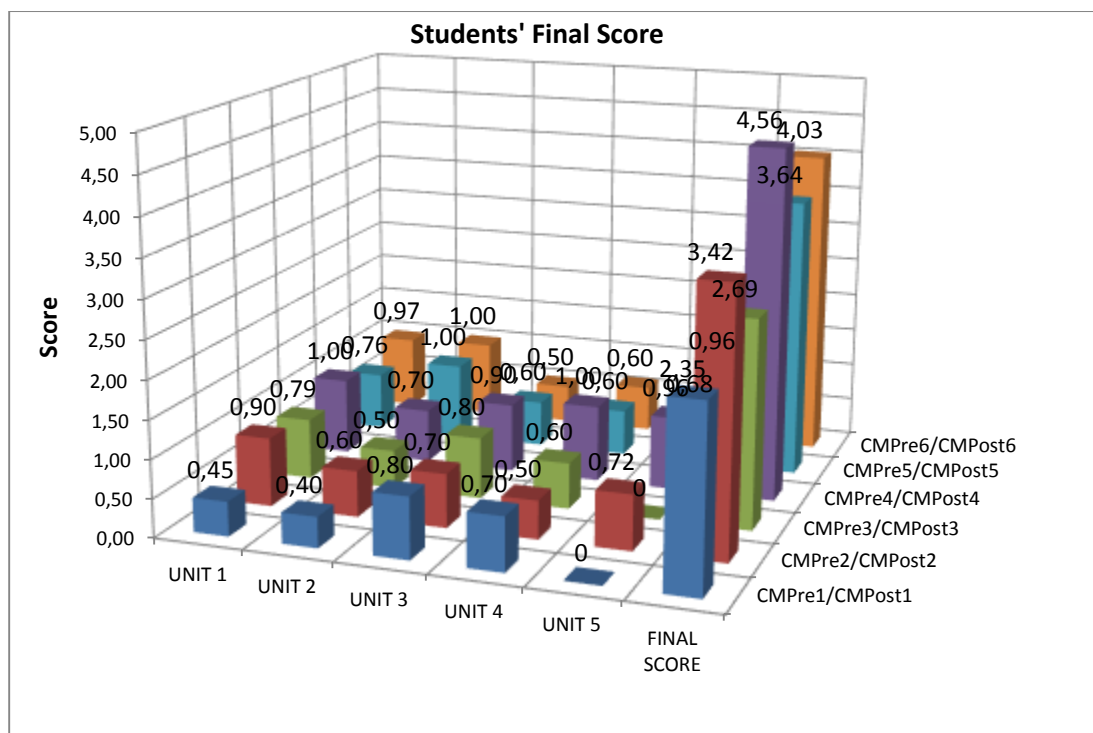
UNIT 4: This unit tested if the student chose or not the correct decision of a series of answers in relation to a question posed (it needed to take into account the context and type of person used and its third person inflexion) or if the student chose a correct sentence among three possible ones. It was identified that, similar to the previous groups, that in situations in

which it was given the question and the answer; it was easier for the students to find the link between complete pairs and the identification of the correct third person inflexion. However, the results obtained were inferior to the women's groups.

Of a possible total value of 1 point, all the 6 students of the group exceeded the average. From the total of the group, 2 students exceeded the two thirds of the score and 1 obtained the ideal score.

UNIT 5: This unit tested the student writing abilities, letting him/her work with the structure of the sentences freely, the choosing of the person to be used, the third person inflexion to be used as well as the general text congruence and the union between the sentences. 4 of the 6 students that answered to the question did not take risks as well as the previous groups and, in general, they decided to build short paragraphs composed by short sentences. The paragraphs were consistent; and grammatically and logically well built. 2 of the 6 students left the question in blank. Moreover, the scores of this group exceeded the scores of the experimental groups on a virtual world, but not to the women's group 2 (class attendance control group)

Of the group of 6 students 4 exceeded the average, only 2 were under it and did not answer, 4 obtained a higher score than the two thirds.



Graph 70: Pretest Score per Unit Per Student - Control Men's Group

Table of percentage obtained per unit in the pretest, from the group of students in general.

UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5
AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE
0,81	0,70	0,72	0,67	0,55

Chart 21: Pretest Overall Average-Control Men's Group

This table of percentages showed us that this group exceeded the general average of the 5 units. Moreover, we observed that all overall scores in all the units exceeded a range between 4 and 6 points to the experimental groups on a virtual environment, but it got lowed in contrast to the control women's group. This time, the unit corresponded to the construction of a paragraph offered a low percentage of effectiveness in the choosing of the structures and the verb inflexion.

APPENDIX 9: STATISTIC POST-TEST ANALYSIS

EXPERIMENTAL WOMEN'S GROUP (VIRTUAL ENVIRONMENT)

SCORE OBTAINED PER UNIT

NAME	POST-TEST					GRADE
	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	
EWPre1/EWPost1	0,79	0,90	0,90	0,90	0,96	4,45
EWPre2/EWPost2	0,95	1,00	0,90	0,90	0,96	4,71
EWPre3/EWPost3	0,74	0,35	0,80	0,80	0,88	3,57

EWPre4/EWPost4	1,00	0,80	1,00	1,00	1	4,80
EWPre5/EWPost5	0,95	1,00	1,00	1,00	1	4,95
EWPre6/EWPost6	0,89	0,70	1,00	0,90	0,92	4,41
EWPre7/EWPost7	0,95	0,80	1,00	1,00	1	4,75
EWPre8/EWPost8	0,84	0,90	0,90	0,80	0,92	4,36

Chart 22: Post-test Score per unit-Experimental Women's Group

UNIT 1: This unit tested the ability of the student to apply the correct inflexion about a verb depending on the subject in accordance with the conjugated verb; it was always in present tense.

Of a total score of 1 point, all of the 8 students exceeded the average, 7 exceeded the two thirds and 1 obtained the perfect score. This clearly indicated us that the students could identify the type of person and the correct inflexion to be applied (S/ES/IES/NONE).

UNIT 2: In this unit we observed if the student chose the correct type of question (Yes-No Question / WH-Question), as well as if the chosen answer was consistent with the content of the posed reading.

Of a total score of 1 point (0.50 assigned to the choosing of the type of question and 0.50 assigned to grammar of it). From the 8 students tested: 1 student did not exceed the average, 5exceeded the two thirds of the possible punctuation and 2 achieved the perfect score.

UNIT 3: This unit tested the use, from students, of the possible third person inflexions about a verb in particular, having in mind the present simple tense.

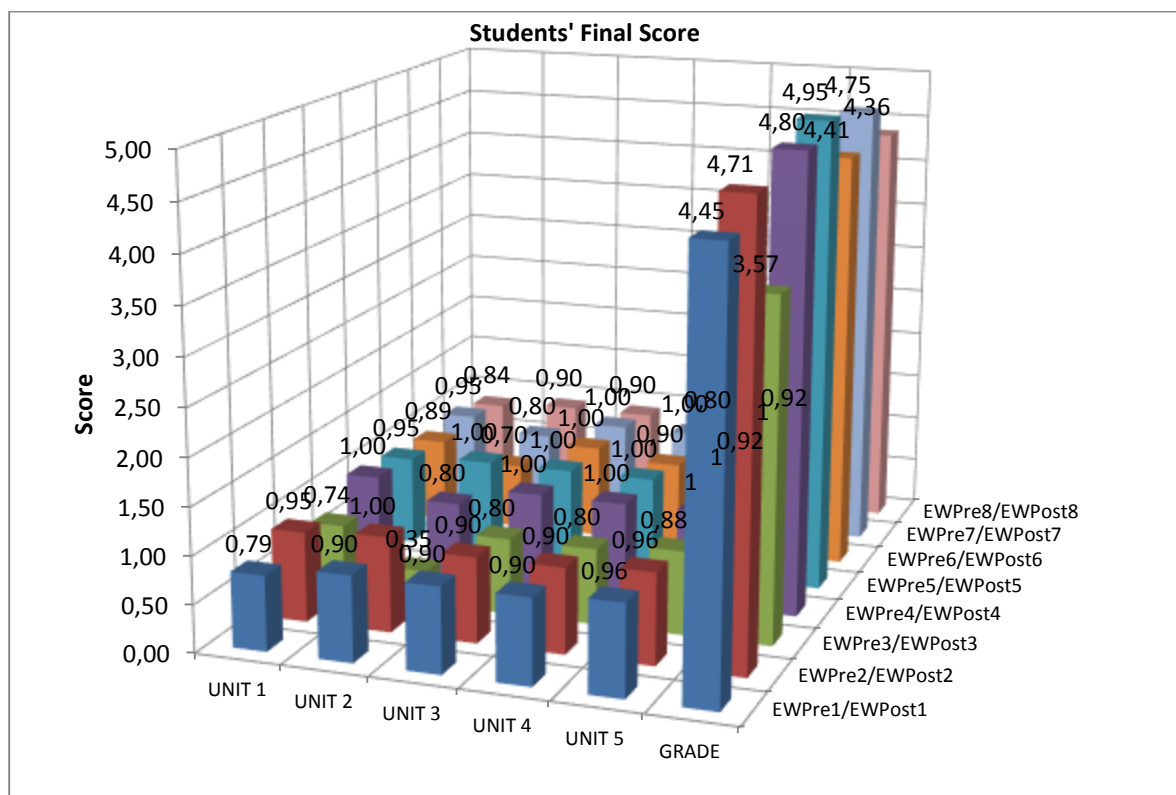
Of a total of 1 point, from a group of 8 students: all of them exceeded the average as well as the two thirds of the score, and 4 obtained the perfect score. This situation clearly showed us that the students understood or interpreted that time better the rules for applying the inflexion of a third person in English, coinciding with the finding in the **UNIT 1**.

UNIT 4: This unit tested if the student chose or not the correct decision of a series of answers in relation to a question posed (it needed to take into account the context and type of person used and its third person inflexion) or just if the student chose a correct sentence among three possible ones. It was identified that, it was easy for the students to find the link between complete pairs and the identification of the correct third person inflexion as well as identifying the correct sentence among three possibilities.

Of a possible total value of 1 point, all the 8 students exceeded the average as well as the two thirds of the score and 3 obtained the ideal score.

UNIT 5: This unit tested the student writing abilities, letting him/her work with the structure of the sentences freely, the choosing of the person to be used, the third person inflexion to be used as well as the general text congruence and the union between the sentences. The students did not take risks and in general they decided to build short paragraphs composed by short sentences. The paragraphs were consistent; and grammatically and logically well built.

Of a total group of 8 students, all of them exceeded the average, 5 exceeded the two thirds and 3 obtained the perfect score.



Graph 71: Post-test Score per Unit Per Student - Experimental Women's Group

Table of percentage obtained per unit in the post-test, from the group of students in general

	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	OVERALL	
	AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE	
Chart Post-	0,89	0,81	0,94	0,91	0,96	0,90	23: test

Overall Average-Experimental Women's Group

This table of percentages showed that for the 5 units, the overall average from this group exceeded the average. Moreover, all the 5 units exceeded the two thirds of the score.

Score table obtained per unit in the Post-test and its final score per student

EXPERIMENTAL MEN'S GROUP (VIRTUAL ENVIRONMENT)

SCORE OBTAINED PER UNIT

NAME	POST-TEST					GRADE
	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	
EMPre1/EMPost1	0,89	0,90	1,00	1,00	0,76	4,55
EMPre2/EMPost2	0,21	0,00	0,80	0,70	0,4	2,11
EMPre3/EMPost3	0,89	1,00	1,00	1,00	0,96	4,85
EMPre4/EMPost4	0,79	0,25	0,80	0,60	0,64	3,08
EMPre5/EMPost5	0,95	1,00	1,00	1,00	0,88	4,83

Chart 24: Post-test Score per unit-Experimental Men's Group

UNIT 1: This unit tested the ability of the student to apply the correct inflexion about a verb depending on the subject in accordance with the conjugated verb; it was always in present tense.

Of a total score of 1 point, of the 5 students tested: 4 exceeded the average and were above the two thirds; and 1 did not do exceed the average. That finding indicated that, in this group, the students could identify the type of person and the correct inflexion to be applied (S/ES/IES/NONE), but it was less effective than the experimental women's group.

UNIT 2: In this unit we observed if the student chose the correct type of question (Yes-No Question / WH-Question), as well as if the chosen answer was consistent with the content of the posed reading.

Of a total score of 1 point (0.50 assigned to the choosing of the type of question and 0.50 assigned to grammar of it). From 5 students tested: only 3 students exceeded the average, 1 exceeded the two thirds and 2 obtained the perfect score; however, 2 were under the average. This fact indicated us that the experimental men's group from the students tested showed there was a reading comprehension and they suffered to be congruent in the type of question application in relation to the question posed.

UNIT 3: This unit tested the use, from students, of the possible third person inflexions about a verb in particular, having in mind the present simple tense.

Of a total of 1 point, from a group of 5 students: all of them exceeded the average and were above the two thirds, but 3 obtained the perfect score. In this case, the male students showed to comprehend or interpret better the rules for applying the inflexion of a third person in English separated of a context, in accordance with the finding in the **UNIT 1**.

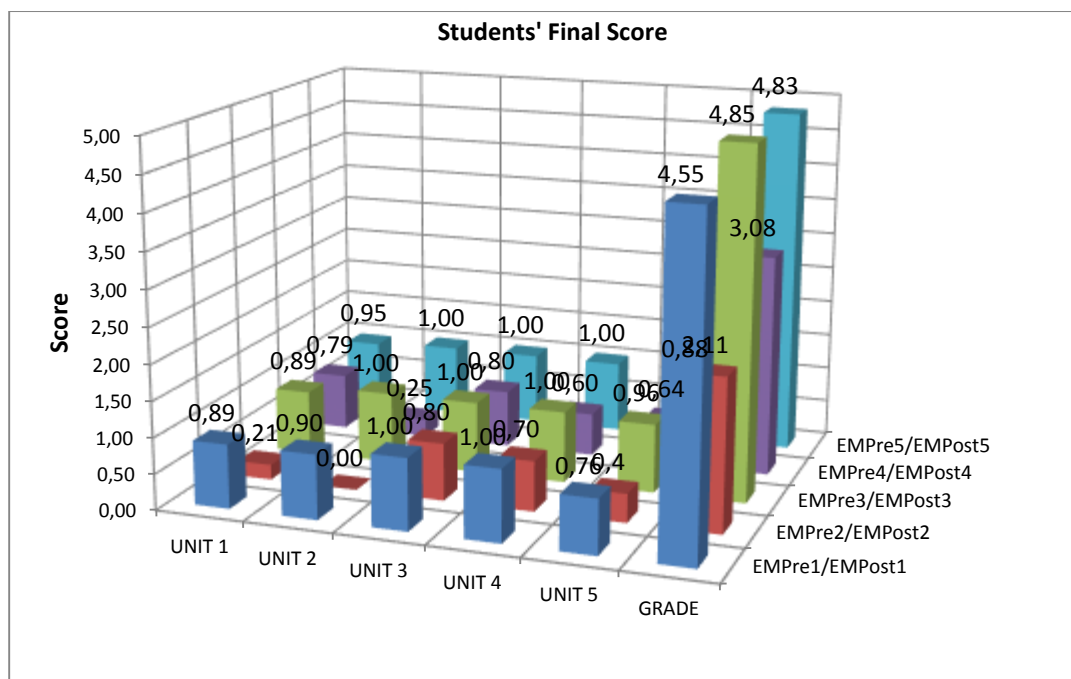
UNIT 4: This unit tested if the student chose or not the correct decision of a series of answers in relation to a question posed (it needed to take into account the context and type of person used and its third person inflexion) or if the student chose a correct sentence among three possible ones. It was identified that, in situations in which it was given the question and the answer, it was easy for the students to find the link between complete pairs and the

identification of the correct third person inflexion as well as identifying the correct sentence among three possibilities, similarly to what happened in the experimental women's group.

Of a possible total value of 1 point, the 5 students tested exceeded the average, 1 exceeded the two thirds and 3 obtained the perfect score.

UNIT 5: This unit tested the student writing abilities, letting him/her work with the structure of the sentences freely, the choosing of the person to be used, the third person inflexion to be used as well as the general text congruence and the union between the sentences. The students from this group (a total of 5), did not take risks as well as the last group and decided to build short paragraphs composed by short sentences; however, in this case, the paragraphs were irregular in consistency and sense.

Of a total group, 4 students of 5 exceeded the average, 3 were above the two thirds, and only 1 was under it.



Graph 72: Post-test Score per Unit Per Student - Experimental Men's Group

Table of percentage obtained per unit in the post-test, from the group of students in general

	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	OVERALL
	AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE
Chart Post-	0,75	0,63	0,92	0,86	0,73	0,78

25:
test

Overall Average-Experimental Men's Group

This table of percentages showed that for the 5 units, the overall average from this group exceeded the average. Moreover, all the 5 units exceeded the two thirds of the score.

Score table obtained per unit in the Post-test and its final score per student

CONTROL WOMEN'S GROUP (CLASS ATTENDANCE) – Score obtained by unit

POST-TEST

NAME	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	GRADE
CWPre1/CWPost1	0,95	0,60	0,80	0,90	1	4,25
CWPre2/CWPost2	0,95	0,95	1,00	1,00	0,96	4,86
CWPre3/CWPost3	0,89	0,85	1,00	0,90	1	4,64
CWPre4/CWPost4	0,89	0,75	0,70	0,90	0,96	4,20
CWPre5/CWPost5	0,95	0,75	0,90	0,80	1	4,40
CWPre6/CWPost6	0,89	0,95	1,00	1,00	1	4,84
CWPre7/CWPost7	0,74	0,70	0,90	0,90	0,92	4,16

Chart 26: Post-test Score per unit-Control Women's Group

UNIT 1: This unit tested the ability of the student to apply the correct inflexion about a verb depending on the subject in accordance with the conjugated verb; it was always in present tense.

Of a total score of 1 point, of the 7 students tested: all of them exceeded the average and the two thirds. That finding indicated that, in this group, the students could identify easily the type of person and the correct inflexion to be applied (S/ES/IES/NONE), and it was more effective than the previous groups (experimental women's and men's group).

UNIT 2: In this unit we observed if the student chose the correct type of question (Yes-No Question / WH-Question), as well as if the chosen answer was consistent with the content of the posed reading.

Of a total score of 1 point (0.50 assigned to the choosing of the type of question and 0.50 assigned to grammar of it). From the 7 students tested: all of them exceeded the average, 6 exceeded the two thirds of the possible punctuation. With this fact, we could interpret that the tested students showed a high level in reading comprehension and they were congruent in the type of question application in relation to the question posed. This showed a better performance in comparison with the experimental men's group, but lower with the experimental women's group.

UNIT 3: This unit tested the use, from students, of the possible third person inflexions about a verb in particular, having in mind the present simple tense.

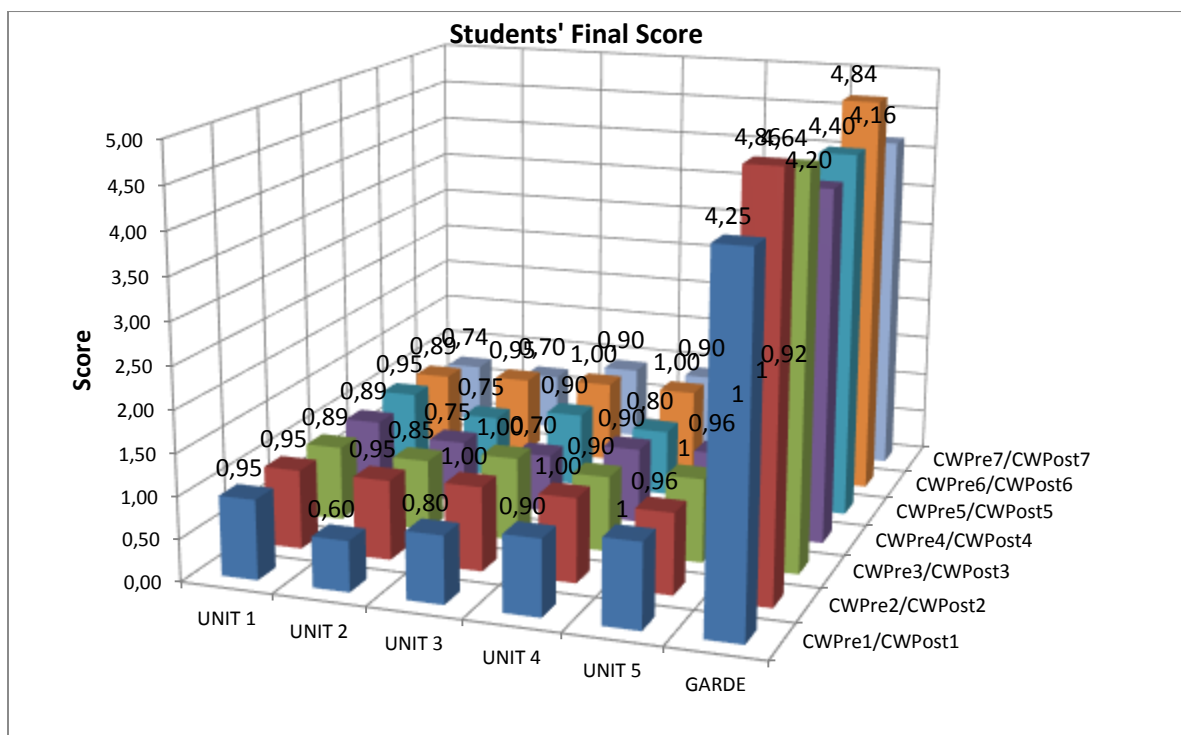
Of a total of 1 point all the 7 students tested exceeded the average as well as the two thirds of the score, and there were 3 who obtained the perfect score. In this case, the female students showed to comprehend or interpret better the rules for applying the inflexion of a third person in English separated of a context, in accordance with the finding in the **UNIT 1**; however, it was lower than the previous groups (experimental women's and men's group)

UNIT 4: This unit tested if the student chose or not the correct decision of a series of answers in relation to a question posed (it needed to take into account the context and type of person used and its third person inflexion) or if the student chose a correct sentence among three possible ones. It was identified that, in situations in which it was given the question and the answer, similarly to what happened with the groups 1 and 2 (experimental on a virtual environment for men and women).

Of a possible total value of 1 point, all of the 7 students tested exceeded the average as well as the two thirds, but only 2 obtained the perfect score.

UNIT 5: This unit tested the student writing abilities, letting him/her work with the structure of the sentences freely, the choosing of the person to be used, the third person inflexion to be used as well as the general text congruence and the union between the sentences. The students from this group (a total of 7), did not take risks as well as the previous groups and, in general, they decided to build short paragraphs composed by short sentences. The paragraphs were consistent; and grammatically and logically well built. Also, this group was as efficient as the experimental women's group and higher in relation to the experimental men's group.

From the 7 students of the group: all of them exceeded the average as well as the two thirds, and 4 obtained the perfect score.



Graph 73: Post-test Score per Unit Per Student - Control Women's Group

Table of percentage obtained per unit in the post-test, from the group of students in general

UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	OVERALL
AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE
0,89	0,79	0,90	0,91	0,98	0,90

Chart

27:

Post-test Overall Average-Control Women's Group

This table of percentages showed that for the 5 units, the overall average from this group exceeded the average. Moreover, all the 5 units exceeded the two thirds of the score.

Score table obtained per unit in the Post-test and its final score per student

CONTROL MEN'S GROUP (CLASS ATTENDANCE) – SCORE OBTAINED PER UNIT

NAME	POST-TEST					GRADE
	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	
CMPre1/CMPPost1	0,68	0,35	0,80	0,90	0,60	3,33
CMPre2/CMPPost2	0,95	0,95	1,00	1,00	1,00	4,90
CMPre3/CMPPost3	0,89	0,80	0,40	0,90	0,96	3,95
CMPre4/CMPPost4	0,89	1,00	1,00	1,00	0,96	4,85
CMPre5/CMPPost5	0,79	0,65	1,00	0,90	0,80	4,14
CMPre6/CMPPost6	0,89	0,85	0,90	0,90	0,92	4,46

Chart 28: Post-test Score per unit-Control Men's Group

UNIT 1: This unit tested the ability of the student to apply the correct inflexion about a verb depending on the subject in accordance with the conjugated verb; it was always in present tense.

Of a total score of 1 point, all the 6 students tested exceeded the average, and the same ones, exceeded the two thirds of total score. That finding indicated that, in this group, the problems regarding the identification of the type of person and the correct inflexion to be applied (S/ES/IES/NONE) low, exceeding the score of the experimental men's group, but it had more mistakes in relation to other two groups (men's group 1 and women's group 2).

UNIT 2: In this unit we observed if the student chose the correct type of question (Yes-No Question / WH-Question), as well as if the chosen answer was consistent with the content of the posed reading.

Of a total score of 1 point (0.50 assigned to the choosing of the type of question and 0.50 assigned to grammar of it). From the 6 students tested: 5 of them exceeded the average, 4 exceeded the two thirds of the possible punctuation and 1 obtained the perfect score. With this fact, we could interpret that the tested students showed a high level in reading comprehension and they were congruent in the type of question application in relation to the question posed. However, they did not exceed two of the three previous groups already tested (women's group 1 and 2).

UNIT 3: This unit tested the use, from students, of the possible third person inflexions about a verb in particular, having in mind the present simple tense.

Of a total of 1 point, from a group of 6 students: 5 of them exceeded the average and 1 did not do it. 2 exceeded the two thirds of the score and 3 obtained the perfect score. In this case, the male students showed to comprehend or interpret better the rules for applying the inflexion of a third person in English separated of a context, almost totally in accordance with the finding in the **UNIT 1**.

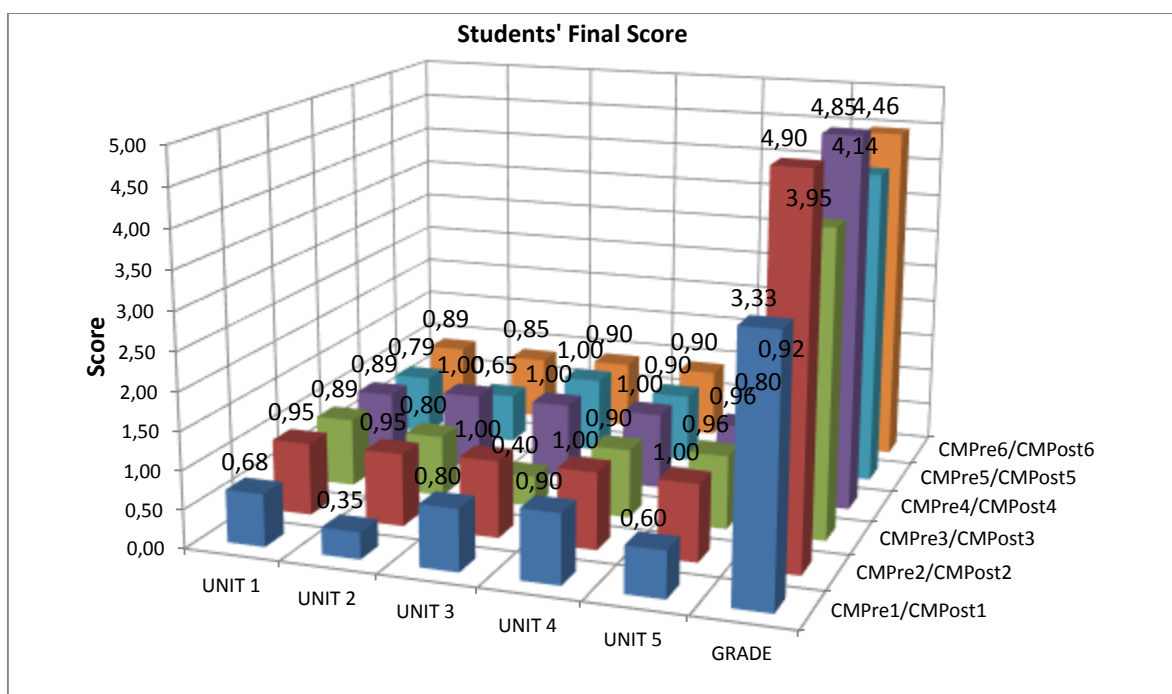
UNIT 4: This unit tested if the student chose or not the correct decision of a series of answers in relation to a question posed (it needed to take into account the context and type of person used and its third person inflexion) or if the student chose a correct sentence among

three possible ones. It was identified that, similar to the previous groups, that in situations in which it was given the question and the answer; it was easier for the students to find the link between complete pairs and the identification of the correct third person inflexion. Moreover, the results obtained were superior to the previous three groups.

Of a possible total value of 1 point, all the 6 students of the group exceeded the average. From the total of the group, 4 students exceeded the two thirds of the score and 2 obtained the ideal score.

UNIT 5: This unit tested the student writing abilities, letting him/her work with the structure of the sentences freely, the choosing of the person to be used, the third person inflexion to be used as well as the general text congruence and the union between the sentences. The 6 students that answered to the question did not take risks as well as the previous groups and, in general, they decided to build short paragraphs composed by short sentences. The paragraphs were consistent; and grammatically and logically well built. However, the scores of this group only exceeded the scores of the men's group 1, but women's group 1 and 2 were superior.

All the 6 students of the group exceeded the average, 4 were above the two thirds and only 1 obtained the perfect score.



Graph 74: Post-test Score per Unit Per Student - Control Men's Group

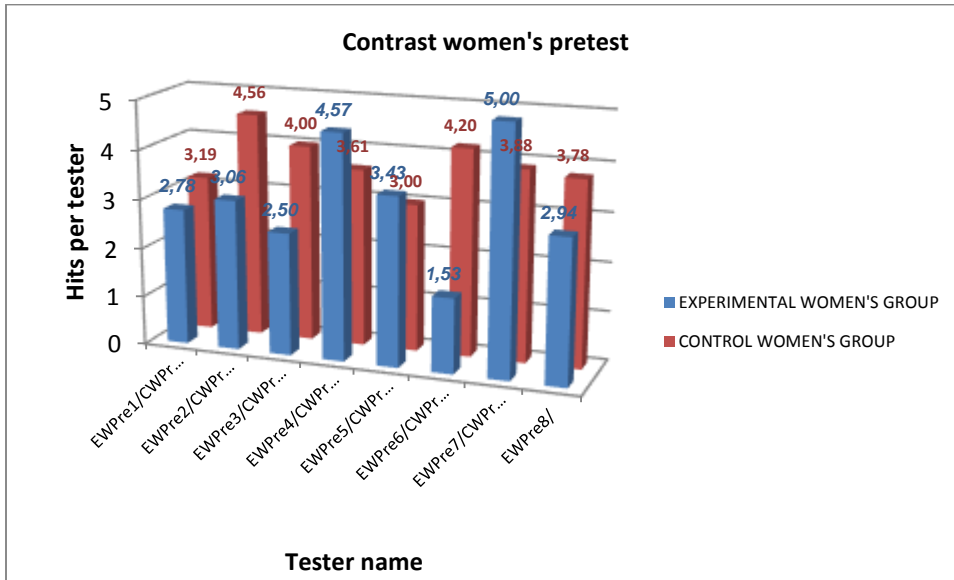
Table of percentage obtained per unit in the post-test, from the group of students in general

UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	OVERALL
AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE
0,85	0,77	0,85	0,93	0,87	0,85

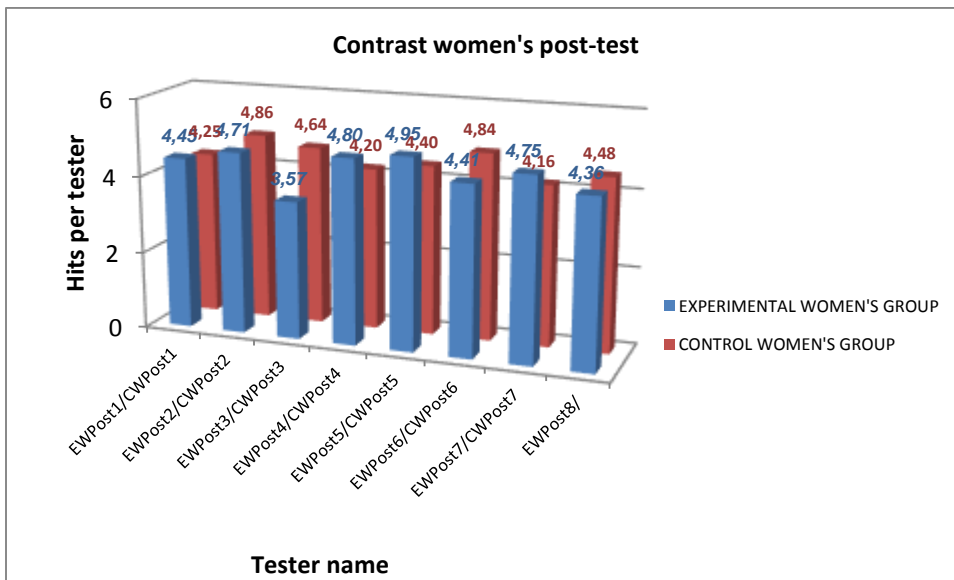
Chart 29: Post-test score per unit-Control Men's Group

This table of percentages showed that for the 5 units, the overall average from this group exceeded the average. Moreover, all the 5 units exceeded the two thirds of the score.

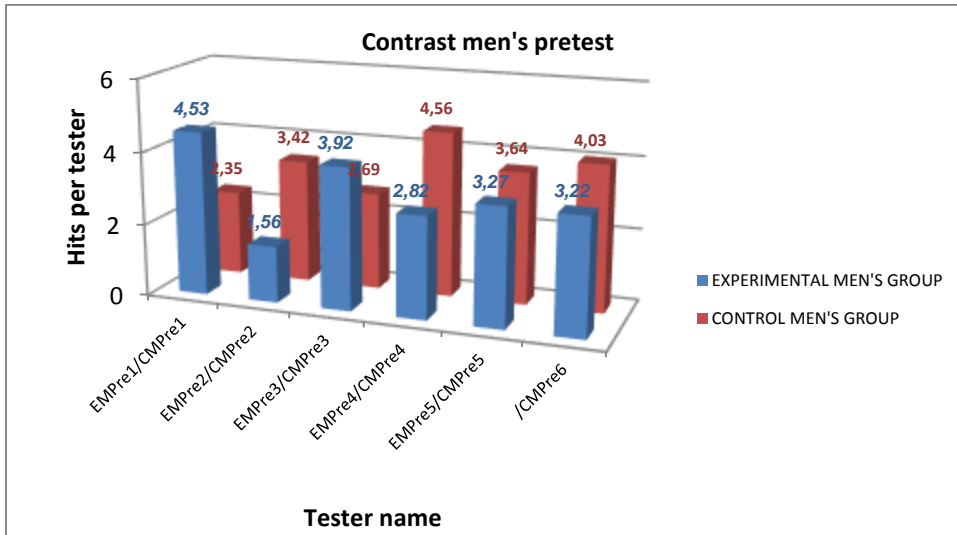
APPENDIX 10: CONTRAST BETWEEN GROUPS BY GENRES



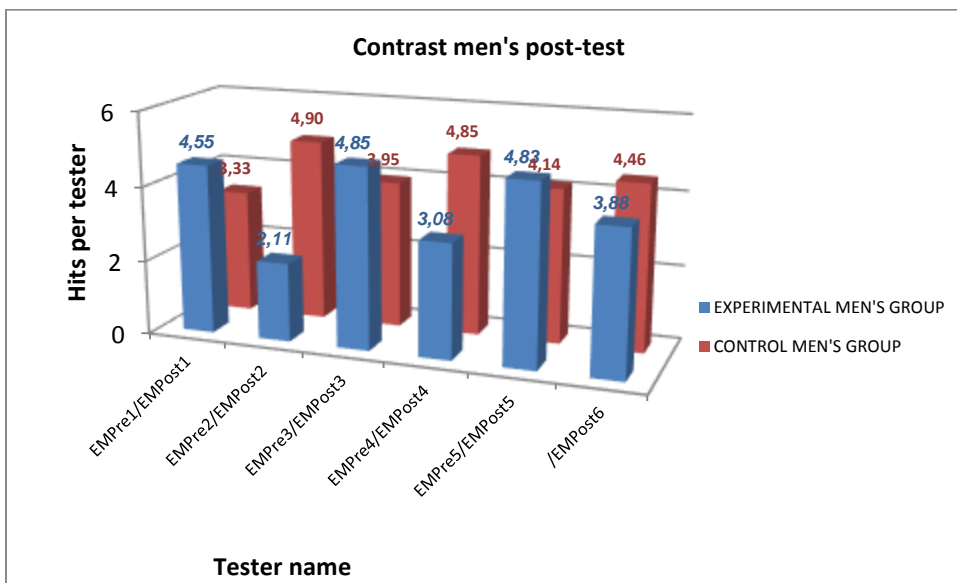
Graph 75: Individual Contrast in Women's Pretest



Graph 76: Individual Contrast in Women's Post-test



Graph 77: Individual Contrast in Men's Pretest



Graph 78: Individual Contrast in Men's Post-test

APPENDIX 11: OVERALL CONTRAST AND IMPROVEMENT

The following overall contrast charts show relevant information analysis taking into account individual performance:

TESTER NAME	PRETEST	POST-TEST	IMPROVEMENT	PERCENTAGE
	EXPERIMENTAL GROUP FINAL SCORE	EXPERIMENT GROUP FINAL SCORE		IMPROVEMENT %
EWPre1/EWPost1	2,78	4,45	1,67	0,33
EWPre2/EWPost2	3,06	4,71	1,65	0,33
EWPre3/EWPost3	2,50	3,57	1,07	0,21
EWPre4/EWPost4	4,57	4,80	0,23	0,05
EWPre5/EWPost5	3,43	4,95	1,52	0,30
EWPre6/EWPost6	1,53	4,41	2,88	0,58
EWPre7/EWPost7	5,00	4,75	-0,25	-0,05
EWPre8/EWPost8	2,94	4,36	1,42	0,28
EMPre1/EMPost1	4,53	4,55	0,02	0,004
EMPre2/EMPost2	1,56	2,11	0,55	0,110
EMPre3/EMPost3	3,92	4,85	0,93	0,186
EMPre4/EMPost4	2,82	3,08	0,26	0,052

EMPre5/EMPost5	3,27	4,83	1,56	0,312
	3,22	4,26	1,04	0,21

Chart 30: Overall Contrast in Experimental Pretest / Post-test

As the chart illustrates, it was the interpretation of the experimental group between the pretest and post-test development. It shows that only one tester, of 13, did not have a positive improvement (EWPre7/EWPost7), showing that there was a general positive result.

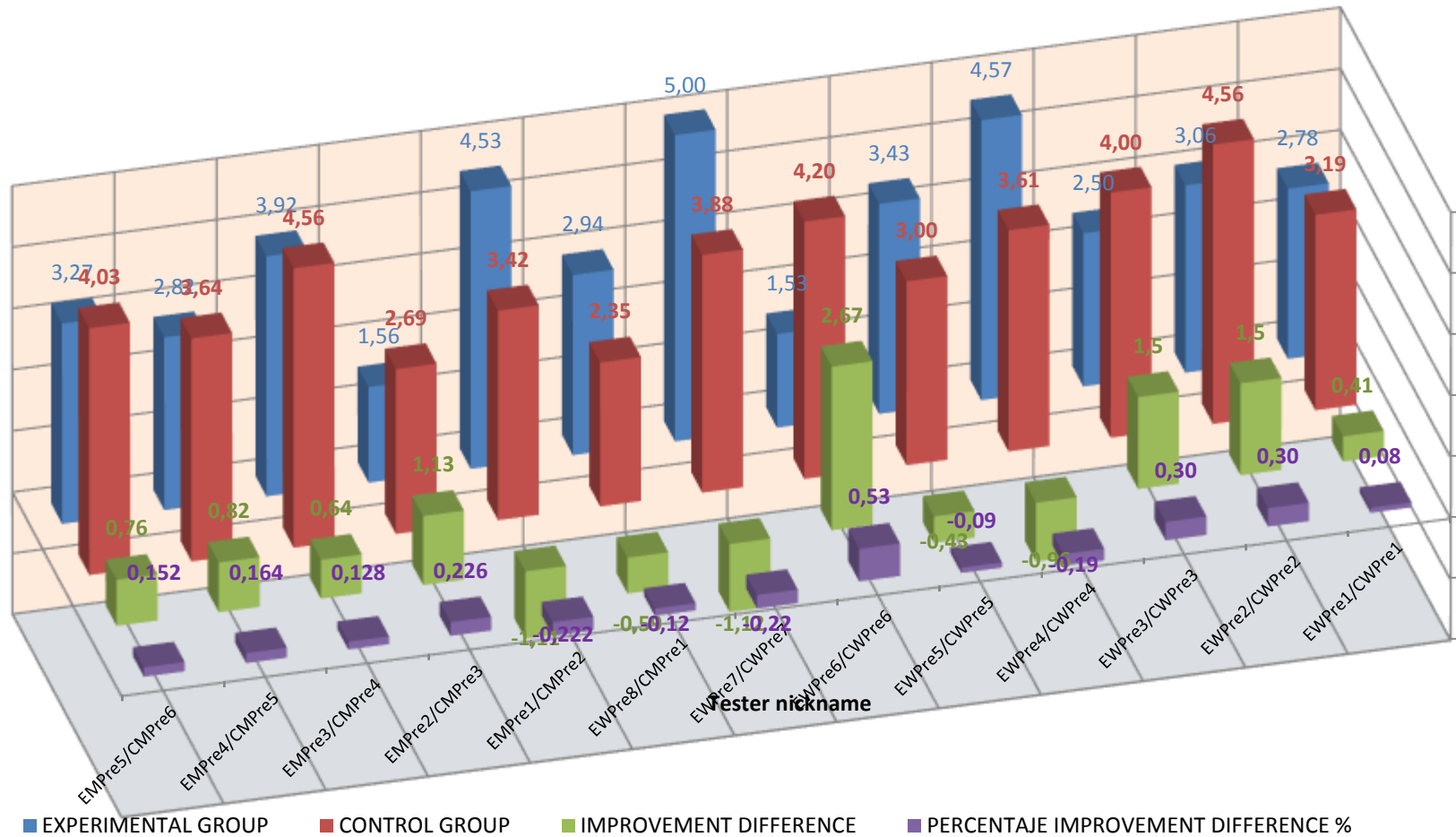
TESTER	PRETEST	PRETEST	IMPROVEMENT	PERCENTAJE
	FINAL SCORE	FINAL SCORE		
NAME	EXPERIMENTAL	CONTROL	DIFFERENCE	IMPROVEMENT
	GROUP	GROUP		DIFFERENCE
				%
EWPre1/CWPre1	2,78	3,19	0,41	0,08
EWPre2/CWPre2	3,06	4,56	1,5	0,30
EWPre3/CWPre3	2,50	4,00	1,5	0,30
EWPre4/CWPre4	4,57	3,61	-0,96	-0,19
EWPre5/CWPre5	3,43	3,00	-0,43	-0,09
EWPre6/CWPre6	1,53	4,20	2,67	0,53
EWPre7/CWPre7	5,00	3,88	-1,12	-0,22
EWPre8/CMPre1	2,94	2,35	-0,59	-0,12
EMPre1/CMPre2	4,53	3,42	-1,11	-0,222

EMPre2/CMPre3	1,56	2,69	1,13	0,226
EMPre3/CMPre4	3,92	4,56	0,64	0,128
EMPre4/CMPre5	2,82	3,64	0,82	0,164
EMPre5/CMPre6	3,27	4,03	0,76	0,152
	3,22	3,63	0,40	0,08

Chart 31: Overall Contrast between Experimental and control groups in the Pretest

In this chart, the overall analysis focused on the experimental group against the control group in the pretest, illustrating that there were 5 of the 13 students in the experimental group were superior to the 13 students of the control group. See the following graph for a better interpretation.

Individual Overall Contrast and Improvement (Pretest)



Graph 79: Individual Overall Contrast and Improvement (Pretest)

TESTER NAMES	PRETEST	POST-TEST	IMPROVEMENT	PERCENTAGE
	CONTROL GROUP FINAL SCORE	CONTROL GROUP FINAL SCORE		IMPROVEMENT %
CWPre1/CWPost1	3,19	4,25	1,06	0,21
CWPre2/CWPost2	4,56	4,86	0,3	0,06
CWPre3/CWPost3	4,00	4,64	0,64	0,13
CWPre4/CWPost4	3,61	4,20	0,59	0,12
CWPre5/CWPost5	3,00	4,40	1,4	0,28
CWPre6/CWPost6	4,20	4,84	0,64	0,13
CWPre7/CWPost7	3,88	4,16	0,28	0,06
CMPre1/CMPost1	2,35	3,33	0,98	0,20
CMPre2/CMPost2	3,42	4,90	1,48	0,30
CMPre3/CMPost3	2,69	3,95	1,26	0,25
CMPre4/CMPost4	4,56	4,85	0,29	0,06
CMPre5/CMPost5	3,64	4,14	0,5	0,10
CMPre6/CMPost6	4,03	4,46	0,43	0,09
	3,63	4,38	0,76	0,15

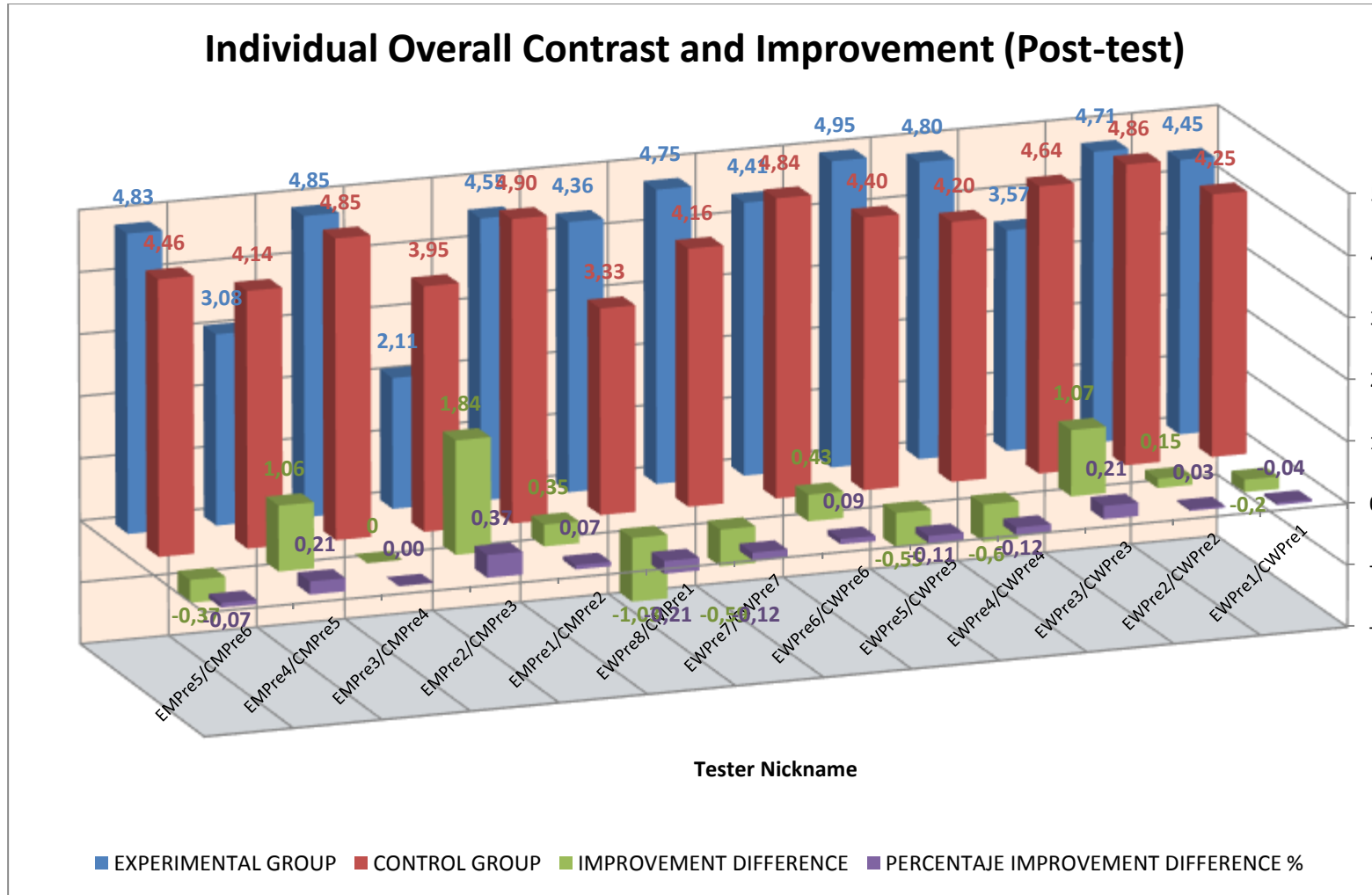
Chart 32: Overall Contrast in Experimental Pretest / Post-test

The chart above was done to interpret the control group between the pretest and post-test development. It demonstrates that all the students in the control group, 13 as total, improved their English level of the topic in charge, being CMPre2/CMPost2 the one who improved the most.

TESTER	POST-TEST	POST-TEST	IMPROVEMENT	PERCENTAJE
	FINAL SCORE	FINAL SCORE		IMPROVEMENT
NAME	EXPERIMENT	CONTROL	DIFFERENCE	DIFFERENCE
	GROUP	GROUP		%
EWPPre1/CWPre1	4,45	4,25	-0,2	-0,04
EWPPre2/CWPre2	4,71	4,86	0,15	0,03
EWPPre3/CWPre3	3,57	4,64	1,07	0,21
EWPPre4/CWPre4	4,80	4,20	-0,6	-0,12
EWPPre5/CWPre5	4,95	4,40	-0,55	-0,11
EWPPre6/CWPre6	4,41	4,84	0,43	0,09
EWPPre7/CWPre7	4,75	4,16	-0,59	-0,12
EWPPre8/CMPre1	4,36	3,33	-1,03	-0,21
EMPre1/CMPre2	4,55	4,90	0,35	0,07
EMPre2/CMPre3	2,11	3,95	1,84	0,37
EMPre3/CMPre4	4,85	4,85	0	0,00
EMPre4/CMPre5	3,08	4,14	1,06	0,21
EMPre5/CMPre6	4,83	4,46	-0,37	-0,07
	4,26	4,38	0,12	0,02

Chart 33: Overall Contrast in Experimental Pretest / Post-test

This last chart, analyzed the overalls between the experimental group against the control group in the Post-test, showing that there were 6 of the 13 students in the experimental group were superior to the 13 students of the control group. For a better interpretation, look at the graph below.



Graph 80: Individual Overall Contrast and Improvement (Post-test)