UNIVERSITY OF EL SALVADOR

SCHOOL OF ARTS AND SCIENCES

FOREIGN LANGUAGE DEPARTMENT

Universidad de El Salvador

Hacia la libertad por la cultura

UNDERGRADUATE RESEARCH:

THE IMPACT OF USING THE DUOLINGO APP IN INTENSIVE FRENCH II STUDENTS IN THE BACHELOR IN MODERN LANGUAGES (ENGLISH AND FRENCH) IN SEMESTER II, 2016 IN THE FOREIGN LANGUAGE DEPARTMENT OF THE UNIVERSITY OF EL SALVADOR

IN ORDER TO OBTAIN THE DEGREE OF:

LICENCIATURA EN LENGUAS MODERNAS: ESPECIALIDAD EN FRANCÉS E INGLÉS

PRESENTED BY:

DÍAZ LEÓN, MARÍA ELENA   DL10005

GÓMEZ ÁVALOS, JOCELYN ABIGAIL   GG09112

MONGE SERPAS, MARICELA ELIZABETH   MS10017

ADVISOR:

MsD. ODIR ALEXANDER MENDIZÁBAL

SAN SALVADOR, EL SALVADOR, CENTRAL AMERICA, APRIL 21ST 2017

ACKNOWLEDGEMENT

This paper is addressed with an expression of gratitude to the following people:

To God,

For allowing us to get to this point and giving us health to achieve our goals, in addition to its infinite goodness and love.

To our parents,

For being all that we are, both in all our education, as in life, for their unconditional support perfectly maintained over the time.

For their advices, their values, for the constant motivation that has allowed us to be good persons.

For the examples of perseverance and constancy that characterize them and that has always grounded us, for the value shown to get ahead but more than anything, for their love.

To our advisor,

Who has helped us in assessments and doubts presented in the elaboration of this thesis.

To the teachers,

Those who marked each stage of our university path. To Lic. Odir Mendizábal, for their great support and motivation for the culmination of our professional studies and for the elaboration of this thesis. To Lic. Christian Torres, for his time and support offered in this

work and as well to Lic. Alexander Landaverde, Lic. Alfredo Lopez, Lic. Margarita Ramírez and Lic. Francisco Rodríguez, for supporting us in their moment.

To our friends,
That we support each other in our professional studies and that until now, we remain friends, thanks for supporting us to do this work.

To the volunteers,

That offered their time and patience to help us in our experimental stage of this work.

All this work has been possible thanks to them.

INDEX

Contents

INTRODUCTION

This paper is the result of an investigation focused on the impact of using the Duolingo App in the students of Intensive French II from the Modern Languages Major (English and French) in the Foreign Language Department of the University of El Salvador in semester II, 2016. The investigation was carried out within the months of March 2016 until January 2017, where the experimental part was taken among August and October of 2016. This research has the following sections: literature review, methodology, data analysis, conclusions, recommendations and limitations.

1.1 STATEMENT OF THE PROBLEM

In the Foreign Language Department, of the University of El Salvador, the Modern Languages Major is meant to prepare students who develop high language skills as they have been preparing for five years in that area. After having studied many French subjects they face the challenge to reach a C1 performance level. What is more controversial in that major, is the fact that it does not occur and this is mainly attributed to a factor that hampers students to do that and that is the lack of extracurricular tools they should have had since the beginning of their studies. This absence of extracurricular tools leads most of the students not to be competent in French language, for that reason researchers consider highly important to analyze the impact that using an application can have on students of Intensive French II. In recent year, technology has become an indispensable tool of today's world. It has evolved by leaps and bounds to such an extent that it has covered different fields of knowledge and education is not the exception. This phenomenon has aroused great interest in both language educators and learners since it offers potential advantages that help them improve their skills: Listening, Grammar, Vocabulary, Speaking.

Technology can be in the form of hand-held devices, iPods, mp3 players, tablets, smartphones, among others. Many scholars and pedagogues have strongly eulogized this usage for effective teaching and learning of foreign languages like English and French but they have also recognized the big challenge that it implies since not everyone has access to it.

1.2 SIGNIFICANCE OF THE PROBLEM

The importance of the problem is that not all the students from Modern Languages reach a C1 level in French at the end of the major, it is for this reason that researchers decided to investigate if the use of an application for learning languages could help students to get a higher level.

1.3 STATEMENT OF THE PURPOSE

The purpose of this study is to determine the impact of using Duolingo App in the students of Intensive French II from the Modern Languages Major in the Foreign Language Department of the University of El Salvador in semester II, 2016. Researchers describe if there was a change or not in the students' French performance level in Grammar, Vocabulary and Listening skills as well as their Motivation.

1.4 RESEARCH TOPIC

The impact of using the Duolingo App in the students of Intensive French II from the Modern Languages Major (English and French) in the Foreign Language Department of the University of El Salvador in semester II, 2016

1.5 OBJECTIVES

General objective

To describe the impact of using the Duolingo App in the students of Intensive French II from the Modern Languages Major (English and French) in the Foreign Language Department of the University of El Salvador in semester II, 2016.

Specific objectives

1 To determine if there is any change in the students' performance by using the Duolingo App.

2 To measure in written which is the most affected skill among Grammar, Vocabulary and Listening by the use of the Duolingo App.

3   To evaluate if using the Duolingo App increases students' motivation to practice French language orally.

1.6 JUSTIFICATION

To begin with, this research project is focused on evaluating the impact of the Duolingo App on the French performance and the motivation of the students from Intensive French II of the Modern Languages Major in the Foreign Language Department of the University of El Salvador. The researchers decided to carry out this study since most of the students begin the Major in Modern Languages in Intensive French I without any knowledge of the language and then in Intensive French II students do not have a great level of it, therefore it would be more viable for the researchers to determine if there is a progress or not in their competences in the language aforementioned.

In recent years, technology has been evolving and it has taken a relevant place in the field of teaching and learning languages as it has changed the way foreign languages have been taught, providing teachers and learners with many tools that bring many advantages. Software developers are now releasing a great variety of applications both paid and free; among those applications are included courses to learn new languages, digital books and dictionaries that make students replace more traditional resources like books and paper dictionaries.

What is more, it has been discovered that there is an application for smartphones aimed to help students learn new languages in an easy and fun way. That application is called Duolingo, it is a software package that contains short lessons that start from a basic level to an advanced level. This app is for free and it can be downloaded from the App store and the Play store for smartphones. It requires Internet access and the creation of an account to save or share your progress. Moreover, if you do not have a smartphone, you can go to its website to practice on your desktop or laptop.

One of the things that make this application important around the world is that in the official facebook page of Duolingo, they mentioned that on December 2016 that "Duolingo

was recognized by the President of Ireland for helping revive the Irish language! Irish has fewer than 100,000 native speakers, but more than 2.3 million people have studied it on Duolingo. It's a proud moment for us and the volunteers that created the course".

Moreover, Skopal (2015) mentioned that "regarding the governments, so far only two Central American countries (Costa Rica and Guatemala) besides the United States of America have expressed strong desire to integrate Duolingo in their educational system".

Another thing, is that "even an independent study of the University of New York and the University of South Carolina found that 34 hours with Duolingo is equivalent to a college semester learning a language" as cited in Colombia Aprende website in 2014.

That is why researchers want to determine if the use of the Duolingo App as an external tool would affect positively or negatively the students' performance level and their motivation, specifically to the ones who have the lowest grades.

In conclusion, technology has become an important part in education and it is changing the traditional way of teaching, specifically in the field of foreign languages, providing the access to innovating software applications that facilitate the acquisition process of learners. For that reason, researchers pretend to propose to the professors of the Foreign Language Department, the use of the Duolingo App in case this investigation proves that it helps students improve their French performance level and their motivation.

1.7 SIGNIFICANCE OF THE STUDY

The significance of the study is to provide the teachers and students with the necessary instruments to learn French so that they can take advantage of these tools that this new generation offers to the education field which is becoming more technological.

1.8 DELIMITATIONS

The participants involved in this investigation were students from the first academical year of the Modern Languages, English and French, Major at the Foreign

Language Department of the University of El Salvador, located in San Salvador. The research was carried out from March 2016 to January of 2017, covering a total of 44 weeks. The sample of this research consists of 16 students registered in Intensive French II course, semester II, 2016. This research is mainly focused on the impact of using the Duolingo App in the students from intensive French II. Furthermore, this investigation is aimed to determine whether students change or not their French performance level in Grammar, Vocabulary and Listening skills as well as their motivation. It is also important to mention that researchers decided to take into account these students since they begin their studies in Intensive French I without any knowledge of that language and then, in Intensive French II students do not have a great level of it.

1.9 ASSUMPTIONS

The assumptions in this investigation are the following:

First, it is assumed that students from the first year of Modern Languages Major begin their studies in Intensive French I without any knowledge of that language and then, in Intensive French II students do not have a great level of it.

Second, students are not provided with necessary extracurricular tools to improve their French performance level.

1.10 DEFINITIONS OF TERMS

In this part researchers present some key words for the purpose of providing readers with a tool that makes the comprehension of the literature easy.

1. **Assessment:** refers to the wide variety of methods or tools that educators use to evaluate, measure, and document the academic readiness, learning progress, skill acquisition, or educational needs of students as reported by edglossary.org.

2. **Classroom response system:** is the integration of mobile technologies to gather feedback from learners and that facilitates teaching activities.

3. **Computer-assisted language learning (CALL):** is succinctly defined in a seminal work by (Levy, 1997, as cited in Wikipedia) as "the search for and study of applications of the computer in language teaching and learning".

4. **Connectivity:** is a network that can connect mobile devices to data collection devices, other devices or a common network.

5. **Context sensitivity:** is the capacity to both gather and respond to real or simulated data unique to the current location, environment and time.

6. **Context-aware capabilities or Context-awareness:** refers to the idea that computers can both sense, and react based on their environment. Devices may have information about the circumstances under which they are able to operate and based on rules, or an intelligent stimulus, react accordingly. Context-aware devices may also try to make assumptions about the user's current situation. In addition, context-aware systems are concerned with the acquisition of context (e.g. using sensors to perceive a situation), the abstraction and understanding of context (e.g. matching a perceived sensory stimulus to a context), and application behavior based on the recognized context (e.g. triggering actions based on context) (Schmidt, 2002).

7. **Digital technology:** is a type of transfer that involves breaking a message or form of communication between two machines down into binary code. Binary code consists of all ones and zeros and can be reassembled upon being read by another piece of equipment that utilizes digital technology. This is a contrast to other, older types of technology that used other forms of information transfer and couldn't move data as quickly.

8. **EFL:** according to the website Grammar.About.com it is the traditional term for the use or study of the English language by non-native speakers in countries where English is generally not a local medium of communication.

9. **ESL:** the dictionary.com gives the definition of English as a second language the study of English by nonnative speakers in an English-speaking environment.

10. **Game consoles:** A video game console is a specialized computer system designed for interactive video game play and display.

11. **Hand-held:** Conforming to The Free Dictionary, a digital device, such as a computer, PDA, or cell phone, that is small enough to be held and operated in one hand.

12. **Mobile applications or mobile app** is a software application designed for use on mobile devices, such as smartphones and tablets, rather than desktop or laptop computers.

13. **Mobile devices:** According to Wikipedia, a mobile device (or handheld computer) is a small computing device, typically, small enough to hold and operate in the hand and having an operating system capable of running mobile apps.

14. **Mobile technology:** is what mobile phone networks are based on, and it's the technology that gave mobile phones the name "cell phones". Cellular technology basically refers to having many small interconnected transmitters as opposed to one big one.

15. **Mobile-assisted language learning (MALL):** is language learning that is assisted or enhanced through the use of a handheld mobile device as stated in Wikipedia.

16. **Personal digital assistant (PDA):** also known as a handheld PC, or personal data assistant, is a mobile device that functions as a personal information manager as reported by Wikipedia.

17. **Podcasting:** The distribution of audio or video files, such as radio programs or music videos, over the Internet. Podcasting can be defined as Internet-based audio relay medium. Audio files are commonly created in mp3 format and posted on the Web for others to listen. A podcast is a media file that is distributed by subscription (paid or unpaid) over the Internet using syndication feeds, for playback on mobile devices and personal computers. Podcast may also be termed podcasting.

18. **Portability:** is the small size and weight of mobile devices.

19. **Social networking website (SNS):** is an online platform that allows users to create a public profile and interact with other users on the website. Social networking websites usually have a new user input a list of people with whom they share a connection and then allow the people on the list to confirm or deny the connection. After connections are established, the new user can search the networks of his connections to make more connections. A social networking site may also be known as a social website or a social networking website.

20. **Social interactivity:** focuses on the data exchange and collaboration with other learners that can happen face-to-face.

21. **Tablet PC:** is a portable PC that is a hybrid between a personal digital assistant (PDA) and notebook PC. Equipped with a touch screen interface, a tablet PC usually has a software application used to run a virtual keyboard. However, many tablet PCs support external keyboards.

22. **Voice synthesizing:**
a synthesizer that simulates speech in any language by assembling a language's elements or phonemes under digitalcontrol, each with the correct inflection, duration, pause, and other speech characteristics.

1.11 ORGANIZATION OF THE STUDY

This section was designed in order to demonstrate how this investigation was organized. It provides a clear outlook of the four chapters that constitute this research. The first chapter, introduction, is divided in ten significant parts such as: statement of the problem, significance of the problem, statement of the purpose, research topic, objectives, justification, significance of the study, delimitations, assumptions and definition of terms. Literature review, the second chapter, presents a compilation about technology history, its evolution, and then the creation of mobile devices as well as the implementation of applications. Moreover, it is presented some studies which show the impact of using

applications. Finally, it is drawn a description of the Duolingo App which is the object of this study. Methodology, the third chapter, describes all the elements and procedures taken into account to conduct this investigation; for example, research approach, type of study and research design. Chapter four, data analysis, shows the analysis and interpretation of the main results found by the researchers. Last but not least, chapter five includes conclusions, recommendations as well as limitations.

CHAPTER II: LITERATURE REVIEW

In recent years, technology has become an indispensable tool of today's world. It has evolved by leaps and bounds to such an extent that it has covered different fields of knowledge and education is not the exception. This phenomenon has aroused great interest in both language educators and learners since it offers potential advantages that help them improve their skills: Listening, Grammar, Vocabulary and Speaking. Since 1950's the field of teaching has experimented many changes, beginning with the integration of the computer technology and then with the introduction of mobile devices such as ipods, mp3 players, tablets, smartphones, that provide teachers and students with tools like applications that give them access to information at anytime and anywhere. However, there have not been many studies yet that have proved the advantages or the efficiency of using these applications. That is why in this literature review, researchers will analyze all the information gathered regarding the use of computers, mobile devices, smartphone applications, mainly focused on the application called Duolingo that is the subject matter of this paper.

2.1 THE USE OF TECHNOLOGICAL RESOURCES IN THE TEACHING AND LEARNING FIELD OF FOREIGN LANGUAGES

2.1.1. IMPLICATIONS TO USE COMPUTERS EFFICIENTLY IN THE EFL TEACHING AND LEARNING

Have you ever wondered about the implications of computer technology in the EFL classrooms? It is a well-known fact that computer technology has changed the way English has been taught during the last years, as it provides teachers and learners with many advantages like the development, assessment and testing of the EFL learners' language skills, as well as it serves for educational purposes (Alsied & Pathan, 2013, Aydin, 2013). On the other hand, due to the lack of knowledge that teachers have on how to use this important device its use has been very limited. As Aydin (2013) concluded teachers only use it for communicating on email, making presentations on power point, typing texts on

word processing programs, so they ignore that computer technology can be used for gaming, simulations, problem solving, graphics creations, spreadsheets, and database programs. However, as he also pointed out, if teachers received the suitable knowledge about the use of computer technology in the EFL teaching and learning process, they would be able to implement the use of computers effectively in the classrooms. Then, there are many factors that should be considered before using computer technology in the EFL teaching and learning process such the advantages that it offers, the limitations that it could have if teachers do not have the adequate knowledge and the effectiveness that teachers would accomplish if they received the necessary training.

To begin with, according to some researchers teachers and learners have strong arguments to support the implementation of computers technology in the EFL domain for the reason that it brings many benefits like the development, assessment, and testing of the four macro English skills. First, this tool can contribute a lot in the development of the Listening, Speaking, Reading and Writing skills as "it lets students to learn independently and enables them to interact with real world situations"(Hoven, 1999, as cited in Alsied & Pathan, 2013, p.63). The use of computer technology, with internet, provides websites which contain authentic materials, feedback, audios, videos, exercises, and activities to improve these skills. Second, the use of computer technology is effective for the assessment and testing of EFL learners, as it ensures correct assessment of their language ability. Scholars like (Chapelle & Douglas 2006; Dandonoli 1986; and Stansfield 1990 as cited in Alsied & Pathan 2013) have advocated this use of computer technology in the field of foreign language assessment and testing. Students can find a variety of websites which contain online tests to assess their language abilities and proficiency. Furthermore, teachers have the opportunity to prepare their own online test, for their students, by using programs like: Hot Potatoes and Micromedia Authorware. Third, teachers use computer technology for educational purposes. According to Li and Walsh (2011) teachers mainly use PowerPoint presentations of pictures, grammar, and sentence structures (as cited in Aydin, 2013). They also use internet to communicate with their students via email, and software like word processing. In brief, teachers and students have positive opinions toward the use

of computer because it helps them to develop, assess and test abilities, as well as it serves for educational purposes.

In contrast to the first view, even if computer technology has a significant presence in the EFL teaching and learning process (Alsied & Pathan, 2013), its incorporation to this field is nowadays still limited since teachers do not receive enough training for a proper use, do not have free access to computers in schools and as a consequence only employ very restricted educational software. First of all, even though teachers have positive attitudes toward the use of technology while teaching a foreign language, Aydin (2013), concluded that they do not receive adequate training in most of the areas that would allow them to become proficient users of technology for educational purposes, as he pointed out "teachers must be trained in concept mapping, databases publishing software and multimedia authoring software, webpage authoring software, programming languages, micro-worlds/simulations and modeling software" (p. 229). Moreover, "teachers complain about the lack of computer facilities in schools" (Park & Son, 2009, as cited in Aydin, 2013, p. 217). If teachers are not provided with access to computer technology in schools, there are fewer opportunities for them to guide their students to its use in order to improve their learning process. In addition, notwithstanding the wide range of computer software that currently exists, as most of the teachers are not trained and do not have technology facilities in schools, they get limited to use only a straitened group of programs in EFL classrooms. In their study, Wozney, Venkatesh, and Abrami (2006) found that teachers' computer technology practices are mainly reduced to the use of "the World Wide Web, CD-ROMs and word processing programs" (as cited in Aydin, 2013, p. 216). In summary, as long as teachers do not receive sufficient training to learn how to use computer technology and do not possess technology facilities in schools, they will restrict its use to only few tools, so that at the end the integration of technology in the EFL teaching and learning process will be limited in general terms.

Furthermore, it can be mentioned that there are other useful ways of using computer technology efficiently if teachers receive the adequate training. Aydin (2013) mentioned that teachers can teach English using gaming, simulations, problem solving, graphics

creations, spreadsheets, and database programs. As well it is important that teachers have to receive training of how to use computers so that they can teach English effectively to the students. Aydin (2013) believed that teachers must be trained and they certainly need some basic information about how to develop web pages and multimedia. Indeed, it requires experts from different fields such as professional programmers, sound engineers and graphic designers. Therefore, pre- and in- service teaching programs should include educating teachers about the pedagogical uses of web pages, multimedia, micro worlds/simulations, and programming. Finally, teachers also have to implement the effective use of computers in the classrooms. As Aydin (2013) has said that it would be possible to use computers in the EFL learning and teaching process effectively after teachers are trained on how to use the software and once they have been provided with both technical and instructional support. In this way, teachers will gain a high level of awareness with respect to computer-assisted language learning, and they will be able to implement the adequate use of computers in their classrooms.

In conclusion, there are many aspects to be considered when using computer technology in the EFL teaching and learning process, as it has an important role in the developing, assessment and testing learners' skills by facilitating the access to the English content. Although, not all the teachers have the knowledge of how to use it appropriately and thus they have a limited use of it, if they receive the appropriate training, there will be an efficient way of teaching and learning English in the classrooms.

2.1.2. MOBILE TECHNOLOGIES IN TEACHING AND LEARNING

In the report "Literature Review In Mobile Technologies and Learning", the authors Naismith, Lonsdale, Vavoula, Sharples (2006) point out that "mobile technologies are very common to most people in the UK today. People now rest assured that we can communicate with any person all over the world, whenever we want it, that we can take pictures, share and access information or record and share our thoughts by means of a technological device" (p.1).

However, they explain that it is still defiance for designers and educators to understand and explore how the mobile devices can be used to support learning, as even in these days when these resources are part of everyday life; there is a lack of models of how to use and develop them for learning purposes.

To begin with, in the present, it can be seen how our society is connected through a wide range of mobile technologies that provide resources of information that can be used from school, home and even from work as employers want their workers to keep on the move in this time. This fact is described by some people as Rheingold (2003) as "the beginning of the next social revolution" (as cited in Naismith, et al., 2006, p.6).

Next, they claim that in the UK about a 75% of the general population has a mobile phone, which can be now connected wirelessly to the internet. "Hand-held computers are becoming more widespread" (BBC 2014, as cited in Naismith, et al., 2006, p.6). In the case of laptops, they are now developing new appeals as they are being combined with the connectedness of the brand-new mobile phones.

Besides, mobile technologies are nowadays widespread even among children. That is why Sharples (2003) encourages people to change the bad perspective they have about these devices and start seeing them as useful tools that can improve the learning process, so that they can take advantage of all of the positive aspects that these resources bring (as cited in Naismith, et al., 2006).

According to the authors "the nature of learning is closely linked to the concept of mobility" (p.7). As reported by Vavoula and Sharples (2002) it must be taken into account the following three aspects in which learning can be portable:

"Learning is mobile in terms of space, ie it happens at the workplace, at home, and at places of leisure; and it is mobile between different areas of life, ie it may relate to work demands, self-improvement, or leisure; and it is mobile with respect to time, ie it happens at

different times during the day, on working days or on weekends" (as cited in Naismith, et al., 2006, p.7).

Moreover, the researchers describe that mobile devices offers to the learners, more useful and different experiences than traditional desktop computers, as they provide a variety of activities and as they can be used actively in different settings. So, they can be easily engage to the education of present-day learners, as these mobile technologies provide them with the opportunity to individual and responsible learning.

2.1.2.1. Classification of mobile technologies

The authors explicate that the term "mobile" that means to most "portable and movable" it is commonly related to "personal" when talking about technologies. However, they affirm that a device can perfectly be one without unavoidably being the other. Mobile phones, PDAs, Tablet PCs and laptops are what normally people tend to see as "mobile device", they are considered being personal and portable as they can be taken from place to place. Nevertheless, they refer to some technologies as classroom response systems, used for students to answer "anonymously to multiple choice questions and ministers by a teacher on a central server", as personal but not portable devices as they can be used in only one area (p.8).

On the other hand, they mention some devices that are not personal but considered portable devices as street kiosks and interactive museum displays, since even if they are not physically "movable" "they provide learning experiences to users on the move" (p. 8).

2.1.2.2. An activity-based approach to considering learning with mobile technologies

According to the authors, investigations regarding with the use of mobile technologies for learning, most of the time, put special attention on the technical capabilities of these devices; leaving aside existing theories that support the use of mobile devices for educational purposes. That is why; the researchers present some activities that can be carried out based on the main theories and areas of learning relevant to mobile technology.

Mobile devices have capabilities to add a new vision to the activities that can be supported both because the personal and portable nature of the devices themselves and because of the kinds of interactions they can support with other learners and the environment. Klopfer et al (2002) argue that mobile devices have 5 potential properties that can produce certain types of learning (as cited in Naismith et al., 2006).

The first property, portability, is defined by Klopfer et al (2002) as "the small size and weight of mobile devices" (as cited in Naismith et al., 2006, p.9). That is to say, mobile devices can be brought to anywhere.

Social interactivity, the second property, focuses more on the data exchange and collaboration with other learners that can happen face-to-face (Nyiry, 2002, as cited in Naismith et al., 2006).

Context sensitivity is the third property, Naismith et al (2002) describe this property as the capacity to "both gather and respond to real or simulated data unique to the current location, environment and time" (as cited in Naismith, et al., 2006, p.10).

The fourth property, connectivity, is a network that can connect mobile devices to data collection devices, other devices or a common network (as cited in Naismith, et al., 2006).

Finally, individuality is the fifth property. In this case, difficult activities can be personalized for each learner (as cited in Naismith, et al., 2006).

2.1.2.3. Classification of activities

According to the authors, the activities have been classified according to 6 major learning theories.

The first theory, the behaviorist learning, is built upon the work of Skinner (1968). It assumes that an external or particular stimulus provoke a response. In this sense,

computer can be seen as the presentation of a problem or a stimulus that will be solved by the learner (response), and then the feedback presented by the system is the reinforcement. In this kind of learning, there is a transmission of information from the computer, considered the tutor, to the learner. However, it seems that this approach focuses more on computers instead of mobile devices. Desktop PCs have the capabilities to present content, obtain responses and provide feedback, while mobile devices present big challenges as they have limited displays, restricted input methods, and low rates of connectivity. Even so, drill and feedback provide some benefits. For instance, content and feedback can be adapted to enhance some curriculum areas, and important information can be gathered about the progress of each student. Also, it is important to mention that basic activities can be integrated to a significant learning context as in the classroom response systems. A classroom response system is the integration of mobile technologies to gather feedback from learners and that facilitates teaching activities. For example, it enables teachers to pose multiple choice questions on students' devices and at the same time, it allows students to give anonymously an answer to the question. Roschelle (2003) presents some advantages of the classroom response system. First, anonymity of responses, second, those responses serve for future analysis and third, visualizations enhance mutual pattern recognition (as cited in Naismith, et al., 2006).

The second theory, the constructivist learning, is defined by Bruner (1966) as "an active process in which learners construct new ideas or concepts based on both their current and past knowledge" (p.12). It also makes emphasis on the fact that teachers must motivate students to get actively involved in the construction of their own knowledge by given them suitable tools. In this regard, mobile devices are meant to be supporting tools which have important characteristics that help to immerse learners in a realistic context. Good examples about the implementation of the constructivist learning with mobile devices are found in an area of the learning experience named participatory simulations. Here learners are actively involved in the recreation of a dynamic context similar to that they face every day and where learning takes place. Furthermore, learners are asked to bring a networked device to be part of that context. The key point of this is to "move the simulation away from the computer screen and more into the tangible world that students can interact with" (p.12). In

this way, learners realize that their actions can have a strong impact on that context. Colella et al (1998) describe a participatory simulation where learners play the role of hosts in the spread of a virus; small wearable computers keep a track of who they meet and the transmission of a disease (as cited in Naismith, et al., 2006).

The third theory, situated learning, is an approach developed by Lave and al (1991). The authors argue that learning should not be seen as the simple transmission of knowledge, but as a process of participation in a community of practice (as cited in Naismith et al., 2002). Furthermore, Brown (1989) suggests that teachers must create real and authentic activities where learners are able to solve problems. Meanwhile, there are three main aspects which support this approach. First, problem based learning, has as a main objective to develop learners' critical thinking and makes them learn through the presentation of an authentic and real problem. Most of the time, learners are motivated to work in groups in order to find the solution of the problem by themselves. The role of the teacher is only to be a facilitator. Second, case-based learning, is based on well-defined problems which are the representation of what students can find in real word. Third, context- aware learning refers to the fact that mobile devices can provide learners with appropriate information, content, and activities from a specific environment (as cited in Naismith et al., 2006).

Regarding the authors, collaborative learning, the fourth theory, is concerned with the great capabilities of current mobile devices to enhance interaction, communication, and collaboration among learners. "Learning can be more effective when learners can converse with each other, by interrogating and sharing their descriptions of the world. We can say that the two people share an understanding if person A can make sense of B's explanations of what B knows, and person B can make sense of A's explanation of what A knows. Thus it is through mutual conversation that we come to a shared understanding of the world. Learning is a continual conversation; with the external world and its artefacts, with oneself, and also with other learners and teachers. The most successful learning comes when the learner is in control of the activity, able to test ideas by performing experiments, ask

questions, collaborate with other people, seek out new knowledge, and plan new actions" (p.15).

The researchers claim, informal and lifelong learning is the fifth learning area relevant to mobile technology. Learning is something that occurs in any place at any moment, and it is influenced by the environment and the specific situations people have to deal with. It can be both intentional and accidental. Informal learning activities are classified by Eraut (2000) "through a continuum, where the former activities stand for deliberate learning and the latter activities stand for implicit learning. Also, those activities in the middle of the continuum stand for reactive learning, that is to say, activities that happen in response to changing circumstances like career, promotion or parenthood" (as cited in Naismith et al., 2006, p.17). Conforming to Naismith et al most people learn because they want to be able to experience something new or maybe they want to perform a task effectively. In this regard, mobile devices are meant to be potential tools that support learning and that must be included in everyday activities.

They point out learning and teaching support as the final aspect relevant to mobile technology. In this sense, mobile devices can greatly assist the process of teaching and learning as well as classroom management. Perry (2003) reports on the successful use of PDAs for administration and supporting classroom management. Mobile devices are used by teachers in order to provide students with materials, assign homework, to report student's attendance, access to school data among others (as cited in Naismith et al., 2006). The informal aspect of mobile devices has positive rewards, Strom and Strom (2002) report that PDAs helped teachers to communicate parents about their children absenteeism, and in this way find a solution for that problem (as cited in Naismith et al., 2006).

Naismith et al conclude that current mobile devices are changing the way people learn and teach since they are great tools that support the implementation of above mentioned activities and immerse learners in authentic and real situations.

2.1.2.4. Teaching and learning with mobile technologies-case studies

First, the authors show that in the behaviorist learning, "there are studies that demonstrated the unique capabilities for anytime and anywhere that mobile devices can offer even for the most straightforward 'drill and feedback' activities" (p.20).

Moreover in the constructivist learning, Naismith, et al mention that "the participatory simulations are games where learners play an active role in the simulation of a dynamic system or process. The key challenge is to make sure the technology is unobtrusive, so that it facilitates rather than hinders interactions between the learners." (p.22)

These authors maintain that "the technology supported system afforded all the students the opportunity to present a viewpoint" (p.22).

They made a list of the Key findings of "a study where learners took part in a participatory simulation about the spread virus" (p.22):

- "Students readily engaged with the simulation, and found it to be a rewarding and stimulating experience".
- "Students successfully collaborated to answer the relevant questions about the simulation".
- "The technology facilitated, rather that hindered, normal interactions between the students – the devices augmented rather than replaced normal channels of communication, and hence provided unobtrusive technology support".
- "Students were able to test our experimental hypotheses within the simulation after observing specific behaviors".

Besides in the situated learning "the portability of mobile technology allows the learning environment to be extended beyond the classroom into authentic and appropriate contexts of use" (Juniu 2002, as cited in Naismith et al., 2006 p.24). They refer to this as the most important benefit of the PDA for educators and students.

The authors name in the learning experience three stages: "stage 1: exploring and discovering, stage 2: reflecting, consolidating and hypothesizing, stage 3: hypothesizing and experimenting."

They assume "regarding the content itself that the most effective design approaches were those that incorporated audio, particularly audio-visual coherence and interactive messages." (p.27)

In the collaborative learning, the authors explain that "the most compelling examples of conversational learning occur when mobile technology is used to provide a shared conversation space. Effective learning occurs when people can converse with each other, by interrogating and sharing their descriptions of the world." (p.27)

Moreover, in the informal and lifelong learning, they pointed out that "the personal nature of mobile devices makes them well suited for learning applications outside of format education." (p.28)

Besides, in the learning and teaching support, the authors demonstrated "how mobile devices can be used to support learning-related activities for students, teachers and administrators." (p.30)

Finally, in the support for teachers and administrators, the authors described that "as head teachers and senior managers most closely match the mobile professional profile for which hand-helds were designed, they were thus in the best position to experience immediate benefits. This group of users found the hand-helds amazingly efficient at ensuring contact lists, diaries and meeting arrangements were up-to-date, and were able to employ the facilitates for rapid accrual and reporting of data to address truancy control problems." (p.31)

2.1.2.5. Implications for learners, teachers and developers

According to Naismith et al (p. 33) "compared to desktop technology, learning and teaching with mobile technology presents significant new challenges including:"

Context – "the ability to acquire information about the user and his or her environment presents a unique ability to personalise the learning opportunity." (p. 33)

Mobility – "the 'anytime, anywhere' capabilities of mobile devices encourage learning experiences outside of a teacher-managed classroom environment. Inside the classroom, mobile devices provide students with the capabilities to link to activities in the outside world that do not correspond with either the teacher's agenda or the curriculum." (Sharples 2003, as cited in Naismith et al., 2006, p. 33)

Learning over time – "lifelong learners will need effective tools to record, organize and reflect on their mobile learning experiences." (Vavoula 2004, as cited in Naismith et al., 2006, p. 33)

Informality – "the benefits of the informality of mobile devices may be lost if their use becomes widespread throughout formal education. Students may abandon their use of certain technologies if they perceive their social networks to be under attack." (p.33)

Ownership – "both personal and group learning are most effectively supported when each student has access to a device." (p.33) Ownership is stated as a prerequisite for engagement, where students have the potential to go 'beyond the necessary and play with it to explore its potential'. Personal ownership does, however, present a challenge to the institutional control of the technology." (Savill-Smith and Kent 2003, as cited in Naismith et al., 2006, p. 33)

2.1.2.6. The future of teaching and learning with mobile technologies

According to Naismith et al (2006) the modern mobile technologies are about to become even more universal and networked devices that the ones that currently exist. Mobile phones, PDAs, game consoles and other technologies within the next five to ten years will be equipped with "context-aware capabilities" that "will transform everyday activities by providing the ability to capture details about the time, location, people around you and even the weather. The entire internet will become both personal and portable." (p.36)

They affirm that learning will have great advances with the help of mobile devices, learners will spend less time inside the classrooms, and they also will have the opportunity to be responsible of their own learning "through consultations with their personal diaries and institution-based virtual learning environments". "The ability to instantly publish their observations and reflections as digital media will empower them to be investigators. Context-aware applications will enable learners to easily capture and record events in their life to both assist later recall and share their experiences for collaborative reflection."(p. 36)

The authors claim that educators and technology developers must dare to ensure that the newer learning is "highly situate, personal collaborative and long-term, in other words, truly learner-centered learning." (p. 36)

Besides, as they also state, educators will be requested to be guiders instead of transmitters and technology developers will be asked to assure the privacy and the security of those users that will pay for the devices and services.

Finally, researchers suggest that, nowadays, being whether "right or wrong", mobile technology is spreading into the classrooms, so educators and developers must find to implement their devices for student to be able to take advantage of them." (p.36)

2.1.3. EMERGING TECHNOLOGIES

2.1.3.1. Mobile Apps for Language Learning

In his column "Emerging technologies: Mobile apps for language learning", Jones (2011) explains that a couple of years ago, the most appealing thing that people could do with their mobile phones was to download ringtones, but currently it has changed. Smartphone users have the opportunity to choose, among a great variety of applications, what they want to use. Jones support this view by pointing out that it has become a significant phenomenon to such an extent that it has aroused much interest in educators but particularly in language educators. This paper will analyze the state of language apps, the devices they run on, and how they are developed.

2.1.3.2. The changing mobile environment

The author argues that there have always been devices to play audios and videos as well as interest in analyzing their use in language learning. As time goes by, portable cassette players became iPods and MP3 players which ensure the audio-based learning. Then, "with the emergence of PDA's (personal digital assistants) and the Palm Pilot, language dictionaries, e-book grammars, and flashcard software appeared as well". Also, it is important to mention that Palm was the creator of the first smartphones with modern properties such as "SMS messaging, built-in cameras and voice recording." (p.2)

The essayist goes on to say that in past years, smartphones had many limitations which hampered their use for educational purposes. For example, during 2002, Jones carried out a study in Australia. He bought smartphones for each of the participants involved, so what they had to do was to write travel diaries but students reported that the text input system was slow and was likely to make errors in long texts. Similarly, in 2006 George Chinnery conducted an investigation based on the use of mobile phones for vocabulary practice, live tutoring and PDA's for file sharing. As a result, he found similar problems: small and low-resolution screen, poor audio quality, storage/memory and slow internet connectivity. However, by 2007, there was a great revolution on smartphones'systems with the advent of the new Apple iPhone.

2.1.3.3. Apps on the rise

Jones further states that "one of the most remarkable improvements of the iPhone, launched for the first time in 2007 by Apple, was its web browser the "Mobile Safary" characterized by its high-resolution screen, powerful processor, more internal memory, and faster internet connectivity". Also, "one of its main objectives was to present web pages as they appear in a normal desktop computer". Moreover, "the iPhone brought new effects on its screen; for instance, touch actions or double taps allowed small texts to be read". (Pag.2-3) Therefore, with these new amazing devices, there is a strong chance for learning to happen.

The researcher indicates that there are all kinds of applications created for different purposes, but a great variety has been created for the language learning area. Moreover, Claire Siskin argues that some of these applications focus on specific languages like Japanese, French, and ESL. She also mentions that these applications include flashcards programs (Anki, Quizlet), dual language dictionaries, and phrase books. Furthermore, it should be mentioned that vocabulary software are more sophisticated and powerful; for example: eStroke, Pleco, and ChinesePod (as cited in Jones, 2011, p. 4).

The authors also makes emphasis on the fact that Claire Siskin made a list of applications, repurposed apps, that are aimed to be tools for language learning. They all include features such as: voice search, voice email, postcard creation, audio recording, and children's games. Siskin clearly says that if people combine these voice or audio features, they would become essential components in language use and learning. So, in this list many applications are recommended, for example, e-books (which include text, images, and audio), games such as Town Musicians of Bremen (geared toward children's language learning), Google Translate, Conversation mode and Talk to Me. (as cited in Jones, 2011, p. 5).

2.1.3.4. Developing for mobile delivery

The author argues that applications are becoming very popular, so he suggests that developers must optimize smartphone by creating applications that are compatible with

smartphones' operating systems. That is to say, "Apple iOS devices (iPhone, iPod touch, iPad) only use programs such as: Objective-C and Apple's Xcode which means that they do not run on Android devices, for which apps are written in Java running on a version of Linux. iOS apps are available exclusively from the Apple App Store, while Android apps are more widely available, from the official Android Market, Amazon's Appstore for Android, Hango, and other repositories". He further proposes that, for language learning purposes, developers should create: a Web app and a hybridapp that will run and perform similarly in most smartphone environments. (pag.5)

2.1.3.5. Outlook: Tablets also on the rise

Jones affirms that another significant achievement for the apple company was the creation of the iPad in 2010. So, those applications created for the iPhone were congruent with the iPad`s operating system. It is important to note that the application hello-hello for language learning was uniquely created for iPads and it was available in different languages. Due to the iPad's high quality standards other companies were forced to create tablets using the Android's operating system.

The author considers that smartphone are the suitable tools for individualized informal learning. Users have the power to select what applications they want to use. So, language educators must promote learners' autonomy; in this regard, students will be able to combine formal and informal learning.

Jones concludes that applications are becoming very popular and innovating. People have the freedom choose, from a great variety, what they want to use. Applications are having a great impact on different domains, so language educators cannot leave aside this phenomenon. Educators can integrate these significant tools to the process of learning since they have potential capabilities and at the same time they help students to become autonomous.

2.1.4. "EXPLORING MOBILE APPS FOR ENGLISH LANGUAGE TEACHING AND LEARNING"

In the research **"Exploring mobile apps for English language teaching and learning"**, Zou, B and Li, J. (2015) affirmed that "a number of apps have been created and used for English as Foreign Language (EFL) learning. However, few studies have given effective examples of tasks for mobile learning" (p. 564).

Also it is important to mention that "the majority of the existing apps have not yet been very pedagogically useful, due to the possible knowledge gap between the app developers and language teachers" (Sweeney & Moore, 2012 as cited in Zou, B and Li, J. 2015, p. 564). That is why, these Zou, B and Li, J. investigated how mobile apps can be integrated into English language teaching and learning and what sorts of tasks can be employed to enhance learners' EFL learning.

Their results demonstrated that "participants had high motivation to practice English on apps including listening, reading, speaking and vocabulary practice both within and outside of the class" (p. 566).

In the Vocabulary skill, the authors found that "70 percent of the respondents perceived that they regularly did vocabulary activities outside of the classroom" (p. 566).

Moreover, in the Reading skill, researchers said that "all students did reading tasks both in and after class. Despite the fact that some of the respondents prefer reading on paper, the average reading tasks they did via mobile devices rose considerably from seldom to twice a day" (p. 566).

Next in the Listening skill, researchers discovered that the majority of the students practiced listening on apps such as BBC, TED Speech and VOA several times a day due to their easy access and the benefits for developing their Listening skills.

Finally, in the Speaking tasks, they found out that "70 percent of the students stated that apps were useful, particularly for improving pronunciation. In terms of the communication tool QQ/WeChat (similar to The Line or ICQ), the students contended that it was easy and comfortable for them to communicate in class through the forum on the app with the teacher and the other students. Students felt more confident to discuss lessons in the class forum on their mobile devices. This indicates that it could be one of the good ways/channels for EFL learners to practice English." (p.566)

In the second phase about the students' perceptions of features in the EAP app, the researchers proved "that using mobile devices as a learning tool can motivate students' enthusiasm." (p. 567)

Furthermore, researchers obtained that "convenience and high-quality contents were considered as the top two significant features for a good app. The majority of the students revealed that learning via handheld devices had become an indispensable part of their lives." (p. 567)

The researchers concluded that "the majority of the participants held a positive attitude towards mobile learning, and many of them frequently conducted a variety of learning practices on their mobile devices." (p. 567)

As well as they found out "the majority of the subjects enjoyed mobile learning, which can be revealed by their significantly high motivation in carrying out the relevant activities on the apps." (p. 567)

2.1.5. "EXPLORING SMARTPHONE APPLICATIONS FOR EFFECTIVE MOBILE-ASSISTED LANGUAGE LEARNING"

In their paper **"Exploring Smartphone Applications for Effective Mobile-Assisted Language Learning"** Heyoung, K. & Yeonhee, K. (2012) point out that within the use of smartphones, the employment of mobile applications for learning a new language has become very common in the recent years. However, they also suggest that it has not been proved that it has a real positive impact in this field. That is why in their research they deeply study 87 ESL mobile apps by means of the following two questions: "what are the common and distinctive features of smartphone applications?" and "what are the strengths and weaknesses in utilizing present smartphone applications for effective mobile-assisted language learning (MALL)?" (p. 1)

According to the authors, the "study first suggests evaluation criteria designed for mobile-based ESL software. Next, overall features and functions of the selected applications are analyzed in the three categories: 'content and design', 'L2 approaches' and 'technology'. The details of the findings are sorted and explained by target language skills." (p. 1)

To begin with, Heyoung, K. & Yeonhee, K. claim that the use of "mobile devices" has become widespread that even "has changed the way we learn, communicate, and live" (p. 1). So that learners now are provided with more and more tools as "mobile applications" that enhance and facilitate the learning process even more. Nevertheless, it has not been proved yet the effectiveness of these applications as some researchers such as Chinnery, 2006; Kukulska-Hulme, 2009; Kukulska-Hulme and Shield, 2008, have studied them just as a small part of the use of technology.

As the researcher explains, "The term mobile-assisted language learning (MALL) was first coined by Chinnery (2006)" (p. 2) and after this, the use of these new technologies as extra tools to improve learning has become more widespread and more important. Nonetheless, the effectiveness of MALL is not simply determined by their existence but it

implies many other aspects as their mobility, which not only refers to "spatial movement, but also the ways in which such movement may enable time-shifting and boundary-crossing." (Kukulska-Hulme, 2009, as cited in Kim, 2012, p. 2)

Moreover, Heyoung, K. & Yeonhee, K. summarize the advantages of using MALL as the following:

"First, MALL enables students to more easily and more promptly access language learning materials and communicate with people at anytime, from anywhere." (p. 2)

"Second, the nature of digital technology facilitates students' participation in both collaborative and individualized language learning activities synchronously and/or asynchronously allowing rapid development of speaking, listening, reading, and writing, skills." (p. 2)

"Third, mobile technology provides various resources and tools for language learning that encourage learners to be more motivated, autonomous, situated (site-specific), and socially interactive." (p. 2)

On the other hand, when analyzing the common features that smartphone apps present, Heyoung, K. & Yeonhee, K. conclude that "the majority of applications deals with short language data information such as word lists, pronunciations, grammatical elements, or sample dialogues or essays etc.", where Vocabulary is the most common skill that can be practiced in the ESL apps as they are only considered as an extra tool and not as complete instructor. Besides, they claim that "most of them require cognitive language learning style and seldom provide socially interactive learning opportunity. Most instructions in Vocabulary and Grammar apps are drills, problem solving, recalling, and comprehension checks to individually construct linguistic knowledge. The technology functions as resources (ex. word list, tongue twisters, sample writings, games) and tools (ex. dictionaries, a notepad, a voice recorder, a translator), and it is up to the users to control them for developing new knowledge." (p. 52).

Furthermore, the authors explain that "ESL apps employ various modes and functions of multimedia, such as sounds, videos, music, or images, for personal, perceptual, and field-independent learning while other mobile technologies such as SNS, podcasting, voice synthesizing, which clearly provide more collaborative, constructive, or field-dependent practice, are not actively used for instruction". Last but not least, the researchers point out that most of the reviewed apps are based on the "audio-lingual" and "task (test)-based" methods as "there were many authentic or extended discourses provided" and "sound setup or voice recording tools were highlighted in many apps for repetition drills." (p. 53)

Regarding the strengths and weaknesses in using smartphone apps for "MALL", the authors describe that ESL apps provides the learners with different activities and resources that may encourage them to develop their "sense of individuality", increase their motivation and "autonomy". However, they point out that these apps lack of "more active use of authentic context, socially interactive tasks, timely and situated materials (ex. podcasting)" (p. 53). They also claim that "the present apps facilitate personal learning, but do not effectively assist personalized learning." (p. 53). Finally, they explain that two of the actual limitations to learn by means of ESL apps are first, they do not employ different methodologies and approaches so they may not be useful for all the type of learners that exist and second, "there are three times more paid apps than the free ones, which, generally, are so-called 'trial or lite versions'", added to this, Heyoung, K. & Yeonhee, K. explain that smartphone are so expensive.

2.1.6. DUOLINGO EFFECTIVENESS STUDY SUMMARY

In the report "**Duolingo Effectiveness Study**", the authors Vesselinov, R. and Grego, J. (2012) point out that "learning a foreign language has become a very appealing and important ability in the contemporary world. In many cases learning a foreign language involves using language learning software or computer assisted self-study. There are many language learning software tools available, some more popular than others. But there is very little research specifically dealing with these tools". (p. 2)

These researchers (2012) described that they conducted their study of Duolingo effectiveness in September to November of 2012. "The study lasted for approximately eight weeks. A random representative sample was selected from Duolingo users who studied Spanish. The participants were at least 18 years of age, native speakers of English, not from Hispanic origin and not advanced users of Spanish, and all of the participants resided in the United States". (Page 1)

Moreover, the researchers (2012) narrated the progress of how they managed their study, "the participants took one college placement Spanish language test in the beginning of the study and one test at the end of the study. The test results were measured in points (the higher the better). The improvement of language abilities was measured as the difference between the final and the initial language test results. The effectiveness of Duolingo was measured as language improvement per one hour of study". (Page 1)

This summary will treat two factors that the researchers Vesselinov, R. and Grego, J. (2012) found in their study about the effectiveness of using Duolingo, they are the motivation and the initial level of knowledge.

First, the researchers (2012) shown that "the people, who studied Spanish to travel, had the biggest improvement. People who studied mainly for personal interest and school had more modest improvement". (Page 19)

Second, the researchers (2012) discovered that "the people who were beginners had the biggest improvement and more advanced people had the smallest improvement". (Page 19)

On the other hand, their study answered some questions which are that "the vast majority of the participants in the study liked the product and most of them succeeded in improving their knowledge of Spanish. Based on these findings we can say that for a completely novice user of Spanish it would take on average 26 to 49 hours of study with Duolingo to cover the material for the first college semester of Spanish". (Page 19)

Evidently, the authors experienced some limitations for their study: They (2012) explained that "as expected many people had difficulties keeping up with the study and their use of Duolingo for the two months of study was very uneven. Many people dropped out of the study or spent less than two hours studying Spanish. Although we informed the participants twice a week of their study time for the week this was not enough for many of them. It is highly recommended that Duolingo develops some kind of individual online clock which shows how much time each". (Page 19)

Moreover, they (2012) demonstrated that "user spends by date or week. This recommendation is not specifically for future research studies but for the everyday use of Duolingo. Some people do not have an accurate notion about how much time they have spent studying a foreign language. And if they spend less than two hours studying for two months their expectations for improvement cannot be very high". (Page 20)

Finally, they (2012) indicated "some of the participants considered the incentive of $20 gift certificate to be very low and probably with a higher incentive we could have kept some of the people we lost". (Page 20)

2.1.7. DUOLINGO'S BACKGROUND

In his research Skopal (2015) remarks that "the official website of Duolingo describes the application as "the free science-based language education platform selected by Apple as iPhone App of the Year 2013, by Google as Best of the Best for Android 2013, and by TechCrunch as Best Education Startup. It was created by crowdsourcing pioneer Luis von Ahn, PhD, and Severin Hacker, PhD. With over 38 million users, Duolingo has organically become the most popular way to learn languages online in only 2 years." (Duolingo, 2015) Duolingo published a brief description of its business model; "Duolingo is and will always be 100% free to its users. Instead of charging users, Duolingo finances its high-quality education platform using a crowdsourcing model". (p. 3)

Furthermore, in her magazine article "Duolingo Review: The Quick, Easy and Free Way to Learn a Language", Karch (2015) defines that the free language learning app Duolingo offers 11 completed language courses for English speakers. Moreover, she adds that app has courses for speakers of other languages than English. It includes French for Portuguese speakers, English for Czech speakers, and so on.

She details how Duolingo works, remarking that is a great example of "a straightforward language app" and simple to use. First, users have to set up a profile. Second, they have to choose their target language. Next, they have to set their weekly goals only if they are brave enough and then they can start using it.

Next, Karch illustrates that "each course in Duolingo is made up of modules (the circles in the screenshot below) which are grouped to form skills".

Figure I. Karch, A. (2015) Duolingo Review: The Quick, Easy and Free Way to Learn a Language [Screenshot]. Retrieved from http://www.fluentin3months.com/duolingo/

What is more, she clarifies that "Duolingo dictates the order in which you need to complete the different modules, with new modules becoming active only once you have completed the previous one. This is also the case with individual lessons within each module. You need to complete lesson 1 to be able to progress to lesson 2, and so on. That said, Duolingo allows the users to 'test out of' individual modules as well as groups of modules (skills)".
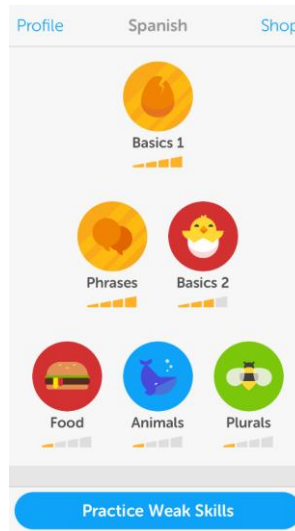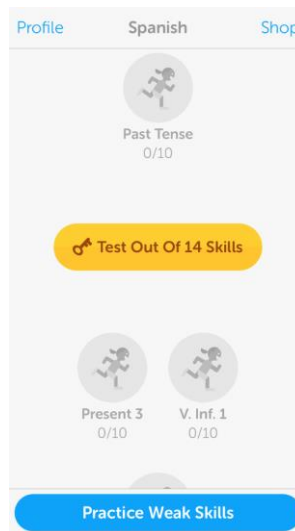

Figure II. Karch, A. (2015) Duolingo Review: The Quick, Easy and Free Way to Learn a Language [Screenshot]. Retrieved from http://www.fluentin3months.com/duolingo/

Karch indicates that "pressing the 'test out' button lets the users take a shortcut if they want to avoid going through the individual lessons or modules that cover material that they are already familiar with. They need to pass the test to do that, because there are no shortcuts in language learning".

Moreover, the author adds that "the option to 'test out' also applies when you begin a new language. The users can start with the basics or they can take an 'entry test' and let the app determine their fluency level".

Karch describes that "each Duolingo's lessons are made up of a range of activities, such as translation:"

Figure III. Karch, A. (2015) Duolingo Review: The Quick, Easy and Free Way to Learn a Language [Screenshot]. Retrieved from http://www.fluentin3months.com/duolingo/

"Or activities where the users have to match words to their foreign language equivalents:"

Figure IV. Karch, A. (2015) Duolingo Review: The Quick, Easy and Free Way to Learn a Language [Screenshot]. Retrieved from http://www.fluentin3months.com/duolingo/

Karch states that in the Duolingo App, Vocabulary is presented through images and grammatical aspects that are illustrated in speech bubbles. Karch mentions that in the Listening exercises users must type the words they hear and, in the Speaking exercises they have to say what they hear. Also, the author explains that there is a progress bar that goes from 0 to100. This bar can go up or down as students do things well or not. She points out that after having finished all lessons; a screen appears which demonstrates the learners' weakest words. Furthermore, she clarifies that they can strength their weakest words by returning to the previous lessons.

Figure V. Karch, A. (2015) Duolingo Review: The Quick, Easy and Free Way to Learn a Language [Screenshot]. Retrieved from http://www.fluentin3months.com/duolingo/

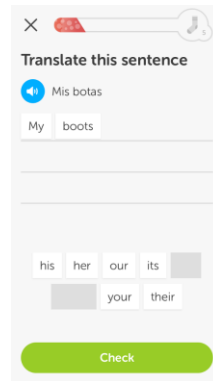*Figure VI.* Karch, A. (2015) Duolingo Review: The Quick, Easy and Free Way to Learn a Language [Screenshot]. Retrieved from http://www.fluentin3months.com/duolingo/

On the other hand, the author states that Duolingo follows learners' progress. After having completed all lessons, they receive a report about their progress and the experience they have gotten. This report also includes the days and the time students spent in using the application. Besides that, she notes that the Duolingo App motivates users to learn a new language by using different methods. For example, users can choose a goal that goes from casual to insane. So, a virtual coach sends them a daily reminder to tell them whether they are on track to reach their goal or not. Moreover, learners can obtain bonus skills and the possibility to get lingots.
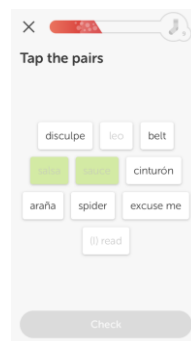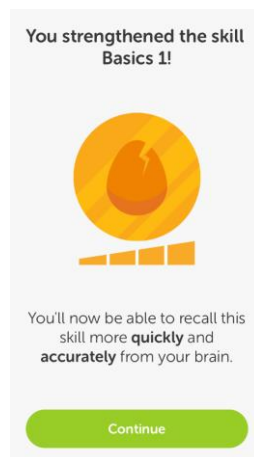

Figure VII. Karch, A. (2015) Duolingo Review: The Quick, Easy and Free Way to Learn a Language [Screenshot]. Retrieved from http://www.fluentin3months.com/duolingo/

Karch claims that one of the important tools of Duolingo is the "strength" bar that reminds learners when it is needed to repeat certain lessons containing specific words that may take longer to get them stuck in the brain before they can move on. She also mentions that another relevant tool of Duolingo is "the little turtle button that allows listening to 'slow' pronunciation of the word or phrase", which is very useful when they are not able to understand a word or a phrase during the taping practice. Finally, she emphasizes the visual aids that the app has when teaching Vocabulary, the green and red colors that indicate whether their answers are right or wrong and also the "highlighted tapable text for new words or grammar points".

Figure VIII. Karch, A. (2015) Duolingo Review: The Quick, Easy and Free Way to Learn a Language [Screenshot]. Retrieved from http://www.fluentin3months.com/duolingo/

On the other hand, Karch mentions that even if the Duolingo App is very helpful when learning a language, as any other app, there are some little things that users may take into account when deciding if the app works for them. First, she points out the penalization learners get when making "the tiniest little mistake in spelling or pronunciation". Second, she claims that when learning advanced grammatical structures, Duolingo asks them to translate sentences they would not commonly use in "natural speech". In addition, she explains that they do not have control over the words they want or need to learn as they must complete the previous lesson before they can move on to the next ones. So, in this way users might be learning vocabulary that is not relevant for them as they do not expect to use it in daily conversations. Finally, she emphasizes that even if the app makes them believe they are practicing oral expression, what they are actually doing is repeating phrases after the app, which can be useful to learn pronunciation but not to become fluent in a language.
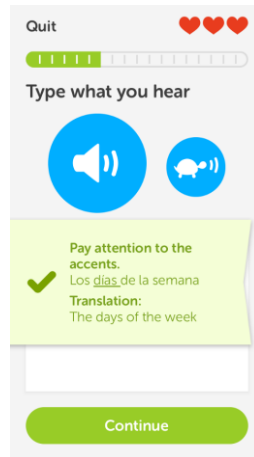
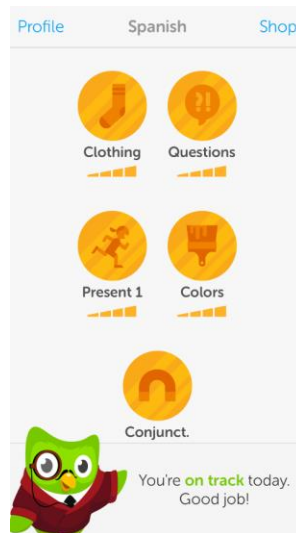*Figure IX.* Karch, A. (2015) Duolingo Review: The Quick, Easy and Free Way to Learn a Language [Screenshot]. Retrieved from http://www.fluentin3months.com/duolingo/
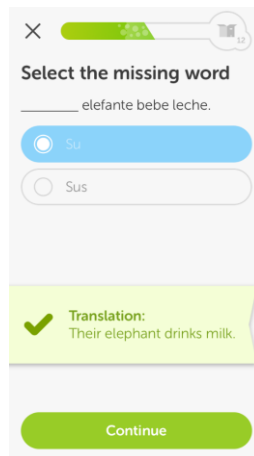
Figure X. Karch, A. (2015) Duolingo Review: The Quick, Easy and Free Way to Learn a Language [Screenshot]. Retrieved from http://www.fluentin3months.com/duolingo/
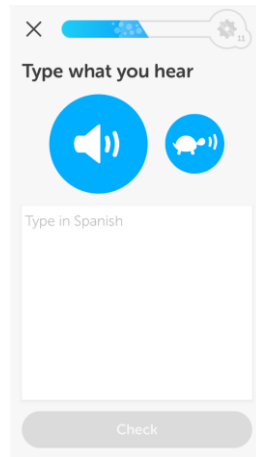

Figure XI. Karch, A. (2015) Duolingo Review: The Quick, Easy and Free Way to Learn a Language [Screenshot]. Retrieved from http://www.fluentin3months.com/duolingo/

As a conclusion, Karch affirms that Duolingo is a very meaningful and useful tool users can add when learning new languages, but they should not expect to become fluent only by using this app. So, what they need to do is to take any opportunity they have to practice by reading, speaking and "truly living the language you're learning".

CHAPTER III: METHODOLOGY

The Modern Languages Major is meant to prepare students who develop high language skills, as they have been preparing for five years in that field. After having coursed many French subjects from different branches such as French Grammar, Oral Expression, Phonetics and French Literature, they are expected to reach a C1 performance level. However, this is not what really happens at the end of the major, due to the lack of extracurricular tools that students should have had since the very beginning of the major to help them improve their performance level. That is why it emerged the necessity to test the impact of the implementation of a technological tool such as the Duolingo App, that according to the online newspaper Tech Crunch (2014) "in December, Apple named Duolingo the 'iPhone App of the Year' for 2013", in order to propose its use to the professors of the Foreign Language Department. Thus, this section of the study was designed with the main purpose to show the stages followed in the investigation. The methodology chapter was divided in three different sections such as: research approach, type of study and research design.

3.1 RESEARCH APPROACH

The data in this study was analyzed with a combination of both qualitative and quantitative approaches for the reason that the main points of the researchers were to generate more information and analyze some data with statistics and graphics. The researchers exposed the experimental group to a lot of French lessons provided by the Duolingo App or the independent variable to determine whether they improved or not their French performance level in Grammar, Vocabulary and Listening skills as well as their motivation. One of the dependent variables, which were the French performance level in Grammar, Vocabulary and Listening skills, was measured with a test divided in those skills, so that the data was analyzed using descriptive procedures. Besides, the other dependent variable which was motivation, it was evaluated through a survey and the data gathered was analyzed by means of statistics and graphics.

3.2 TYPE OF STUDY

The type of study that was applied in this research was the experimental study. This type of study aims to prove the impact of a specific intervention, in this case the use of the Duolingo App. Besides, it is important to mention that in this type of study the researchers play an active role as they participate in the implementation of the app.

3.3 RESEARCH DESIGN

To conduct this part of the investigation the researchers took into account the following elements: setting, participants, measurement instruments, procedure, and data analysis.

3.3.1 Setting

This study took place in the main Campus of the University of El Salvador, located in the department of San Salvador, the only public higher education institution in the country. The tests and surveys were conducted in the classrooms of the Foreign Language and Philosophy building where the students of Modern Languages Major attend classes during the first year. Besides, the implementation of the Duolingo App was done outside the classrooms according to the needs and convenience of each student. As well, check lists and weekly reports were made by the researchers outside the classrooms.

3.3.2 Participants

All of the participants taken into account for the research were students of the Intensive French II course in the semester II, 2016 from the first year of the Modern Languages Major as they had only the bases of the French language. The sampling procedure was a non-random selection in the category of purposive sample. Students were going to be selected based on the results obtained from the administration of a proficiency test, divided in three parts which were Grammar, Vocabulary and Listening, at the very beginning of the experiment but due to the students' denial and rejection towards this project, researchers decided to take into consideration only the ones who voluntarily agreed to participate in the use of the app which means that the sample became random by convenience. On the other hand, they have Spanish as their mother tongue. The majority of

the population was women at about 81.25% while men were represented by the 18.75%. The participants were young adults from 17 to 30 years old.

3.3.3. Measurement instruments

The measurement instruments that were used for this study were some proficiency tests, surveys, checklists, weekly reports and a pilot test. First of all, researchers administered a pilot test in order to identify possible problems and at the same time to get a final version of the surveys and exams. After that, a survey was administered and it helped the researchers discover if students had any knowledge about the Duolingo App. Then, a proficiency test divided in three parts in which Grammar accounted for 40 percent, Vocabulary 30 percent and Listening 30 percent of the final grade evaluated the aforementioned skills. After passing and finishing the tests, the researchers checked and classified the students who got the lowest grades and highest grades. Those who got the lowest grades were going to be asked to use the Duolingo App so that they could practice their French but due to the lack of participation from those students, researchers asked students who decided to participate voluntarily to use the app. Next, to control their progress in the use of the app, researchers created a group in the Duolingo App and the students shared their progress in that group. In addition, the researchers received a weekly report presented as an automated email sent by the application to notify what lessons the students had done and the experience that they had gotten using that app, then the researchers marked those results in a checklist.

The use of the app or the experiment was originally planned for three months but due to the time limitations it was reduced to eight weeks. During that time, the researchers met volunteer students, every fifteen days, in order to motivate them to continue practicing with the Duolingo App and answering their questions and doubts. Seven days after the end of the experiment the researchers gave students the same tests to see if there has had a change in their French performance level. An important fact was that students did not know that they had to do the same exams again. Finally, another survey was administered in order to know if students who received the treatment increased their motivation in the process of learning French.

3.3.4. Procedure

First, researchers were asked to pilot the instruments for the purpose of recognizing possible problems that students could have had when answering the surveys and exams. Thanks to the pilot test, researchers were able to create a final version of the instruments. The administration of that pilot test took place from August 17th to 18th of the same month. After that, data collection instruments were administered to the students individually from August 22nd to 24th of the same month. Administrators asked for the permission of the teacher before doing so. The first day, the researcher administered a survey to know which mobile applications students used, and then a Grammar test was given. Second, students were provided with the Vocabulary and Listening tests. All of the tests were explained to the students in Spanish, with the directions and the objective of the study. The administrators controlled the activity while students were completing the tests in order to answer any doubt that participants might have had. Concerning to the time to accomplish the tests, students were given about one hour and a half each of the days to complete them. At the completion of the administration, tests were collected and scored by the researchers. During the eight experimental weeks, volunteer students were asked to create an account in the Duolingo App. Also, they had to take the placement test and then sign up in a group created by the researchers to share their progress. Volunteer students were requested to use the app thirty minutes every day, completing the lessons according to their needs.

During the experiment, researchers scheduled meetings, every fifteen days, with the students involved in the experiment with the main purpose to motivate them to continue using the Duolingo App and answering their questions and doubts. The experiment finished on October 30th. After that, from November 7th to 8th of the same month , the same proficiency test were passed again to verify if there has had a change or not in students' performance level, plus a survey about the students' perception in their motivation was passed the same day only to the ones who were part of the experiment.

3.3.5. Data analysis

The data analysis consisted of a description of the information gathered among the students during the eight weeks established to carry out the experiment. First of all, the researchers graded the first exams from a range of 1 to 10, in which Grammar was equivalent to 40%, Vocabulary 30% and Listening 30%, the results of the three exams were added to make a total of 100%. Then, they classified who were the students who got the lowest and the highest grades. Besides, a survey about which apps the students used to improve their competences was examined just to be aware if the students did or did not know about the Duolingo App before, so that this research had reliability. Moreover, with the weekly reports that were noted in the checklists, researchers controlled students' progress to see if they used the app. In addition to that, the same tests that were used at the very beginning were passed again at the end of the experiment.

After having the results from both, the first and second test, researchers registered those grades in a chart on the Excel software so that they proceed to analyze that data following the next steps. First, researchers compared the results from the first and the second tests of the group A to determine the change in performance that students had. Also, the same process was done with group B. Second, the results from tests 1 and 2 of the group A were compared with those from group B, in order to verify in which percentage the discrepancy in performance between group A and B increased or decreased. With all of this process, the research team described the change in performance that each group had.

Besides, researchers analyzed the averages from tests 1 and 2 gotten in Grammar, Vocabulary and Listening by group A to calculate in which percentage their performance in each skill improved or declined. The same process was done with group B as well. Next, the researchers drew a comparison of the results of test 1 in Grammar, Vocabulary and Listening of groups A and B to find out the divergence in percentage of their performance in each skill. The same process was repeated with test 2 of both groups. Finally, that difference in Grammar, Vocabulary and Listening from both tests between groups A and B was compared to determine in which degree that discrepancy increased or decreased in

each skill at the end of the experiment. With all of this process, researchers described which skill was the most affected.

Finally, the survey about the motivation was analyzed with the PSPP software to evaluate if there was an increment or decrement in the willingness to practice French according to the students' perception.

CHAPTER IV: DATA ANALYSIS

        The data gathered in this study was analyzed by the researchers with a combination of both qualitative and quantitative approaches. In the first survey, about the use of applications, the investigators analyzed question by question. Then, from the data gathered for each question researchers used a statistical procedure using graphics. Next, it was described in a qualitative way. Besides, with the grades obtained from the first and second proficiency tests, researchers used a statistical analysis to describe and tabulate the data obtained from the sample. Moreover, from these tests, researchers got the average score, that is to say, the mean. In the second survey about the motivation, the investigators analyzed question by question, they also made use of graphics and descriptive procedures.

4.1 DATA ANALYSIS OF THE SURVEY ABOUT THE USE OF APPLICATIONS

Range of age of Intensive French II students

Age	Frequency	%
17-20	8	50%
21-25	4	25%
26-30	2	12.50%
No answer	2	12.50%
Total	16	100%

Age

50,00%			
	25,00%		
		12,50%	12,50%
17-20	21-25	25-30	No answer
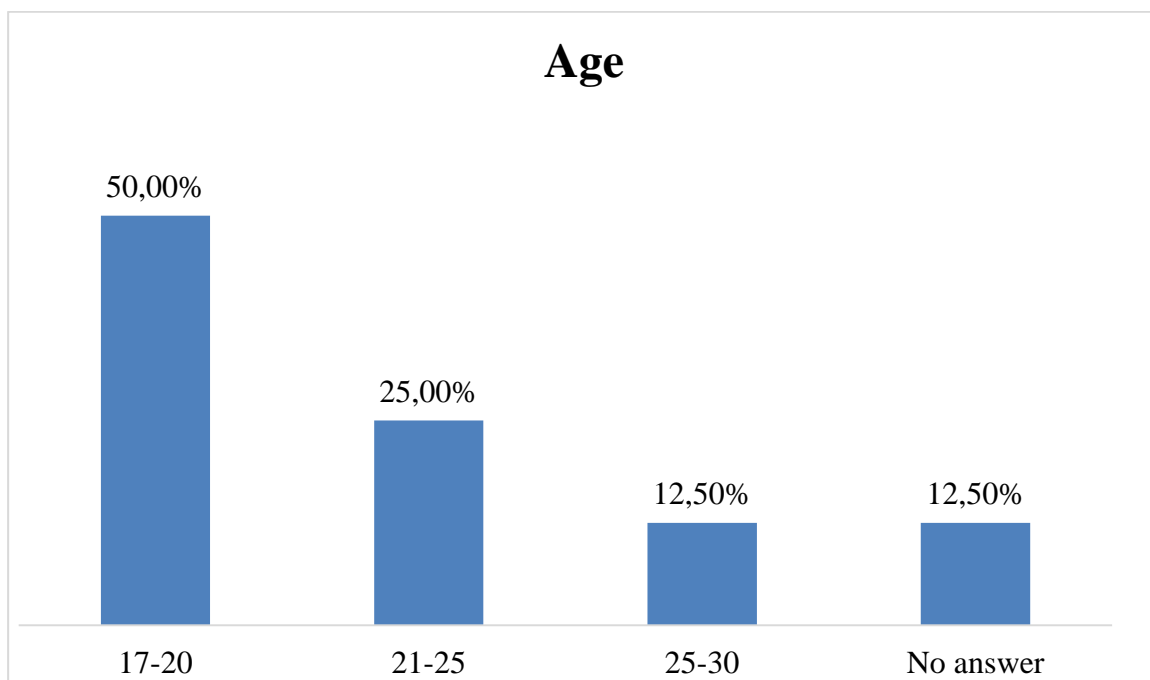
Interpretation:

As it can be seen in this graphic, the majority of the students who took the survey about the use of applications are about between the ages of seventeen to twenty; 50.00% of the sample (eight students). While, the 25.00% of the sample are about twenty-one to twenty-five years old (four students). Besides, the 12.50% (two students) of the students are about twenty-five to thirty years old (two students). Moreover, the other 12.50% (two students) of the sample did not give an answer to this part of the survey.

Gender of the students of the Intensive French II

Gender	Frequency	%
Female	13	81.25%
Male	3	18.75%
Total	16	100%
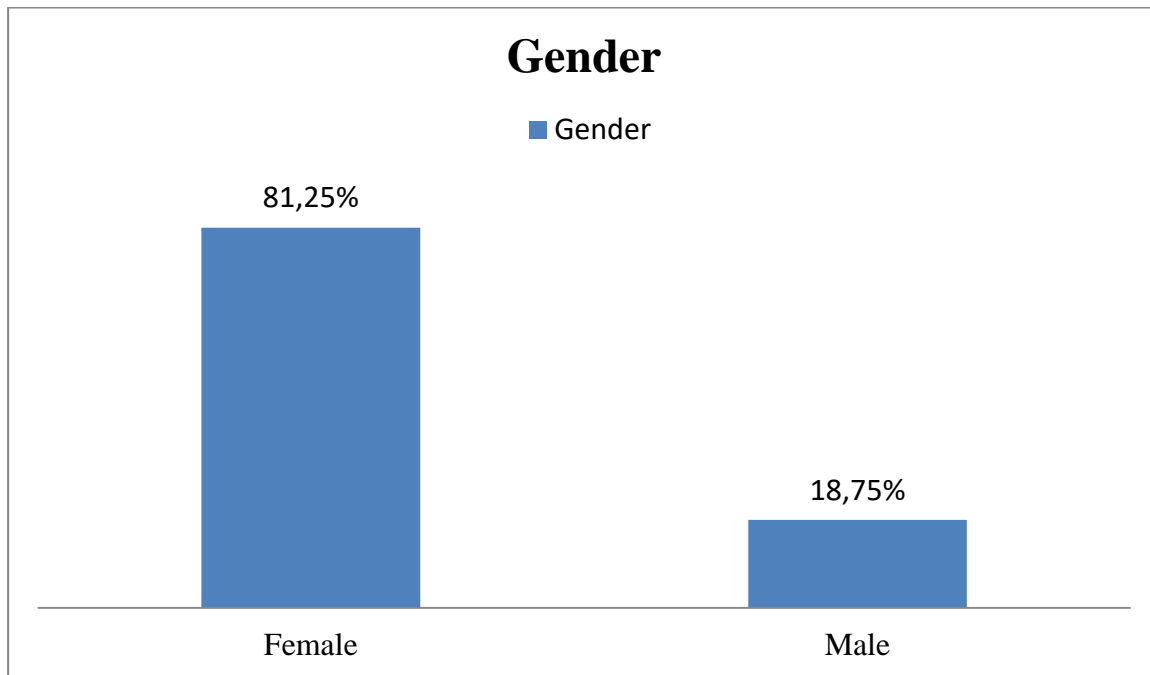
Interpretation

Talking about the gender of participants, the results show that among the sixteen students, the 81.25% (thirteen students) of them were females, while only the 18.75% (three students) of them were males.

Graphic question 1

Have you taken any French course before starting you major?

Choices	Frequency	%
Yes	10	63%
No	6	38%
Total	16	100%

Have you taken any French course before starting your major?

■ Yes ■ No

38%

63%
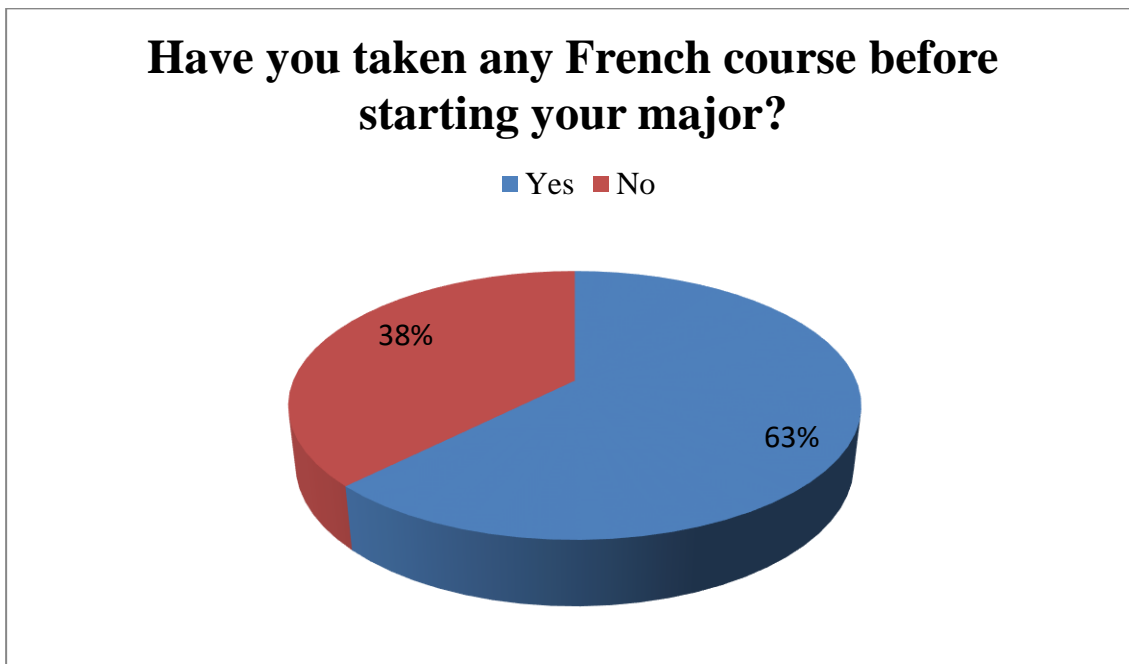
Interpretation:

When the sixteen participants of the experiment were asked the question "Have you taken any French course before starting your major?" ten or 62% said "yes" while six that is to say 38% answered "no" as shown in the graphic above.

Graphic question 2

Besides the University, are you taking another French course in any other institution?

Choices	Frequency	%
No	13	81.25%
Yes	3	8.75%
Total	16	100%

Besides the University, are you taking another French course in any other institution?
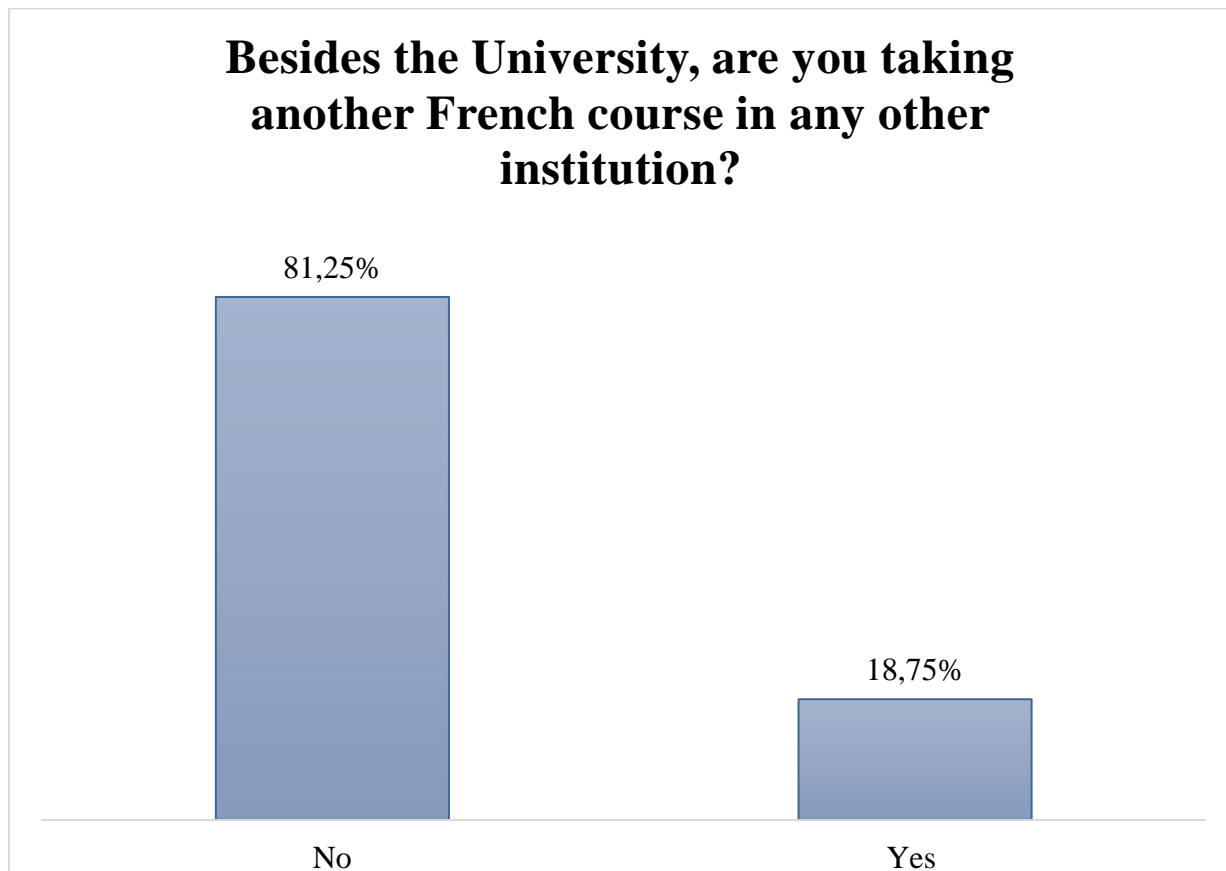
Interpretation:

As it can be seen in this graphic, the majority of the students who participated in this survey (thirteen students; 81.25% of the sample) stated that they are not taking other French course in any other institution, while the 18.75% of the sample (three students) stated that they are taking another French course in other institution.

Graphic question 3

Do you have a computer with internet connection?

Choices	Frequency	%
Yes	10	62.50%
No	5	31.25%
No answer	1	6.25%
Total	16	100%

Do you have a computer with internet connection?

62,50%

31,25%

6,25%

Yes   No   No Answer
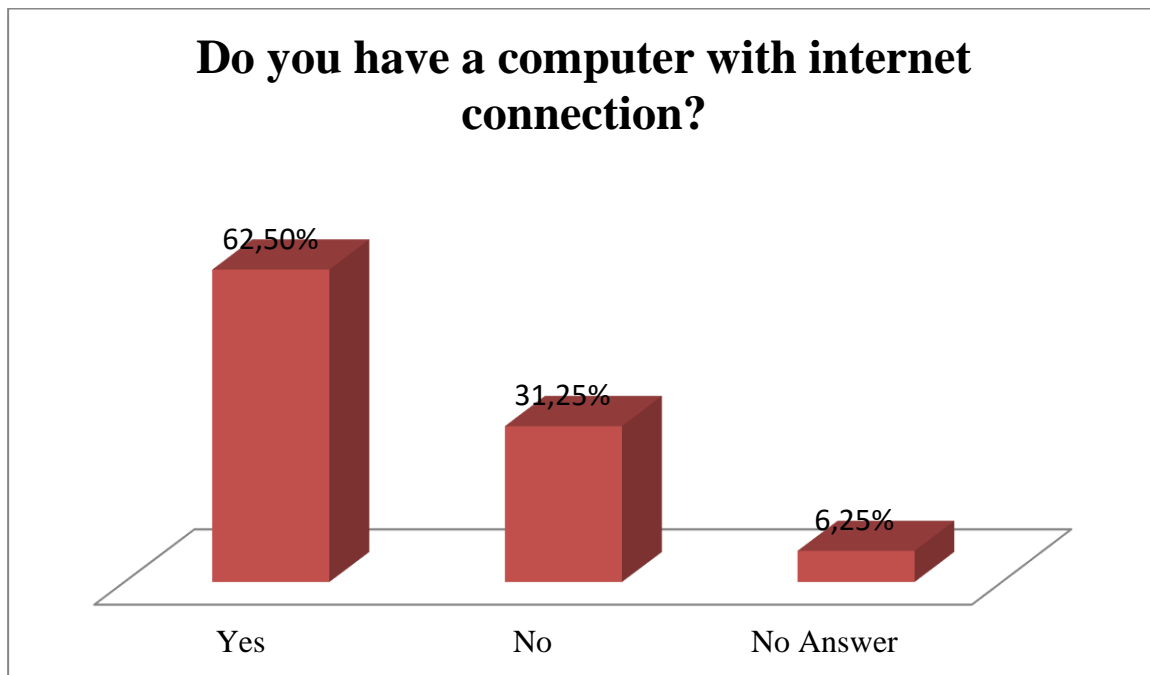
Interpretation:

It was found that 62.50% (ten students) of the people said that they have a computer with internet connection. While the 31.25% (five students) answered "no" and the 6.25% (one student) did not answered the question.

Graphic question 4

Do you have a smartphone?

Choices	Frequency	%
Yes	13	81%
No	3	19%
Total	16	100%
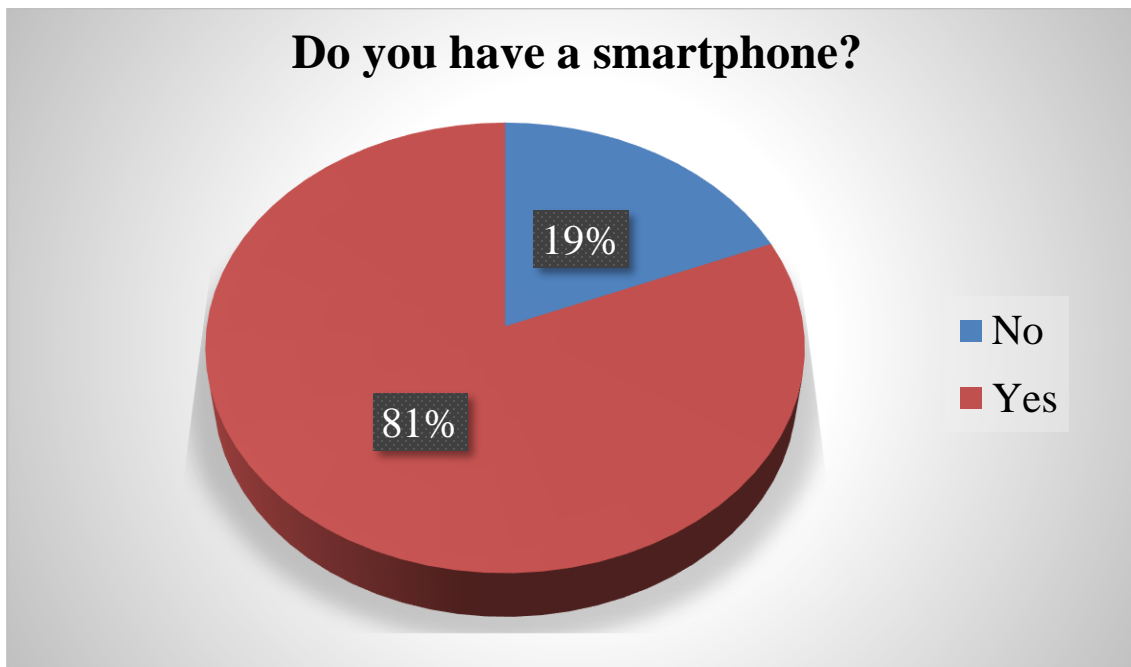
Interpretation:

Regarding the question "Do you have a smartphone?" out of sixteen participants of the experiment, thirteen or 81% answered that they had one. In contrast, three of the volunteers which mean 19% said that they did not have a smartphone.

Graphic question 5

Do you have language applications on your laptop?

Choices	Frequency	%
Yes	10	62.50%
No	3	18.75%
No answer	3	18.75%
Total	16	100%
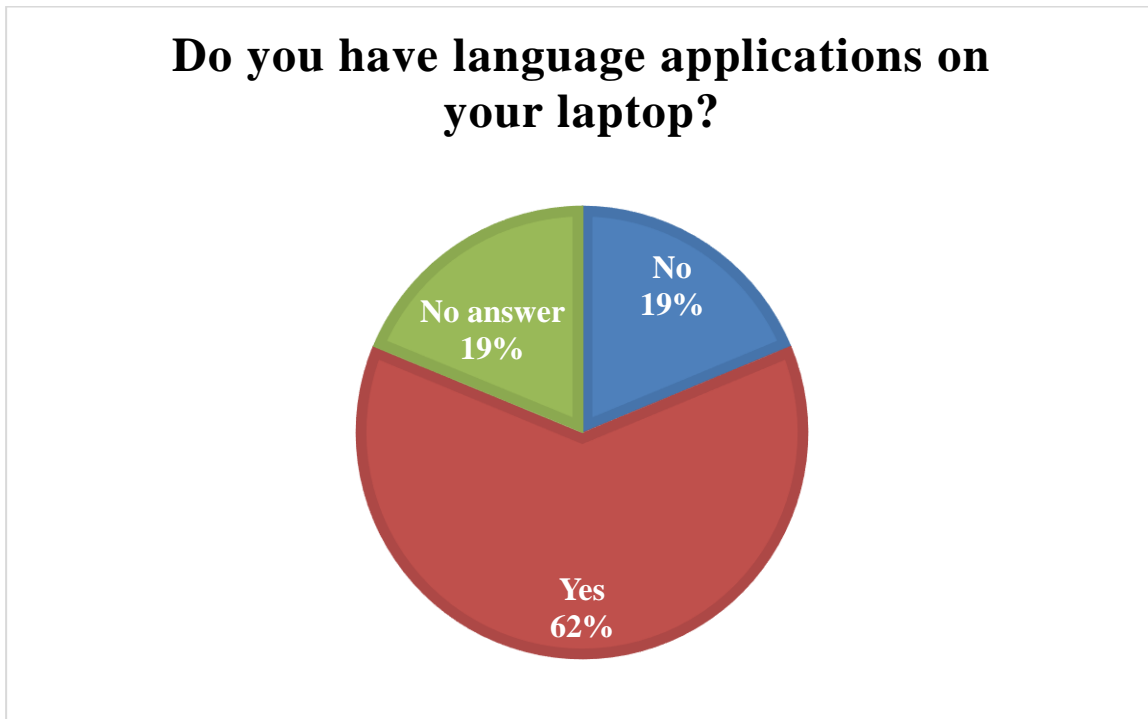
Interpretation:

This graphic demonstrates that, the majority of the students (ten participants; 62.50% of the sample) have applications on their computers, while the 18.75% of the sample (three students) stated that they do not have applications on their computers. The other 18.75% (three students) did not give an answer to the question.

Graphic question 6

What are the mobile applications for languages that you use or know?

Choices	Frequency	%
Duolingo	2	12.50%
Others	10	62.50%
No answer	4	25%
Total	16	100%

What are the mobile applications for languages that you use or know?

62,50%

25%

12,50%

Duolingo   Others   No Answer
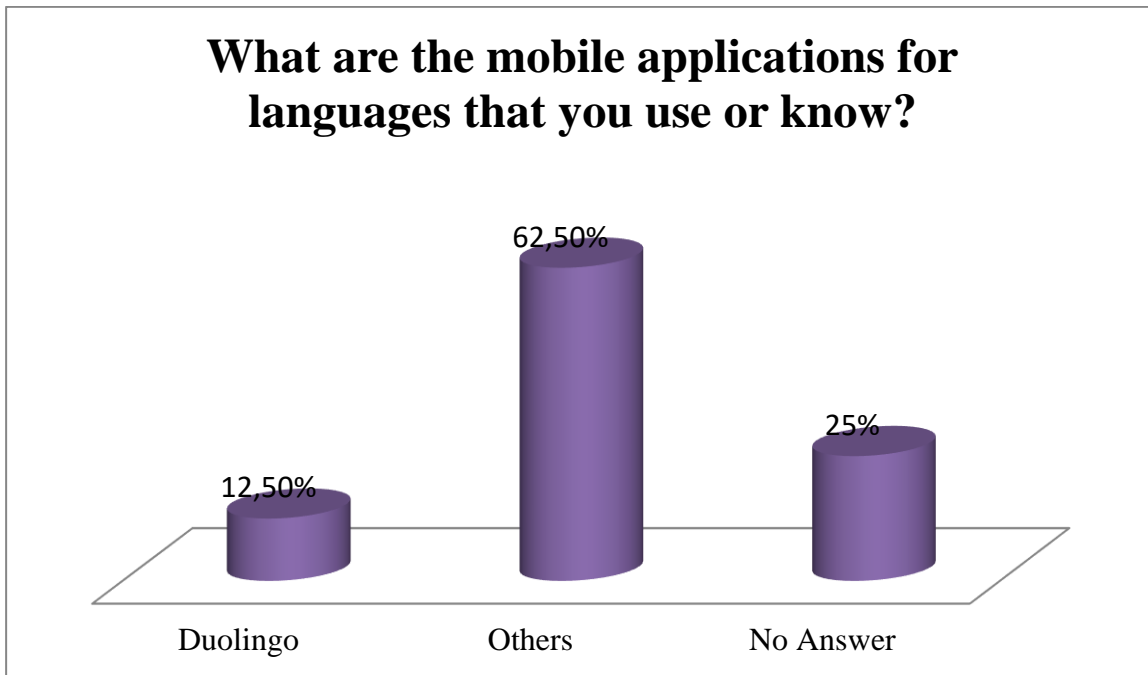
Interpretation:

According to the results, it was found that only 12.50% (two students) of the people use the Duolingo App, while the 62.50% (ten students) said that they use other applications such as Livio, Le Conjugeur, ABC Francés, Google Translator, Dictionary French-Spanish, Le Mot du jour, Mosalingua, Le Bon Mot, and the 25% (four students) did not have an answer for this question.

Graphic question 7

If you have language applications on the mobile phone, what skills do you practice there?

Choices	Frequency	%
Oral Comprehension	1	6%
Written Comprehension	10	63%
Oral Expression	1	6%
Written Expression	1	6%
No answer	3	19%
Total	16	100%
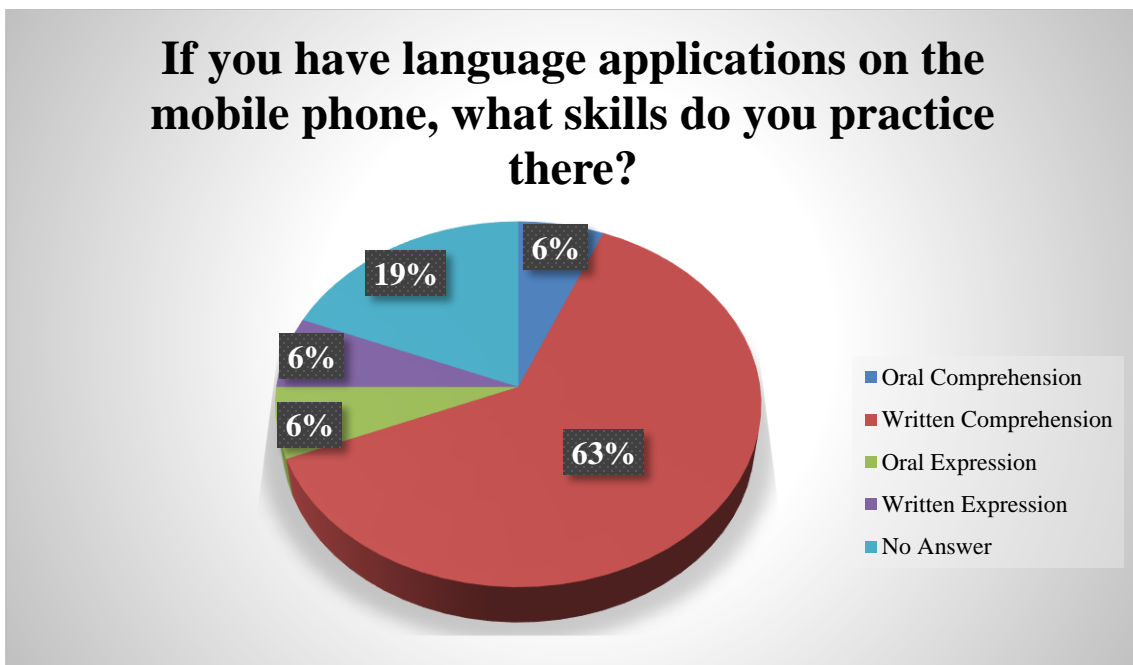
Interpretation:

Regarding the question "If you have language applications on the mobile phone, what skills do you practice there?", one out of sixteen volunteers of the experiment, that is to say 6%, claimed to practice the Oral Comprehension. Besides, ten of the participants, which means 63%, pointed out that they practice their Written Comprehension. Moreover, one of the volunteers, 6%, said that they practice the Oral Expression. Furthermore, one of the volunteers, 6%, affirmed that they practice the Written Expression. Finally, three of the participants, 19%, preferred not to answer that question.

Graphic question 7

What do you think about the use of educational applications to improve your French skills?

Choices	Frequency	%
It is good	2	14%
It is very enriching	12	75%
No answer	2	13%
Total	16	100%

What do you think about the use of educational applications to improve your french skills?

■ It is good   ■ It is very enriching   ■ No answer

13%   14%

75%
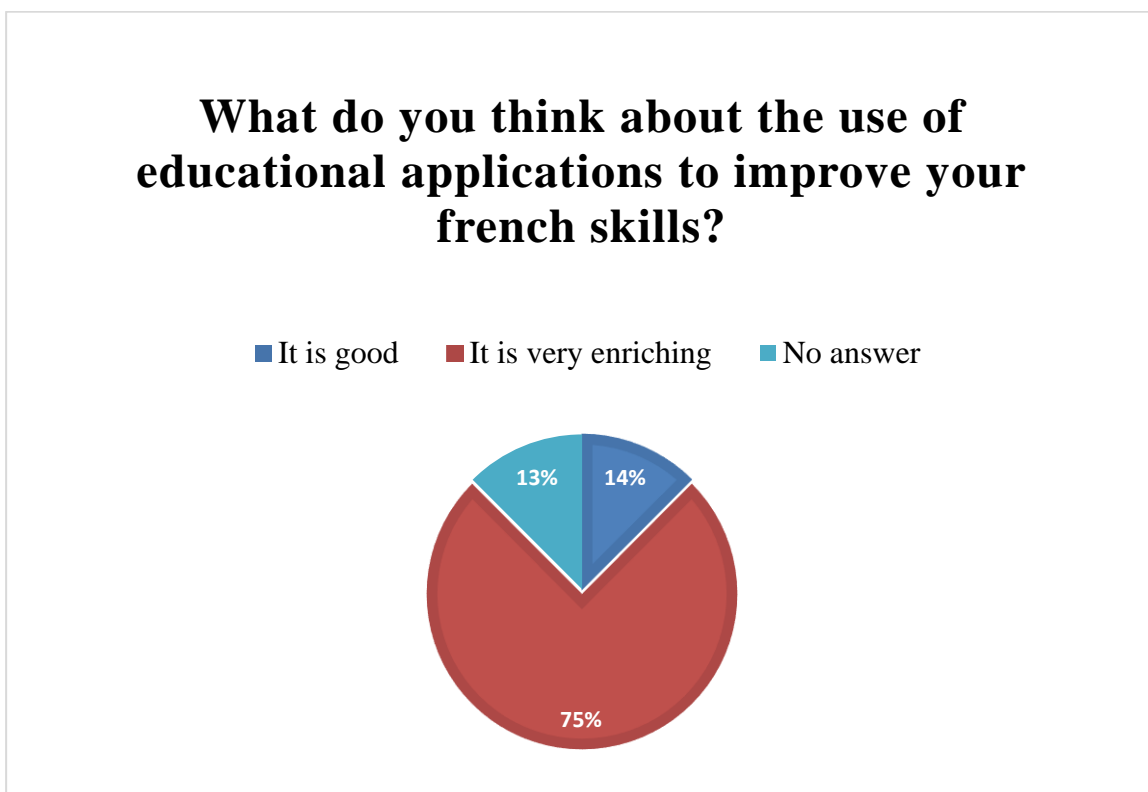
Interpretation:

As shown in this graphic, students were asked their opinion about the use of educational applications to improve their French skills. They were given the following possibilities: it is good, it is very enriching for learning, it is bad, and I do not care about that. The majority of them (twelve participants; 75% of the sample) were able to choose the option "it is very enriching", while the 14% of the sample (two students) choose the option "it is good". The other 13% of the sample (two students) did not provide an answer.

Graphic question 8

What mobile applications would you suggest for practicing French?

Choices	Frequency	%
Duolingo	1	6.25%
Others	7	43.75%
No answer	8	50%
Total	16	100%

What mobile applications would you suggest for practicing French?

50%

43,75%

6,25%

Duolingo   Others   No Answer
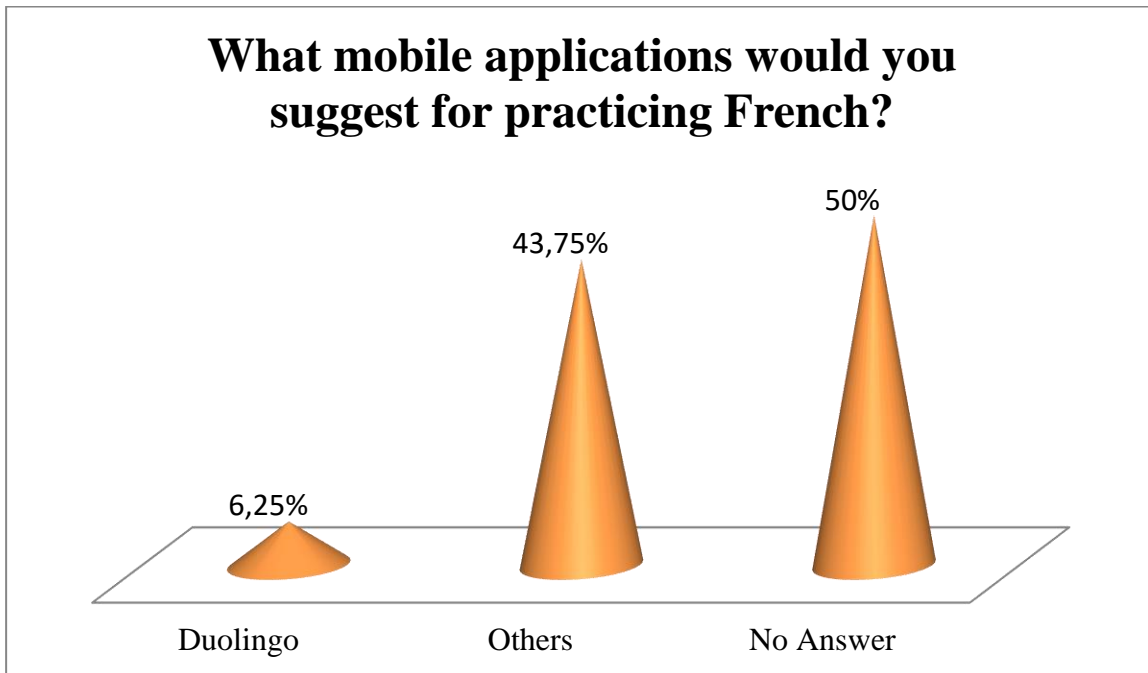
Interpretation:

In the following question, when the students were asked about what mobile applications they would suggest for practicing French the 6.25% (one student) answered that the Duolingo App, while 43.75% (seven students) said other applications such as The Livio Dictionary, YouTube, Le Bon Mot Français, and the 50% (eight students) did not have a recommendation to answer this question.

4.2 DATA ANALYSIS OF PROFICIENCY TEST 1 AND TEST 2

Table 1

Group A Student's name	Grammar 1	40 %	Grammar 2	40 %	Vocabulary 1	30 %	Vocabulary 2	30 %	Listening 1	30 %	Listening 2	30 %	Average 1	Average 2
Blandón Hernández Clara Estrella	3	1.2	3.3	1.32	2.1	0.63	4	1.2	6.3	1.89	6	1.8	**3.72**	**4.32**
Hernández López Roxana Carolina	5.6	2.24	7.5	3	1.7	0.51	5.1	1.53	6.9	2.07	9.5	2.85	**4.82**	**7.38**
Mendoza Gabriela Lourdes	3.9	1.56	6.2	2.48	2.6	0.78	6.3	1.89	6.7	2.01	8.5	2.55	**4.35**	**6.92**
Oliva Santos Lorena Esmeralda	6.5	2.6	6.8	2.72	2.6	0.78	3.9	1.17	5.9	1.77	5.8	1.74	**5.15**	**5.63**
Rodríguez Emerson	5.6	2.24	7	2.8	3.6	1.08	7.8	2.34	7.3	2.19	7.5	2.25	**5.51**	**7.39**
Silva Candray Raquel Saraí	6.8	2.72	7.6	3.04	4.2	1.26	6.7	2.01	8.9	2.67	8.5	2.55	**6.65**	**7.6**
Trejo Luz	8	3.2	8.4	3.36	5.3	1.59	5	1.5	8.7	2.61	8.5	2.55	**7.4**	**7.41**

In this table, it is presented the grades obtained from the administration of the first and second test of the students who practiced with the Duolingo App named as group A. As shown in this table, the researchers realize that four of seven students clearly improved their French skills in Grammar, Vocabulary and Listening, while the other three do not have a significant change. The mean obtained from the first test is 5.37, while the mean obtained from the second test is 6.67.

Table 2

Group B Student's name	Grammar 1	40%	Grammar 2	40%	Vocabulary 1	30%	Vocabulary 2	30%	Listening 1	30%	Listening 2	30%	Average 1	Average 2
Córdova Quintana Oscar Gerardo	2.6	1.04	5.2	2.08	3.4	1.02	4.4	1.32	5.3	1.59	5.5	1.65	**3.65**	**5.05**
Flamenco Hernández Melissa Valeria	3.3	1.32	6.1	2.44	3.4	1.02	5.5	1.65	6.5	1.95	7.3	2.19	**4.29**	**6.28**
Jimenez Rivera Denis Gerson	8.1	3.24	7.8	3.12	5.1	1.53	7.2	2.16	5.3	1.59	8	2.4	**6.36**	**7.68**
Ramírez Hernández Cesiah Damaris	3.6	1.44	5.2	2.08	1.3	0.39	0.58	0.174	2.9	0.87	6.8	2.04	**2.7**	**4.29**
Ramírez Lemus Heidy Arely	3.2	1.28	5.9	2.36	1.7	0.51	4.2	1.26	4.4	1.32	7.5	2.25	**3.11**	**5.87**
Rosales Aguilar Katherine Gabriela	4.1	1.64	5.9	2.36	4.1	1.23	3.9	1.17	6.8	2.04	7.5	2.25	**4.91**	**5.78**
Rosales Ortiz Jenniffer Vanessa	5	2	6.8	2.72	2.6	0.78	3.8	1.14	5	1.5	7.1	2.13	**4.28**	**5.99**
Vargas Solis Ofelia Nohemy	3.7	1.48	4.5	1.8	0.7	0.21	2.5	0.75	5.3	1.59	5.5	1.65	**3.28**	**4.2**
Villegas Campos Dayana Jazmín	2.9	1.16	2.3	0.92	1	0.3	3.3	0.99	5.9	1.77	5.4	1.62	**3.23**	**3.53**

In this table, it is presented the grades obtained from the administration of the test for the ones who did not practice with the Duolingo App named as group B. As shown in this table, even though the students do not have a good grade, they have increased their performance. The researchers notice that six of nine students clearly improved their French skills in Grammar, Vocabulary and Listening, while the other three do not have a significant change. The mean obtained from the first test is 3.97, while the mean obtained from the second test is 5.4

Table 3

Difference in performance between test 1 and test 2, GROUP A			
Mean Test 1	Difference in performance in points	1.3	Percentage change
5.37		0.242085661	GROUP A IMPROVED THEIR PERFORMANCE IN 24.21%
		24.20856611	
Mean Test 2			
6.67			
Difference in performance between test 1 and test 2, GROUP B			
Mean Test 1	Difference in performance in points	1.44	Percentage change
3.97		0.362720403	GROUP B IMPROVED THEIR PERFORMANCE IN 36.27%
		36.2720403	
Mean Test 2			
5.41			

In the previous table, the researchers show the difference in performance between the first and the second tests of group A, where the mean in test 1 is 5.37 and the mean in test 2 is 6.67, that is to say that the difference in performance is 1.3 and divided by the mean test 1 is 0.24 multiplied by 100 gives the percentage change of 24.21%

Then, they show the difference in performance between the first and the second tests of group B, where the mean in test 1 is 3.97 and the mean in test 2 is 5.41, that is to say that the difference in performance is 1.44 and divided by the mean test 1 is 0.36 multiplied by 100 gives the percentage change of 36.27%. In conclusion, both groups improved their performance.

Table 4

Difference in performance between group A and B in test 1 and in test 2			
Mean Test 1	Difference between group A and B, test 1	Decrease of difference in performance	Percentage change of the difference in performance between group A and B
Group A		0.14	DISCREPANCY IN PERFORMANCE BETWEEN GROUP B AND A DECREASED IN 10%
5.37		0.1	
	1.4	10	
	0.352644836	10.00%	
Group B	35.26448363		
3.97	Group A surpasses Group B in 35.26%		
Mean Test 2	Difference between group A and B, test 2		
Group A			
6.67			
	1.26		
	0.232902033		
Group B	23.29020333		
5.41	Group A surpasses Group B in 23.29%		

In this table, the researchers show the difference in performance between group A and B in test 1 and test 2. Where the mean in the first test of group A is 5.37 and of group B is 3.97 which makes the difference between group A and B of 1.4 divided by the lower grade which is 3.97 makes the 0.3526 multiplied by 100 gives the 35.26%, so group A surpasses group B in 35.26%.

Then, the mean in the second test of group A is 6.67 and of group B is 5.41 which makes the difference between group A and B of 1.26 divided by the lower grade which is 5.41 makes the 0.2329 multiplied by 100 gives the 23.29%, so group A surpasses group B in 23.29%.

Finally, the difference in performance between group A and B in the first test (1.4) minus the difference in performance between both groups in test 2 (1.26) is 0.14 divided by 1.4 is 0.1 and multiplied by 100 gives 10, which means that the discrepancy in performance between group A and B decreased in 10%.

Table 5

				Analysis skill by skill, GROUP A			
	Test 1	Mean=	5.63				
Grammar				Difference in points between test 1 and test 2 =	1.06	Percentage change = Increase in performance --- 18.83%	2nd place
	Test 2	Mean =	6.69		0.18827709		
					18.8277087		
	Test 1	Mean =	3.1				
Vocabulary				Difference in points between test 1 and test 2 =	2.44	Percentage change = Increase in performance --- 78.71%	1st place
	Test 2	Mean =	5.54		0.78709677		
					78.7096774		
	Test 1	Mean =	7.24				
Listening				Difference in points between test 1 and test 2 =	0.51	Percentage change = Increase in performance --- 7.04%	3rd place
	Test 2	Mean =	7.75		0.07044199		
					7.0441989		

In this table, the researchers analyze skill by skill which are Grammar, Vocabulary and Listening of group A. The mean in the first test of the Grammar skill is 5.63 and the mean in the second test is 6.69, which makes a difference in points between the test 1 and test 2 of 1.06 divided by the first result which is 5.63 makes the 0.1882 multiplied by 100% which represents an increment in performance of 18.83%.

Next, the mean in the first test of the Vocabulary skill is 3.1 and the mean in the second test is 5.54, which makes a difference in points between the test 1 and test 2 of 2.44 divided by the first result which is 3.1 makes the 0.78709 multiplied by 100% which represents an increment in performance of 78.71%.

Then, the mean in the first test of the Listening skill is 7.24 and the mean in the second test is 7.75, which makes a difference in points between the test 1 and test 2 of 0.51 divided by the first result which is 0.0704 makes the 7.0441 multiplied by 100% which represents an increment in performance of 7.04%.

In conclusion, students in group A increased their performance in all the evaluated skills; however, the most affected one is Vocabulary in the first place, Grammar in the second place and Listening in the third place.

Table 6

				Analysis skill by skill, GROUP B			
	Test 1	Mean =	4.06				
Grammar				Difference in points between test 1 and test 2 =	1.46	Percentage change = Increase in performance --- 35.96%	2nd place
	Test 2	Mean =	5.52		0.35960591		
					35.9605911		
	Test 1	Mean =	2.58				
Vocabulary				Difference in points between test 1 and test 2 =	1.35	Percentage change = Increase in performance --- 52.33%	1st place
	Test 2	Mean =	3.93		0.52325581		
					52.3255814		
	Test 1	Mean =	5.26				
Listening				Difference in points between test 1 and test 2 =	1.47	Percentage change = Increase in performance --- 27.95%	3rd place
	Test 2	Mean=	6.73		0.27946768		
					27.9467681		

In this table, it is demonstrated how students from group B improved their French skills in Grammar, Vocabulary and Listening. The mean got from the first Grammar test is 4.06, while in the second Grammar test increased to 5.52. It can be clearly noticed that the difference in points is 1.46. In other words, they improved their Grammar in 35.96%. Moreover, it can be identify that the mean got from the first Vocabulary test is 2.58, while in the second Vocabulary test is 3.93, that is to say, the difference in points between the first and second Vocabulary tests is 1.35 which represents 52.33%. This table also shows that, the mean got from the first Listening test is 5.26, while in the second Listening test is 6.73 which represents a difference in performance of 1.47 points, that is to say, there is an increment of 27.95%. According to this table, researchers infer that the most affected skill of group B is Vocabulary, then Grammar and last one Listening.

Table 7

Analysis skill by skill, between GROUP A and B, TEST 1							
	Group A	Mean =	5.63				
Grammar				Difference in points between group A and B =	1.57	Percentage change = Group A surpasses Group B in 38.67%
	Group B	Mean =	4.06		0.38669951	
					38.6699507	
	Group A	Mean =	3.1			
Vocabulary				Difference in points between group A and B =	0.52	Percentage change = Group A surpasses Group B in 20.16%
	Group B	Mean =	2.58		0.20155039	
					20.1550388	
	Group A	Mean =	7.24			
Listening				Difference in points between group A and B =	1.98	Percentage change = Group A surpasses Group B in 27.35%
	Group B	Mean =	5.26		0.27348066	
					27.3480663	

In this table it is drawn a comparison skill by skill between group A and B in test one. Firstly, it is noticed that the mean got from the Grammar test of group A is 5.63, while the mean got from group B is 4.06, which demonstrates a difference of 1.57 points. Therefore, researchers can infer that group A outperforms group B in 38.67%. It is also appreciated that the mean taken from the Vocabulary test of group A is 3.1, while the mean taken from group B is 2.58 that represents a difference in points of 0.52. Thus, group A surpasses group B in 20.16%. Besides, the mean got in the Listening test of group A is 7.24, while the mean got from group B is 5.26, which evidently shows a difference of 1.98 points. That is to say, group A surpasses group B in 27.35%. In conclusion, Grammar is the skill where group A surpasses group B in a higher scale, then we have Listening and last Vocabulary.

Table 8

Analysis skill by skill, between GROUP A and B, TEST 2						
	Group A	Mean =	6.69			
Grammar				Difference in points between group A and B =	1.17	Percentage change = Group A surpasses Group B in 21.20%
	Group B	Mean =	5.52		0.21195652	
					21.1956522	
	Group A	Mean =	5.54			
Vocabulary				Difference in points between group A and B =	1.61	Percentage change = Group A surpasses Group B in 29.06%
	Group B	Mean =	3.93		0.29061372	
					29.0613718	
	Group A	Mean =	7.75			
Listening				Difference in points between group A and B =	1.02	Percentage change = Group A surpasses Group B in 13.16%
	Group B	Mean =	6.73		0.1316129	
					13.1612903	

In this table it is drawn a comparison skill by skill between group A and B in test two. First, it is noticed that the mean got from the Grammar test of group A is 6.69, while the mean got from group B is 5.52, which demonstrates a difference of 1.17 points. Therefore, researchers can infer that group A outperforms group B in 21.20%. It is also appreciated that the mean taken from the Vocabulary test of group A is 5.54, while the mean taken from group B is 3.39 that represents a difference in points of 1.61. Thus, group A surpasses group B in 29.06%. Besides, the mean got in the Listening test of group A is 7.75, while the mean got from group B is 6.73, which evidently shows a difference of 1.02 points. That is to say, group A surpasses group B in 13.16%. In conclusion, Vocabulary is the skill where group A surpasses group B in a higher scale, then we have Grammar and last Listening.

Table 9

Final percentage change, skill by skill, between Group A and B							
	Test 1	Difference in points between Group A and B, TEST 1	1.57				
Grammar				Final discrepancy in points between Group A and B =	0.4	Percentage change = Discrepancy between Group A and B decreased in 25.47%	3rd place
	Test 2	Difference in points between Group A and B, TEST 2	1.17		0.25477707		
					25.477707		
	Test 1	Difference in points between Group A and B, TEST 1	0.52				
Vocabulary				Final discrepancy in points between Group A and B =	1.09	Percentage change = Discrepancy between Group A and B increased in 209.62%	1st place
	Test 2	Difference in points between Group A and B, TEST 2	1.61		2.09615385		
					209.615385		
	Test 1	Difference in points between Group A and B, TEST 1	1.98				
Listening				Final discrepancy in points between Group A and B =	0.96	Percentage change = Discrepancy between Group A and B decreased in 48.48%	2nd place
	Test 2	Difference in points between Group A and B, TEST 2	1.02		0.48484848		
					48.4848485		

In the above table, researchers describe the following results of the final percentage change between group A and B, skill by skill:

Grammar: in the first test, the difference in points between group A and B is 1.57, while in the second test the difference is 1.17. That shows that group B improved their performance in the second test and reduced the discrepancy that they had with respect to group A in test 1. Those results can be translated into a final discrepancy decrement of 0.4 in points, and a 25.48%.

Vocabulary: in the first test, the difference in points between group A and B is 0.52, while in the second test the difference is 1.61. That indicates that group B reduced their performance in the second test and increased the discrepancy that they had with respect

to group A in test 1. Those results can be translated into a final discrepancy increment of 1.09 in points, and a 109.62%, which shows that group A triplicates their improvement in performance towards group B in test 2.

Listening: in the first test, the difference in points between group A and B is 1.98, while in the second test the difference is 1.02. That shows that group B improved their performance in the second test and reduced the discrepancy that they had with respect to group A in the first test. Those results can be represented into a final discrepancy reduction of 0.96 in points, and a 48.48%.

In conclusion, it can be seen that Vocabulary is the most affected skill, as it got a significant change in the discrepancy that both groups present towards each other in the first and the second tests, while Listening has the second place, and Grammar the third and last one.

4.3 DATA ANALYSIS OF THE SURVEY ABOUT MOTIVATION

Range of age of the students from Intensive French II who took the survey about motivation

| Age	Frequency	%
17-20	4	57%
26-30	2	28.57%
No answer	1	15%
Total	7	100%
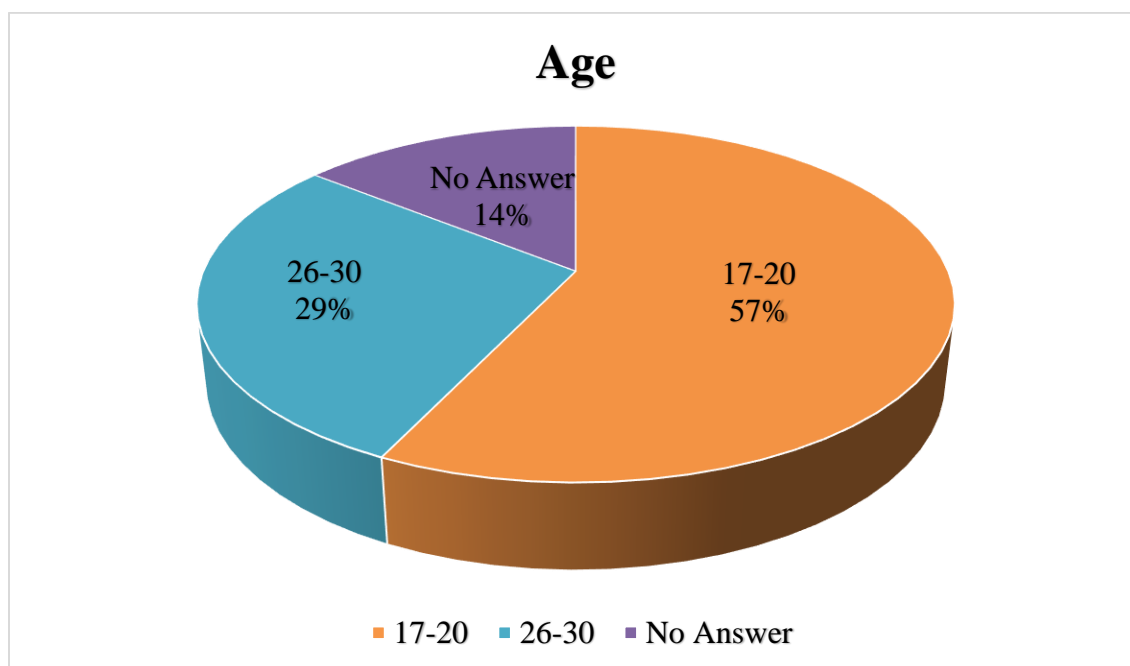
Interpretation:

Regarding the age of the participants that used the Duolingo App, four out of seven, that means 57%, are within the ages 17-20, while two, that is to say 28.57%, are within the ages 26-30. Finally, one of the students or 14% did not want to provide his age.

Gender in the second survey

Gender	Frequency	%
Female	6	81.71%
Male	1	14.29%
Total	16	100%

GENDER

85,71%
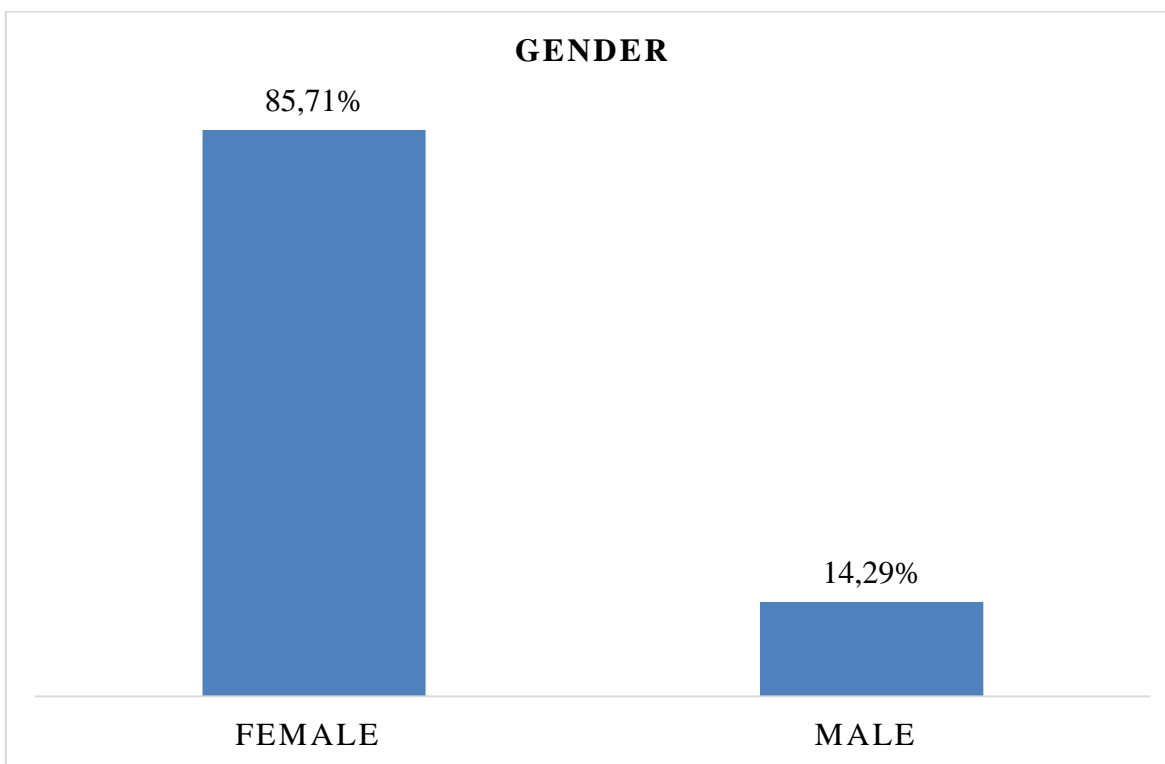
14,29%

FEMALE   MALE

Interpretation:

The participants in this survey are seven university students. The majority of them are female (six participants; 85.71% of the sample), whereas the percentage decreases considerably in the case of male participants: 14.29% of the sample, that is to say, one participant.

Graphic question 1

How did you feel when you begin using the Duolingo App?

Choice	Frequency	%
Comfortable	4	57%
Excited	3	43%
Total	**16**	100%

How did you feel when you begin using the Duolingo App?

■ Comfortable ■ Excited

43%

57%
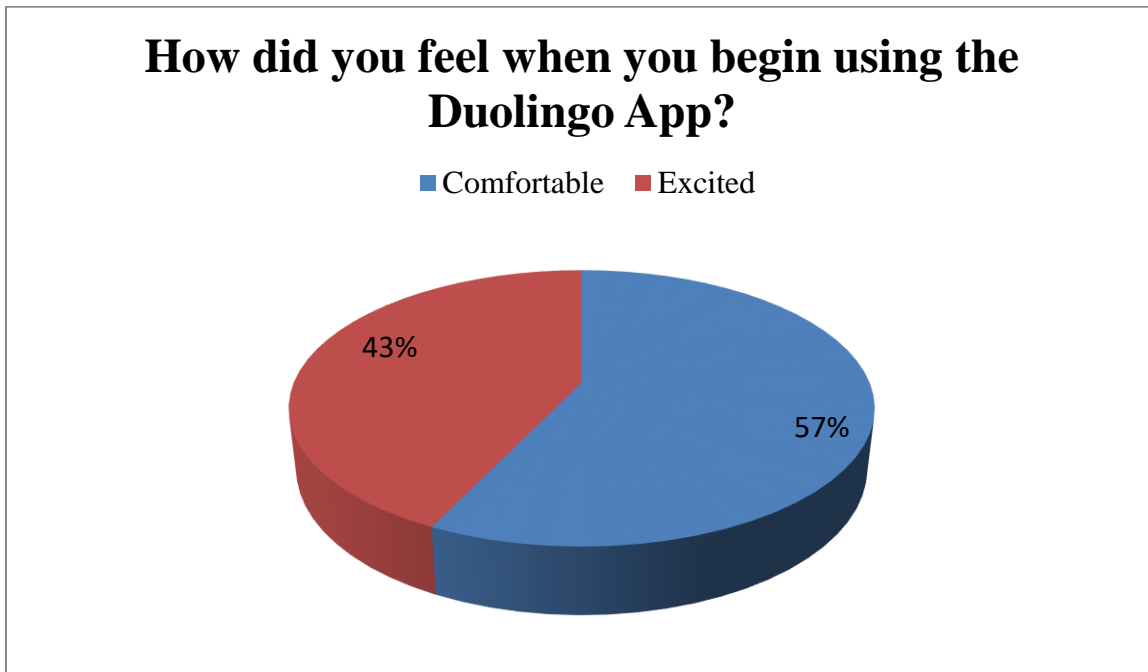
Interpretation:

According to the findings gotten, the 43% (three students) of the participants felt excited when they begin using the Duolingo App, while the 57% (four students) of the learners say that they felt comfortable.

Graphic question 2

What do you think about this application?

Choice	Frequency	%
Interesting	7	100%
Boring	0	0%
Total	7	100%

What do you think about this application?

■ Interesting   ■ Boring

0%

100%
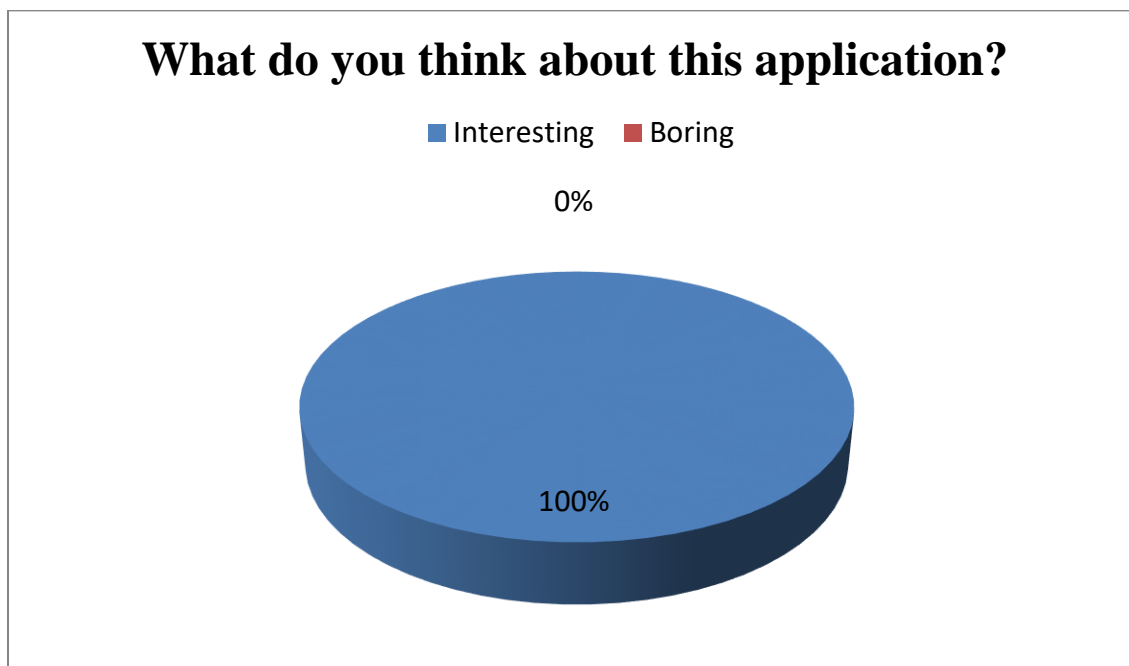
Interpretation:

When the seven participants that used the Duolingo App were asked the question "What do you think about this application?", as shown in the graphic above, 100% of the seven volunteers answered that they found it interesting.

Graphic question 3

Do you consider that this application helped you to become a better student?

Choice	Frequency	%
Yes	7	100%
No	0	0%
Total	**7**	**100%**

Do you consider that this application helped you to become a better student?

yes ■ no

100%   0%   0%
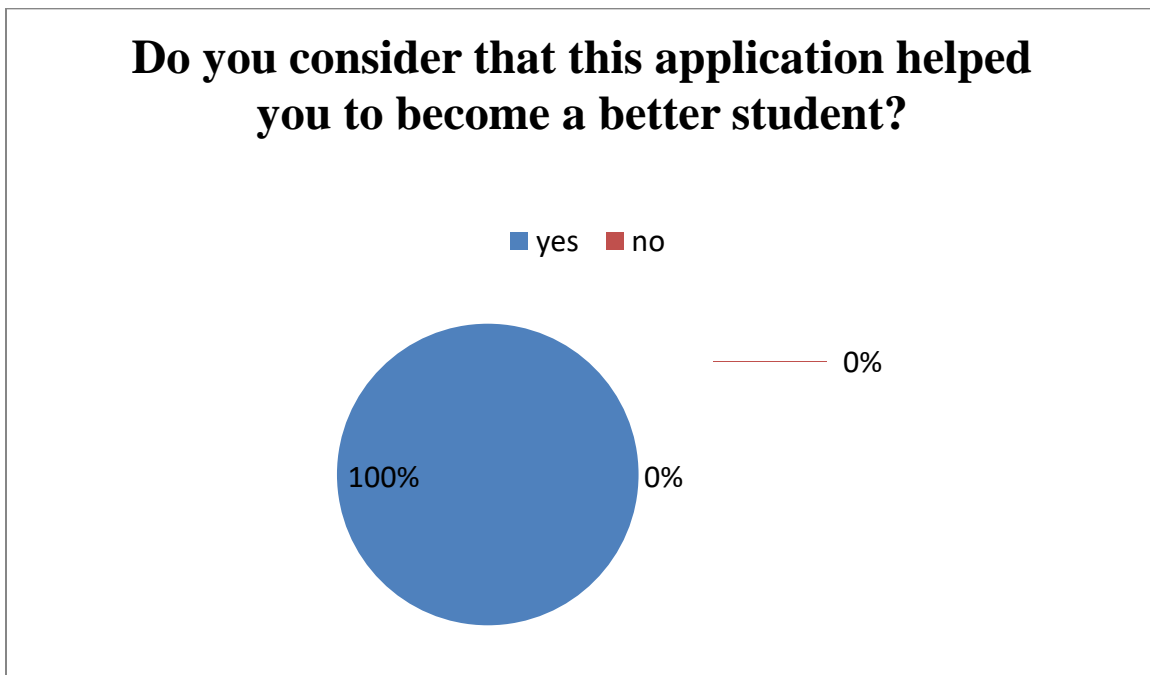
Interpretation:

This graphic shows that, the seven students who took this survey chose the option "yes". In other words, all of the students, 100%, agreed that this application, Duolingo, helped them to become better students.

Graphic question 4

In comparison among the application and the French course, which is the most meaningful for you?

Choice	Frequency	%
The Duolingo App	0	0%
The French Class	7	100%
Total	7	100%

In comparison among the application and the French course, which is the most meaningful for you?

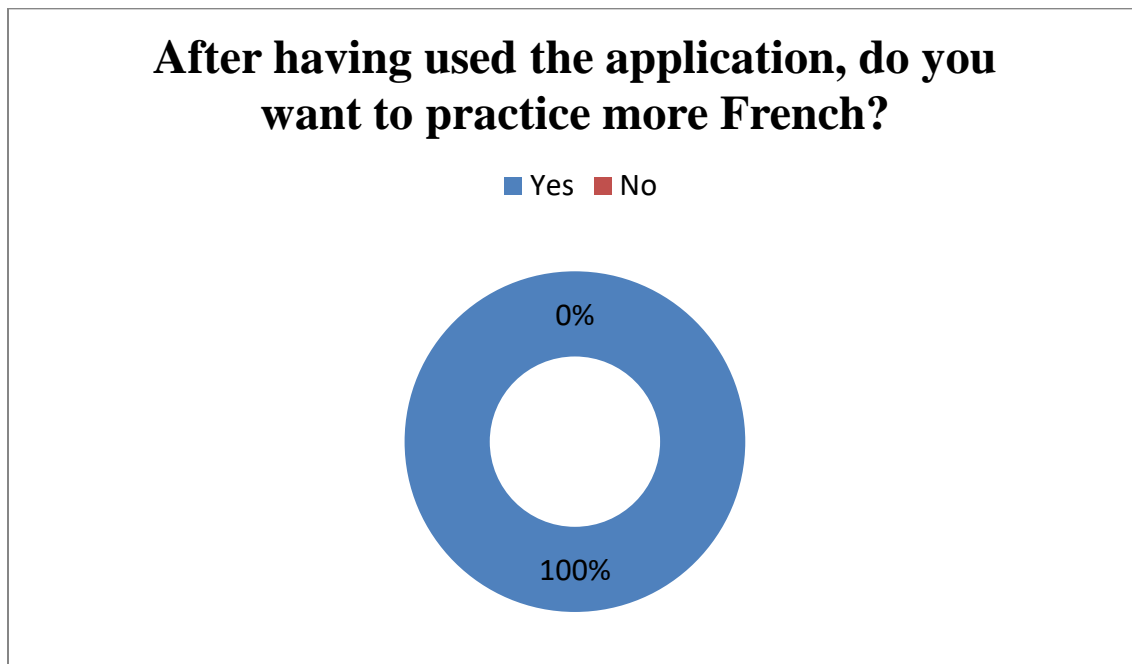■ The Duolingo App   ■ The French Class

0%

100%
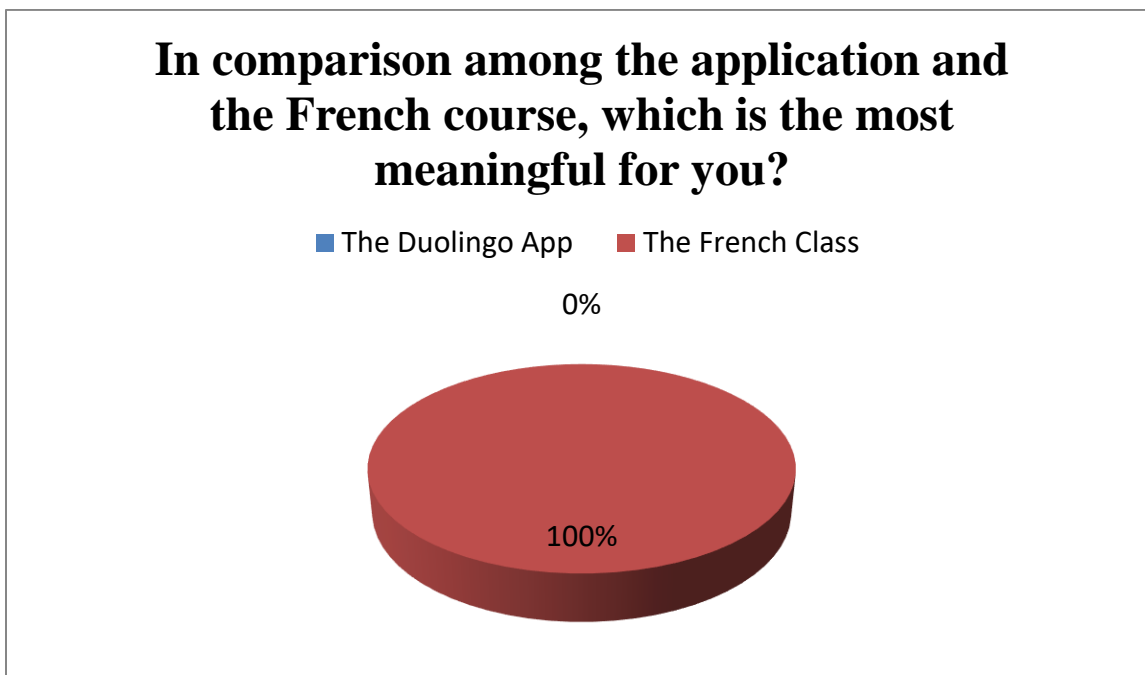
Interpretation:

The results found in the study show that in comparison among the application and the French course, as all the participants the 100% (seven students) agree that the most meaningful for them was the French class.

Graphic question 5

After having use the application, do you want to practice more French?

Choice	Frequency	%
Yes	7	100%
No	0	0%
Total	7	100%

After having used the application, do you want to practice more French?

■ Yes ■ No

0%

100%

Interpretation:

When the participants that used the Duolingo App were asked the question "After having used the application, do you want to practice more French?" Seven out of seven volunteers, which means the 100%, agree when saying that they want to practice more French.

Graphic question 6

Would you like to continue using the Duolingo App?

Choice	Frequency	%
Yes	7	100%
No	0	0%
Total	**7**	100%

Would you like to continue using the Duolingo App?
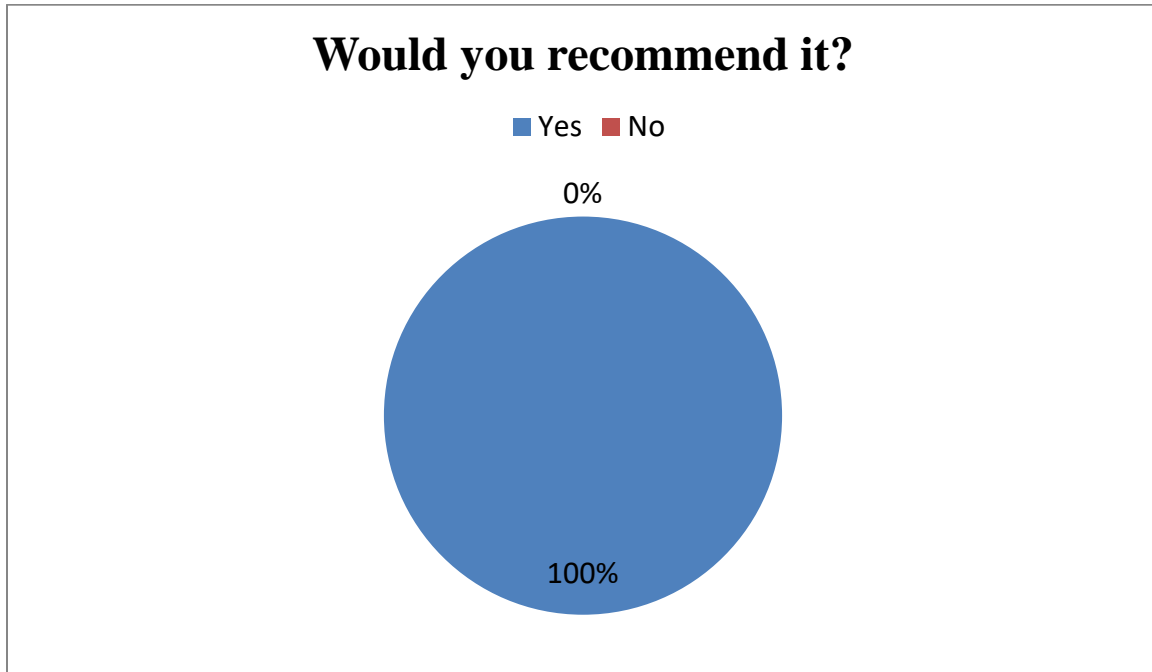
■ Yes ■ No

0%

100%
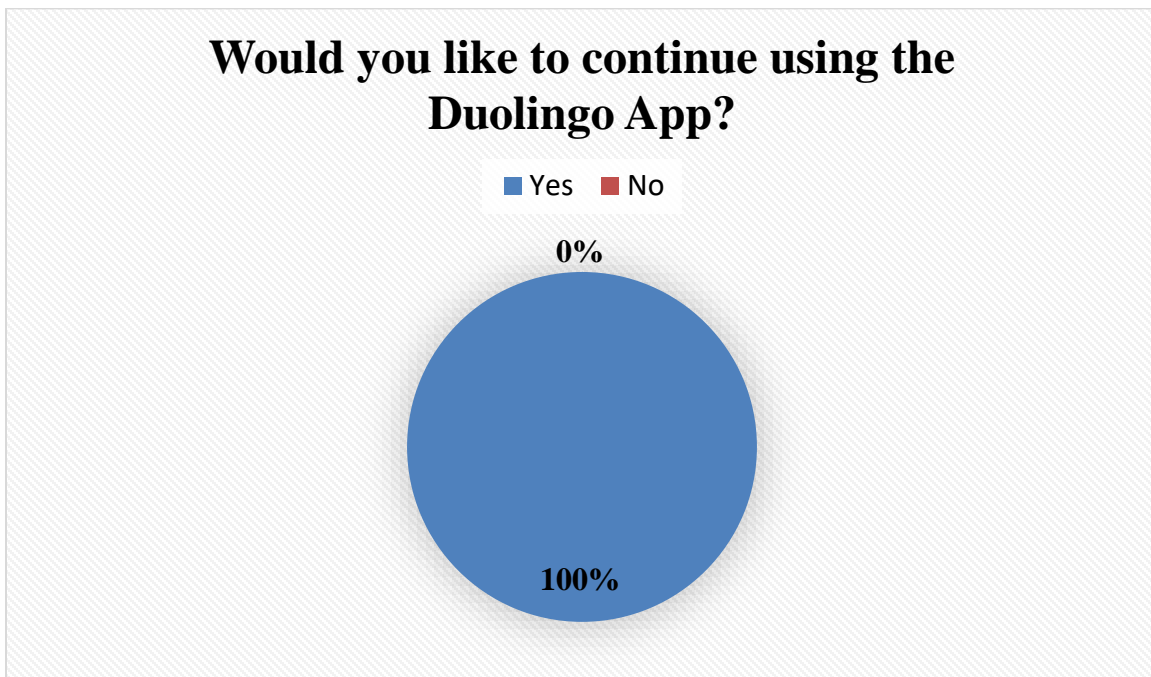
Interpretation:

In this graphic, it is demonstrated that seven students choose the option "yes". That is to say, the 100% of the sample agree to continue using the Duolingo App.

Graphic question 7

Would you recommend it?

Choice	Frequency	%
Yes	7	100%
No	0	0%
Total	7	100%

Would you recommend it?

■ Yes ■ No

0%

100%

Interpretation:

      The answers for the question "Would you recommend the use of the Duolingo App?" showed that the 100% (seven students) of the students would recommend the use of the Duolingo App.

CHAPTER V: CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

Based on the data analysis, researchers make the following highlights of the results:

- In contrast with what they had supposed, most of the students had previous knowledge as they had taken a French course before the university and some even continued studying the language in other institutions at the moment that the experiment was being carried out.

- Researchers discovered through the first survey that almost the entire sample had a computer or a smartphone with internet connection to make use of the Duolingo App which facilitated to carry out the experiment.

- Based on the students' answers, researchers have found that mobile language applications are taking a relevant place in the teaching and learning field since most of them expressed to use some applications such as Duolingo, Livio, Le Conjugeur, ABC Francés, Google Translator, Dictionary French-Spanish, Le Mot du jour, Mosalingua, Le Bon Mot, and find them enriching to their improvement of the French skills. Besides, more than a half of the sample claimed to practice the Written Comprehension skill.

- Regarding the results of the proficiency test administered at the beginning and at the end of the experimental phase, researchers determine that both groups A and B improved their French performance level which leads them to suppose that there were also other factors involved. However, it can be noticed that group A, the ones who used the Duolingo App, were the students that always got the best grades.

- Investigators remark that the participants who had the best grades in the first test, had the least improvement in the second one, despite being always the ones with the highest scores. In contrast, the students who got the lowest grades in the first test had the biggest improvement in the second one. As a result, the discrepancy between group A and B got

reduced in 10%. It is also important to mention that the skill that was the most affected positively in both groups was Vocabulary followed by Grammar and last but not least Listening.

- At the end of the experiment, all of the students agreed that the Duolingo App was interesting; they felt comfortable and excited as well. They considered that they had become better students because they wanted to practice more French and they were willing to continue using the application as well as recommend it. However, they admitted that the French class was more meaningful to learn the language than the app.

5.2 RECOMMENDATIONS

To the future researchers:

- If they want to continue testing applications, it is recommended to carry out the experiment with students of the first year registered in semester one that have zero knowledge and have not taken any course before, so in this way the impact of the use of the application would be more noticeable.

- To make sure that the proficiency tests are related to the content provided by the applications to be investigated.

To the school of arts and sciences authorities:

- To create a committee to support with supplies and allowance the under graduated students who carry out experiments that involve the participation of volunteers so that they can keep motivated and continue helping with the researches.

To the foreign language department authorities:

- To provide students with free internet access to facilitate their learning process and encourage them become independent learners.

- To train teachers regarding the use of mobile applications available for educational purposes.

To the teachers:

- To let know the students that there are mobile language learning apps that can help them practice and improve, as well as implement the use of them to motivate the students in the classroom.

To the students:

- To take advantage of the lots of mobile language learning applications that exist as a resource to learn a new language so in this way they can reach a higher performance level.

5.3 LIMITATIONS

During this process there were some limitations that the researchers had:

1. **Economical:**
    a) **Lack of resources:**
    -   To motivate students to participate and keep working all along the experiment.

    -   Moreover, there was a lack of external support, even if the researchers were looking for it.

    b) **Lack of money:**
    -   To carry out the thesis as it involved a great expense, such as photocopies, prints.

    -   The researchers had to save some money even though sometimes it was hard to get enough of it. At the end of the experimental stage, the researchers had to give a reward to the participants as a sign of gratitude.

2. **Time:**
    -   Some of the researchers had inconvenient in meeting everyday because they live far away.

    -   Two of the researchers had to deal with the traffic and protests when they were traveling to meet.

    -   Moreover, two of the researchers had work commitments aside from the research project.

3. **Lack of enough previous investigations of this kind of topic:**
    -   So that researchers could have had a better idea on how to address the subject.

4. **The measurement instrument:**
   - Items in the Vocabulary exam may not be related to the words used in the application tested, so students' improvement might not be noticed.

5. **Framework to carry out the experiment:**
   - Researchers' main idea was to execute the experiment during three months but due some obstacles it was reduced to two months, which might not be enough time to actually see an improvement in the student's performance.

   - In the last part of the experiment, it was not possible for researchers to administer the second proficiency tests in the fixed time because students in that moment were taking examinations. So researchers had to wait for one more week which did not allow continuing working in the next chapter of the thesis paper.

6. **The sample:**
   - It was very complicated to get participants due to the lack of willingness of the students asked to engage in the experiment. At first, the researchers decided to experiment with two groups from different schedule but at the end they only chose one group as they saw more enthusiasm and collaboration from them, which is why the sample size was reduced.

   - Moreover, when administering the first proficiency tests, researchers faced student's negative attitude since some of them did not want to take the exams and a few of them even left the class.

   - With the ones who did want to participate, it was very difficult that they stayed from the beginning to the end of the experiment since most of them dropped out and just a few were enrolled.

7. **From the adviser:**
   - There were some issues to get in agreement with the adviser's and the researchers' schedule as both of them had commitments besides doing the thesis.

- Researchers at the end had to change of adviser, due to the previous adviser's unavailability.

REFERENCES

Alsied, S. Pathan, M. (2013) "*The Use of Computer Technology in EFL Classroom: Advantages and Implications*". Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.673.2047&rep=rep1&type=pdf#page=62

Aydin, S. (2013) "*Teacher's perceptions about the use of computers in EFL teaching and learning: the case of Turkey*" Retrieved from http://www.tandfonline.com/doi/full/10.1080/09588221.2012.654495

Barnoud, C. Sirejols, E. (1993) *Grammaire : Exercices Niveau Débutant. Collection Entraînez-vous.* CLÉ international. Paris.

Camus, L. *Vocabulaire grands débutants - Test de niveau.* Retrieved from Français Facile website: http://www.francaisfacile.com/exercices/exercice-francais-2/exercice-francais-43511.php

Duolingo. (2016). *Duolingo was recognized by the President of Ireland for helping revive the Irish language.* Retrieved January 27, 2017 from Duolingo's Official Facebook site: https://www.facebook.com/duolingo/?fref=ts

Empson, R. (2014) *Fast-Growing Duolingo Caps Off A Big Year With The Crunchie For "Best Education Startup".* Retrieved from Tech Crunch website: http://techcrunch.com/2014/02/11/fast-growing-duolingo-caps-off-a-big-year-with-the-crunchie-for-best-education-startup/

Esl. (n.d.). *Dictionary.com Unabridged*. Retrieved February 1, 2017 from Dictionary.com website http://www.dictionary.com/browse/esl

Gregoire, M. Thiévenaz, O. *Grammaire Progressive du Français.* CLE international. Paris.

Heyoung, K. & Yeonhee, K. (2012). *Exploring Smartphone Applications for Effective Mobile-Assisted Language Learning.* October25, 2016, from KmJournal Retrieved from: http://kmjournal.bada.cc/wp-content/uploads/2013/05/15-1-2Kim.pdf

Hidden curriculum (2014, August 26). *In S. Abbott (Ed.)*, The glossary of education reform. Retrieved from http://edglossary.org/hidden-curriculum

Jones, R. (2011). *EMERGING TECHNOLOGIES MOBILE APPS FOR LANGUAGE LEARNING.* October 13, 2016, from Virginia Commonwealth University Retrieved from: http://llt.msu.edu/issues/june2011/emerging.pdf

Karch, A. (2015) "*Duolingo Review: The Quick, Easy and Free Way to Learn A Language".* From Fluent in three months website: http://www.fluentin3months.com/duolingo/

Mérieux, R. Loiseau, Y. (2011) *Connexions : cahier d'exercices niveau 2.* Les éditions Didier, Paris.

Miessler, D. (n.d). *Mobile (Cellular) Technologies Explained.* January 21, 2017, from Daniel Miessler Retrieved from: https://danielmiessler.com/study/cellular/#gs.JX13OcE

Mifflin, H. (2016). *Handheld.* Retrieved February 1, 2017, from The Free Dictionary website: http://www.thefreedictionary.com/handheld

(2014). *Plataformas virtuales de inglés Duolingo y Trace Effects*. Retrieved February 1, 2017, from Colombia Aprende website: http://www.colombiaaprende.edu.co/html/micrositios/1752/w3-article-350756.html

(n.d). *Definition - What does Video Game Console mean?*. January 21, 2017, from Techopedia Inc Retrieved from: https://www.techopedia.com/definition/17141/video-game-console

(n.d). *Social Networking Site (SNS).* January 21, 2017, from Techopedia Inc Retrieved from: https://www.techopedia.com/definition/4956/social-networking-site-sns

(n.d). *Tablet PC.* January 21, 2017, from Techopedia Inc Retrieved from: https://www.techopedia.com/definition/2662/tablet-pc

(n.d). *Voice synthesizer.* January 21, 2017, from The Free Dictionary by Farlex Retrieved from: http://encyclopedia2.thefreedictionary.com/voice+synthesizer

(n.d). *What is digital technology?*. January 21, 2017, from IAC Publishing, LLC Retrieved from https://www.reference.com/history/digital-technology-93efbf266360578c

(n.d). *What is Podcasting.* January 21, 2017, from IGI Global Retrieved from: http://www.igi-global.com/dictionary/podcasting/22880

Naismith, L. Lonsdale, P. Vavoula, G. & Sharples, M. (2006). *Literature Review in Mobile Technologies and Learning.* October 13, 2016, from FUTURELAB SERIES Retrieved from: https://www.nfer.ac.uk/publications/FUTL15/FUTL15.pdf

Nordquist, R. (n.d.). *English as a Foreign Language (EFL) Glossary.* Retrieved February 1, 2017, from About Education website: http://grammar.about.com/od/e/g/English-As-A-Foreign-Language-Efl.htm

Pomponne, M. (2016) « *Avoir 20 ans à Moscou* ». RFI Savoirs. Retrieved from: https://savoirs.rfi.fr/fr/apprendre-enseigner/societe/avoir-20-ans-a-moscou#node-3817

Quijada, B. (2014). *El reto es perseverar.* Retrieved January 27, 2017 from Prensa Libre website: http://www.prensalibre.com/tecnologia/RETO_0_1107489312.html

Rouse, M. & Wigmore, I. (n.d). *Mobile app.* January 21, 2017, from TechTarget Retrieved from: http://whatis.techtarget.com/definition/mobile-app

Schmidt. (2002). *What is Context Awareness*. January 21, 2017, from IGI Global Retrieved from: http://www.igi-global.com/dictionary/context-awareness/5609

Skopal, L. (2015). *Duolingo in the Teaching Process.* Retrieved January 26, 2016 from Masaryk University, Faculty of Arts website: https://is.muni.cz/th/426604/ff_m/Masters_Thesis_Skopal.pdf

Vesselinov, R. and Grego, J. (2012). *Duolingo Effectiveness Study*. October 25, 2016, from duolingo.com Retrieved from: http://static.duolingo.com/s3/DuolingoReport_Final.pdf

Wikipedia. (2012). *Personal digital assistant.* Retrieved February 1, 2017, from Wikipedia, the free encyclopedia website: https://en.wikipedia.org/wiki/Personal_digital_assistant

Wikipedia. (2015). *Mobile device.* Retrieved February 1, 2017, from Wikipedia, the free encyclopedia website: https://en.wikipedia.org/wiki/Mobile_device

Wikipedia. (2016). *Mobile-assisted language learning.* Retrieved February 1, 2017, from Wikipedia, the free encyclopedia website: https://en.wikipedia.org/wiki/Mobile-assisted_language_learning

Wikipedia. (n.d.). *Computer-assisted language learning.* Retrieved February 1, 2017, from Wikipedia, the free encyclopedia website: https://en.wikipedia.org/wiki/Computer-assisted_language_learning

Ye, F. (May, 2014). *Validity, reliability, and concordance of the Duolingo English Test.* Retrieved February 1, 2017 from Duolingo website: https://es.duolingo.com/research

Zou, B and Li, J. (2015). *Exploring mobile apps for English language teaching and learning.* October 25, 2016, from reference.research-publishing.net Retrieved from: https://reference.research-publishing.net/publication/chapters/978-1-908416-29-2/394.pdf

ANNEXES

FACULTÉ DES SCIENCES HUMAINES

DÉPARTEMENT DES LANGUES ÉTRANGÈRES

Noms : _____ âge : _____ Genre :   F   M

Enquête par rapport à l'utilisation des applications.

* L'information obtenue sera utilisez pour notre mémoire et sera toujours confidentielle.

Objectif : déterminer l'utilisation et les perceptions des applications mobiles chez les étudiants du Français Intensif II, semestre II, 2016.

1. Est-ce que vous avez pris un cours de français avant de commencer la carrière?
   a) Oui
   b) Non

2. A part de l'université est-ce que vous prenez un autre cours de français?
   a) Oui
   b) Non

3. Est-ce que vous avez un ordinateur avec de l'internet?
   a) Oui
   b) Non

4. Est-ce que vous avez un smartphone? **(Si la réponse est « oui », continuez l'enquête)**
   a) Oui
   b) Non

5. Est-ce que vous avez des applications de langues sur le portable?
   a) Oui
   b) Non

6. Quelles sont les applications mobiles des langues que vous utilisez ou connaissez ?
   _____
   _____
   _____

7. Si vous avez des applications des langues sur le téléphone portable, quelles compétences pratiquez-vous là ?
   a) Compréhension orale
   b) Compréhension écrite
   c) Expression orale
   d) Expression écrite

8. Qu'est-ce que vous pensez de l'usage des applications éducatives pour améliorer vos compétences en français ?
   a) C'est très enrichissant pour l'apprentissage
   b) C'est bien

   c) Ça m'est égal
   d) C'est mauvais

9. Quelle application mobile suggéreriez- vous pour pratiquer le français ?

   _____
   _____
   _____

EXAMEN DE CONNAISSANCE DE LA LANGUE FRANÇAISE

Noms : _____ **Date :** _____

Objectif : Évaluer la connaissance de grammaire de la langue française chez les étudiants du Français Intensif II, semestre II, 2016.

Remarque: Lisez bien les consignes/questions avant de répondre. Utilisez un stylo noir ou bleu. Évitez le correcteur.

Durée : Cette épreuve a une durée de 90 minutes environ.

A. Complétez avec: lui / leur, le, la, l'/ les (15%)

1. L'institutrice surveille ses élèves / L'institutrice _____ surveille.
2. John écoute un CD / John _____ écoute.
3. Papy lit un conte à ses petits enfants / Papy _____ lit un conte.
4. Le moniteur conseille les apprentis / Le moniteur _____ conseille.
5. Mamie propose à ses petites filles d'aller voir un film / Mamie _____ propose d'aller voir un film.
6. Paul prête son jeu à son copain / Paul _____ prête son jeu.
7. La robe rouge plaît beaucoup à la jeune fille / La robe rouge _____ plaît beaucoup.
8. Les facteurs distribuent les lettres / Les facteurs _____ distribuent
9. L'étudiant reçu remercie ses professeurs / L'étudiant reçu _____ remercie.
10. Louis et Léa téléphonent à leurs amis / Louis et Léa _____ téléphonent

B. Mettez tout le texte au féminin. (10%)

Exemple : un fils adolescent,   une *fille adolescente*

1. un mari jaloux   _____
2. un voisin envahissant,   _____
3. un beau-père exaspérant,   _____
4. un garçon sportif,   _____
5. un chanteur grec,   _____
6. un chien végétarien,   _____
7. un électeur conservateur   _____

C. Pronoms relatifs simples : qui, que, où, dont - Complétez les phrases suivantes par le pronom relatif simple qui convient : (15%)

1. Mon frère a pris l'argent _____ était dans le tiroir.
2. Le prisonnier _____ je t'ai parlé s'est évadé.
3. J'ai soigneusement rangé la robe _____ j'ai achetée.
4. La ville _____ j'habite est très belle.
5. Au cinéma, j'ai vu un film _____ m'a beaucoup plu.
6. J'ai versé à la banque l'argent _____ tu m'avais remis.
7. Nous avons passé les vacances dans le village _____ je suis née.
8. Vous verrez des choses _____ vous serez très fiers.
9. Les enfants ont cassé le vase _____ était sur la table.
10. La plage _____ nous sommes allés est très polluée.

D. Complétez les phrases avec « depuis », « pour », « pendant » ou « en » (si nécessaire). (15%)

Exemple : Ma mère cuisine (*pendant*) cinq ou six heures et elle fait à manger *pour* trois jours.

1. _____ deux heures, tous les matins, j'étudie le français.
2. Mon mari ne fume plus _____ trois semaines, c'est un record !
3. Mon fils travaille comme serveur _____ huit jours et il est déjà fatigué.
4. Certains enfants regardent la télévision _____ deux heures par jour !
5. Nous n'avons pas de chance : _____ notre arrivée, il pleut sans interruption.
6. Cette promotion est valable _____ les deux mois à venir.
7. Si vous louez une voiture _____ plus de dix jours, vous avez un tarif spécial.

E. Conjuguez les verbes entre parenthèses au passé composé. (15%)

Exemple : elle *a su* (savoir) lui parler.

1. Ils _____ (voir) une exposition de Modigliani.
2. J' _____ (vouloir) me dépêcher.
3. Vous _____ (devoir) beaucoup travailler !
4. Tu _____ (avoir) très peur.
5. Elle _____ (pouvoir) le rencontrer à Athènes.
6. Les journalistes _____ (savoir) découvrir la vérité.
7. On _____ (vouloir) te faire une surprise.
8. Vous _____ (pouvoir) ouvrir la porte ?
9. J' _____ (avoir) 30 ans hier.
10. Nous _____ (voir) les images en trois dimensions.

F. Mettez à la forme négative, en utilisant « plus », « rien », « personne », selon le modèle. (20%)

Exemple : Est-ce que tu fais quelque chose de spécial, ce soir ? –*Non, je ne fais rien de spécial.*

1. Est-ce que tu connais quelqu'un ici ?

_____

2. Est-ce qu'il y a quelqu'un en ce moment, dans ta maison de campagne ?

_____

3. Est-ce qu'il y a quelque chose à manger dans le frigo ?

_____

4. Tu es toujours fiancé avec Muriel ?

_____

5. Est-ce que tu prends quelque chose comme apéritif ?

_____

G. Transformez les phrases suivantes d'après le modèle. (10%)

Exemple : Tu appelles le garçon. Appelle-le !

1. Vous envoyez la lettre. _____
2. Tu écoutes les informations. _____
3. Vous étudiez ce dossier. _____
4. Vous faites ces photocopies. _____
5. Vous signez le contrat. _____
6. Tu invites monsieur Honorat. _____

EXAMEN DE CONNAISSANCE DE LA LANGUE FRANÇAISE

Noms : _____ **Date** : _____

Objectif : Mesurer la connaissance de vocabulaire de la langue française chez les étudiants du Français Intensif II semestre II, 2016.

Remarque: Lisez bien les consignes/questions avant de répondre. Utilisez un stylo noir ou bleu. Évitez le correcteur. Toute rature annule votre réponse.

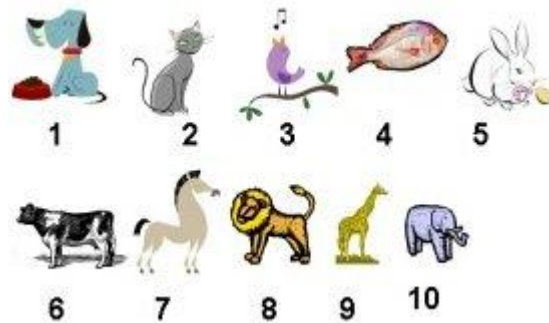**Durée :** Cette épreuve a une durée de 45 minutes environ.

I. **Regardez les images et mettez le nom dans l'espace ci-dessous, selon le numéro correspondant. (20%)**

Les animaux

Notre corps

1) _____
2) _____
3) _____
4) _____
5) _____
6) _____
7) _____
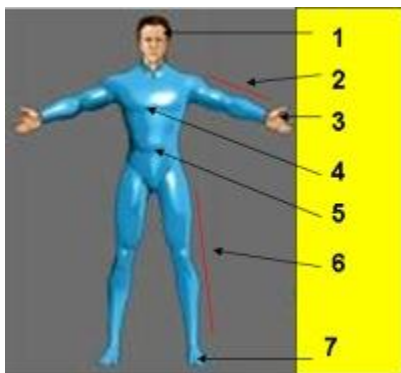
1) _____
2) _____
3) _____
4) _____
5) _____
6) _____
7) _____
8) _____
9) _____
10) _____

Complétez chaque phrase avec l'un des mots proposés. Faites les accords nécessaires. (25%)

Verglas – Soleil – Tordu - Pourri – Nu - Se Présenter – S'entraîné - Supporter – Boxer - Voie – Plan

1. En hiver, le _____ est dangereux sur les routes.
2. La roue de ma bicyclette est _____ depuis que je suis tombée.
3. Marie, ne te promène pas _____ dans la maison, s'il vous plaît.
4. Paul est inquiet car il _____ à son examen mardi.
5. Ma vieille grand-mère a du mal à _____ la chaleur.
6. Vous avez des _____ pour les prochaines vacances?

II. **Complétez chaque phrase avec un des mots proposés. Faites les accords nécessaires. (25%)**

Supporter – boxer – respirer – s'entraîner – rembourrer – respirer – grotte – spectre – bac – fleuve – chiffon – patate

1. On ne voit rien dans la _____, prenons une lampe.
2. Je _____ beaucoup pour le match de samedi.
3. Je préfère vivre à la campagne, je ne _____ pas le bruit dans les villes.
4. On ne peut pas _____ ici, il fait trop chaud !
5. Achète un kilo de _____ pour manger avec le poulet !
6. Ah ! non, la Loire n'est pas une rivière. C'est un _____.
7. Après son _____, elle veut faire des études de médecine.
8. J'ai besoin de vieux _____ pour nettoyer la voiture.

III. **Complétez le texte avec ces mots, à la forme qui convient. (30%)**

Améliorer	conserver	réfléchir	la disparition
Apparaître	fixer	respecter	l'exploitation
Célébrer	inventer	la consommation	l'importation
Cesser	rassembler	la discrimination	l'interdiction

1. Nous avons _____ un nouvel appareil qui permet aux aveugles de « lire » tous les documents écrits.
2. Les syndicats ont permis de _____ les conditions de travail depuis 50 ans : il y a moins de bruit, plus de sécurité…..
3. La couleur de la peau, le sexe, l'origine sociale sont souvent des motifs de _____.
4. Pourriez-vous _____ de parler ? J'aimerais bien pouvoir écouter la conférence !
5. La date du 14 juillet a été choisie pour _____ la Révolution française.
6. Chaque employé a des droits et les entreprises doivent les _____.
7. Lorsque la _____ augmente, les entreprises peuvent produire plus et gagner plus d'argent.
8. Les producteurs français protestent contre les _____ de fruits espagnols.

UNIVERSITE D'EL SALVADOR
FACULTÉ DE SCIENCES HUMAINES
DÉPARTEMENT DES LANGUES ÉTRANGÈRES

EXAMEN DE CONNAISSANCE DE LA LANGUE FRANÇAISE

Noms : _____ **Date** : _____

Objectif : Évaluer la compréhension orale de la langue française chez les étudiants du Français Intensif II semestre II, 2016.

Remarque: Lisez bien les consignes/questions avant de répondre. Utilisez un stylo noir ou bleu. Évitez le correcteur. Toute rature annule votre réponse.

Durée :   Cette épreuve a une durée de 30 minutes environ.

« Les identités en Russie » (50%)
1/2

1 – Les bruits autour
Cochez les bonnes réponses en fonction de ce que vous entendez.

Qu'entendez-vous au début de reportage ?
□ Des cloches
□ De la musique
□ Des gens qui crient
□ Des gens qui parlent
□ Des bruits de vaisselle
□ le bruit de la circulation

2 - Où est-on ?!
À votre avis, où se trouve-t-on ?

3 - Portrait d'Arminé
Soulignez la bonne réponse en fonction de ce que vous entendez.

- Arminé a **22 / 23** ans.
- Elle est étudiante **à l'institut / au Collège universitaire** français.
- Elle va bientôt aller **faire un stage / étudier** à Paris.
- Elle est **curieuse, / sérieuse,** elle est **courageuse, / ambitieuse,** elle **ira loin / trace son propre chemin** dans la vie.

4 - Russe et Arménienne
Cochez la bonne réponse en fonction de ce que vous entendez.

- Pour Arminé, la question de l'identité est :
□ compliquée.
□ Polémique.

- Ses parents sont arméniens mais ils ont :
□ Un statut de réfugiés.
□ La nationalité russe.

- Arminé explique qu'on peut avoir :
□ La nationalité russe sans être russe.
□ Plusieurs nationalités en Russie.

5 - L'identité
Marquez un (X) dans la réponse correcte.

	à la nationalité.	aux origines familiales.
Le mot *russki* se réfère :		
Le mot *rossiiskii* se réfère :		

	aux Russes.	aux étrangers.
Arminé précise qu'elle est arménienne :		
Arminé ne précise pas qu'elle est arménienne :		

« Une jeune femme idéaliste » (50%)

1 - Des choix
Soulignez la bonne réponse en fonction de ce que vous entendez.

- Pour Arminé apprendre le français était un choix **rationnel. / émotionnel.**
- Pour elle, dans la vie il faut faire ce qu'on **veut. / doit.**

2 - Des envies
Cochez les bonnes réponses en fonction de ce que vous entendez.

La journaliste demande à Arminé si elle a des envies :
□ De voyages.
□ De métiers.
□ D'expériences.
□ De découvertes.
□ D'autres rencontres.
□ D'autres études.

3 - L'urbanisme ?
Cochez la bonne réponse en fonction de ce que vous entendez.

Arminé rêve de travailler dans l'urbanisme.
L'urbanisme c'est :
□ L'art et les techniques d'organiser les villes.
□ La science et les techniques de construction dans les villes.

4 - Vrai ou faux ?
Marquez un (X) dans la réponse correcte.

	VRAI	FAUX
Arminé rêve d'une vie ordinaire.		
Arminé voudrait laisser une œuvre après sa mort.		
Elle voudrait réaliser quelque chose qui améliore la vie des gens.		

5 - Définitions
Soulignez la bonne réponse en fonction de ce que vous entendez.

D'après Arminé, l'architecture et l'aménagement de la ville apportent beaucoup aux habitants des villes. Pouvez-vous expliquer ces expressions ?

- L'architecture, c'est l'art de **construire / dessiner** des bâtiments.
- L'aménagement de la ville, c'est la manière **de répartir / programmer** les activités économiques sur le territoire en fonction des ressources.

UNIVERSITE D'EL SALVADOR

FACULTÉ DES SCIENCES HUMAINES

DÉPARTEMENT DES LANGUES ÉTRANGÈRES

Universidad de El Salvador

Noms : _____ **âge :** _____ **Genre :**　　F　　　M

Enquête par rapport à la motivation des étudiants après l'usage de l'application Duolingo.

*L'information obtenue sera utilisez pour notre mémoire et sera toujours confidentielle.

Objectif : déterminer les effets de l'utilisation de Duolingo dans la motivation chez les étudiants du Français Intensif II, semestre II, 2016.

1. Comment avez-vous senti quand vous avez commencé utiliser Duolingo? Choisissez une réponse.
   a) Contente
   b) Disposé
   c) Indifférent
   d) Dubitatif
   e) Obligé

2. Comment avez-vous trouvé cette application ?
   a) Intéressante
   b) Ennuyante

3. À votre avis, l'application vous a aidé à devenir un/e meilleur/e étudiant/e ?
   a) Oui
   b) Non

4. En comparaison entre l'application et le cours de français, lequel est le plus significatif pour vous?
   a) L'application Duolingo
   b) Le cours de Français

5. Après avoir utilisé l'application, est-ce que vous avez envie de pratiquer plus le français ?
   a) Oui
   b) Non

6. Continueriez-vous en utilisant l'application Duolingo?
   a) Oui
   b) Non

7. La recommanderiez-vous ?
   a) Oui
   b) No

Extrait de *Avoir 20 ans à Moscou*
[Personnes qui parlent, musique dans des hauts-parleurs, bruits de vaisselle]

Muriel Pomponne :
Arminé a 22 ans, elle vit à Moscou, elle est étudiante au Collège universitaire français et va bientôt aller étudier à Paris.
Elle est curieuse, ambitieuse, trace son propre chemin dans la vie. Arminé est russe. Ou plutôt, arménienne ?

Arminé *[elle rit]* **:**
C'est une question dure.
Parce que, oui, mes parents, ils sont arméniens. Ils ont la nationalité russe. Toute ma famille a la nationalité russe.
Mais ici en Russie il y a cette différence entre la nationalité.
Par exemple, une personne qui a la nationalité française, il est français, c'est fini. Mais ici en Russie, si tu as la nationalité russe, ça ne veut pas dire que tu es russe.
Parce qu'en russe, il y a *russki*, et *rossiiskii*.
Russki, ça concerne tes origines, ta famille, l'histoire de ta famille et *rossiiskii* c'est ton passeport.
Donc j'ai le passeport russe, ma formation, mes amis, tout est russe.
Si quelqu'un qui est russe va me demander : Est-ce que tu es russe ? Je vais répondre que je suis arménienne. Mais si quelqu'un de français par exemple pense que je suis russe, je ne conteste pas.

Muriel Pomponne :
Arminé, vous allez aller faire des études en France. Pourquoi ?

Arminé :
J'ai choisi le français à l'école.
C'était pas le choix rationnel, mais c'était un choix émotionnel. Parce que moi je suis sûre que dans la vie il faut faire ce que tu veux et dans ce cas-là tu vas atteindre l'emploi ou l'argent, mais il faut toujours rester à côté de ce que tu aimes.

Muriel Pomponne :
Est-ce que vous avez des envies, des envies de métiers, des envies de découvertes, des envies d'autres études.

Arminé :
Oui. Pour le moment j'espère que ce sera possible de trouver quelque chose dans le domaine de l'urbanisme.
Moi oui peut-être que je rêve que au final ma vie ne sera pas banale. Je ne veux pas de finir par travailler au bureau. Je veux faire quelque chose qui va rester plus longtemps que moi. Dans le sens d'ajouter quelque chose, d'ajouter une valeur à la vie, peut-être pas dans la vie de l'humanité, mais au moins dans la vie d'un groupe.
C'est pourquoi j'espère que dans le domaine comme l'architecture ou l'aménagement de la ville, c'est une chose qui ajoute une valeur à la vie des gens. C'est pourquoi je veux m'occuper de ça.

Picture 1 and 2. Students taking the proficiency test.

Picture 3 and 4. Students taking the proficiency test.