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FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN

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"CAKE – LEARN ENGLISH APP AND THE ENGLISH LANGUAGE VOCABULARY"

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2020

SUPERVISOR APPROVAL

CERTIFY:

I, Wilma Elizabeth Suárez Mosquera holder of the I.D No. 1802859841, in my capacity as supervisor of the Research dissertation on the topic: **"CAKE – LEARN ENGLISH APP AND THE ENGLISH LANGUAGE VOCABULARY"** investigated by Mr. Christian Daniel Mena Bonifaz with I.D No. 180491329-9, confirm that this research report meets the technical, scientific and regulatory requirements, so the presentation of it is authorized to the corresponding organism in order to be submitted for evaluation by the Qualifying Commission appointed by the Directors Board.

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DECLARATION PAGE

I declare this undergraduate dissertation entitled **"CAKE – LEARN ENGLISH APP AND THE ENGLISH LANGUAGE VOCABULARY"** is the result of the author's investigation and has reached the conclusions and recommendations described in the present study.

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DEDICATION

To Almighty God, for giving me the
necessary skills, talents, and knowledge.
"Bless the Lord, O my soul, and do not
forget all his benefits".

Daniel Mena

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To my Heavenly Father for being my helper, sustainer, and guide at all my life.

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Daniel

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Abstract

Nowadays, mobile technology has marked a before and after concerning the acquisition of new languages. Some educators claim that mobile applications facilitate vocabulary learning have rather than printed text and memorization techniques. This research project sought to investigate the influence of the Cake - English mobile application in the development of English language vocabulary. The study was quasi-experimental with the participation of 32 students from the second semester A of "Pedagogía de los Idiomas Nacionales y Extranjeros" program at Technical University of Ambato. The researcher randomly divided all the participants into two groups: experimental and control group. Both groups worked on two files of vocabulary exercises, each one with 3 tasks. The experimental group was allowed to use the Cake mobile app to practice and complete the vocabulary exercises, while the control group was allowed to use books and dictionaries. The main research tools were a pre and post-test adapted from the standardized PET vocabulary practice test (Cambridge English exams) and the Top Notch II book. In the same way, two surveys were applied to both groups two both groups. In order to analyze the collected data, the researcher used the T-student statistical test. Results showed that the Cake mobile app had positive effects on the development of the English language vocabulary.

Keywords: Mobile technology, Cake mobile application, English language, vocabulary.

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CARRERA DE IDIOMAS

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AUTOR: Christian Daniel Mena Bonifaz

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FECHA: 4 de Agosto de 2020

Resumen

Actualmente, la tecnología móvil ha marcado un antes y un después en referencia a la adquisición de nuevos idiomas. Algunos educadores afirman que las aplicaciones móviles facilitan el aprendizaje de vocabulario en lugar de textos impresos y técnicas de memorización. Este proyecto de investigación buscó investigar la influencia de la aplicación móvil Cake – English en el desarrollo de vocabulario del idioma inglés. El estudio fue cuasi-experimental con la participación de 32 estudiantes de segundo semestre A pertenecientes a la carrera de Pedagogía de los Idiomas Nacionales y Extranjeros en la Universidad Técnica de Ambato. El investigador dividió aleatoriamente a todos los participantes dentro de dos grupos: Grupo experimental y grupo de control. Ambos grupos trabajaron en dos documentos de ejercicios de vocabulario, cada uno con 3 diferentes tareas. Al grupo experimental se le permitió usar la aplicación móvil Cake para practicar y completar los ejercicios de vocabulario, mientras que al grupo de control se le permitió utilizar libros y diccionarios. Las principales herramientas de investigación fueron un pre-test adaptado de la prueba estandarizada de práctica de vocabulario PET (Cambridge English exams) y del libro Top Notch II. De igual forma, se aplicaron dos encuestas a ambos grupos. Para analizar la información recolectada, el investigador utilizó el test estadístico T-student. Los resultados mostraron que la aplicación móvil Cake tuvo efectos positivos en el desarrollo de vocabulario del Idioma Inglés.

Palabras Claves: Tecnología Móvil, aplicación móvil Cake, idioma Inglés, vocabulario.

CHAPTER I

THEORETICAL FRAMEWORK

1.1 Investigative Background

Nami (2019), led an investigation whose main objective was to explore the different types of language learning apps commonly used by university students. Additionally, this study sought student's perceptions and preferences through the use of language learning mobile apps. This study had four research questions: first, what type of language learning mobile apps do university students use? Second, how do university students discern learning different English language skills through mobile apps? Third, does gender play an important role in university students' perception through the use of mobile apps? Fourth, do the different types of applications play an important role in students´ perceptions? The population consisted of 447 students from the Science program at the Amirkabir University of Technology in Iran. Only students who had used one learning mobile app during the semester participated in this study. The author used descriptive survey research to collect data about student's perceptions in relation to language learning apps. This survey contained two sections: demographic data and application type. The first section collected information about student's gender, age, and academic studies; while the second section collected data about the types of apps that students used (free apps and non-free apps). Finally, the results of this study demonstrated that students preferred using free language learning apps than paid-mobile applications. Also, results showed that students preferred dictionary and lexical apps during their English learning process.

Çelik and Yavuz (2018), conducted an investigation whose main objective was to demonstrate the effect of mobile applications on literal and contextual vocabulary instruction. The question that guided this investigation was to find out if the use of mobile applications was more effective on literal vocabulary instructions or contextual vocabulary instruction, and to what extent. This

investigation was based on experimental research whose statistical analyses methods were non-parametric. Authors evaluated the data obtained from the study using Statistical Package for Social Sciences (SPSS) version 15. Also, the Shapiro – Wilk test assessed the relevance of the data. The participants of the research were 84 freshmen students at Balikesir University. Researchers divided participants into two groups: literal and contextual vocabulary instruction group. The instruments used were data gathering tools (pre-test and post-test) and practice tools (the apps used in practice sessions). The pre- and post-tests used in the literal instruction group included 25 vocabulary questions focus on Turkish equivalents of the English language; while the pre- and post-tests of the contextual group included 25 vocabulary exercises like fill-in-blanks. In the same way, the apps used in the lexical group were Kahoot app and Cram Flashcard app; while the contextual instruction group used Socractive app. The only common app used by both groups were WhatsApp, Messenger and YouTube app. The authors concluded that both groups showed improvements in their post-test scores. However, the literal instruction group outperformed the contextual instruction group. Also, they exposed two recommendations based on the results of the study. First, mobile applications chosen for education have to be suitable for the level of students and designed by experts. Second, mobile apps have to focus on literal vocabulary learning.

A study conducted by Cabrera et al. (2018), sought to examine the use of Pixton app for enhancing grammar and vocabulary teaching in a public high school in Ecuador. Pixton is a mobile application designed to create online comics. The questions that guided this study were two: first, how do teachers and students perceive the mobile app Pixton to enhance grammar and vocabulary? Second, how effective is Pixton mobile application to enhance grammar and vocabulary? This study used quasi-experimental research with the participation of 163 junior high school students (male and female) from 12 to 14 years old. The researchers divided all the participants into two groups; the experimental group with 85 students and the control group with 78 students. Both groups worked on grammar and vocabulary exercises for five months. The experimental group worked with supplementary materials designed by teachers using the Pixton app, while the control group worked with vocabulary exercises designed by the English government book. The instruments used in this study were: a pre-test, a pre-questionnaire, a post-test, a post-questionnaire, a teachers' questionnaire, and an observation sheet. At the beginning of the study,

14 professors answered the teachers' questionnaire about teaching grammar and vocabulary using technological resources. The results demonstrated that 43.45% of teachers do not use technological resources in their classes. As a consequence of this, students presented a lack of confidence to develop their English skills. At the end of the investigation, students answered a post-questionnaire about the experience of using Pixton app. Most of the students affirmed in 74.23% that Pixton motivated, facilitated, and engaged them to learn grammar and vocabulary. Also, the results demonstrated that Pixton was very useful (51.06%).

Makoe and Shandu (2018), led an investigation whose main objective was to design and implement a mobile app focused on encouraging English vocabulary teaching and learning. A group of distance students in South Africa was the population of the investigation. The authors used Design-Based research for the development of the study. This methodology allowed the authors to solve problems using authentic contexts and plan the steps to develop the vocabulary learning mobile app. VocUp was the name of the mobile application designed by the University of South Africa (UNISA). The authors worked on three steps to create and develop the app. The first step was to decide on what content the app was going to teach vocabulary. They decided to present vocabulary through its nature of form, meaning, and use. The second step was to identify the operating system of the mobile app. As a result, they decided to use the Android operating system. The last step was to create the presentation of the app and how learners and teachers could use it with simple commands and codes. The authors focused on three sections: packing of the app, its view, and layout. This study remarked the importance of technological recourses, as well as pedagogical, aspects for using English learning mobile apps focused on vocabulary. Also, the results revealed that the shortcomings presented in the study came from a lack of familiarity with the use of technology. However, the participants appreciated the app due to its usefulness and good interaction to build English vocabulary.

Guaqueta and Castro (2018), conducted a study whose main objective was to explore the use of mobile apps (Duolingo and Kahoot) as a didactic resource for English vocabulary building. The methodology used for this study was a mixed-method because it allowed authors to combine both qualitative and quantitative approaches at the same level of importance. The authors used the

following data collection instruments: an initial diagnosis test, a final development test, eight lessons, and eight assessment sessions designed by the apps Duolingo and Kahoot. The population of this study was 13 girls and 7 boys from 14 to 17 years old at La Voz de la Tierra School in Roncesvalles Colombia. Finally, the results at the end of all interventions showed that students improved their vocabulary knowledge from 36.7 % to 73.45% group average score. In the same way, this study gave students the possibility to interact and explore the positive side of technology to improve their English skills.

Fabre et al. (2017), led an investigation whose main objective was to support EFL teachers to guide learners to overcome interlanguage issues through the use of technological resources. This investigation also sought to demonstrate the positive effects of technology within language context considering the Ecuadorian perspective. The questions that guided this investigation were: first, to what extent does phonetic awareness development influence on students' speaking skills? Second, how effective is the implementation of technology to develop phonetic awareness? The authors used experimental research based on constructivism epistemology to achieve the objectives of the investigation. Two groups of students from higher education at Universidad Estatal de Guayaquil and Universidad Estatal de Milagro were involved in this investigation. The technological resources used for the development of the study were virtual platforms such as YouTube, broadcast and Ted-talks videos. The authors concluded that the acquisition of phonetic awareness is essential to improve English Language learner's pronunciation and communicative abilities. Finally, they stated that technology allowed teachers to expose students to real English situations.

Kovac (2017), carried out a study in order to examine various technological resources and instructional methods that will encourage English vocabulary development. The questions that guided this study were: first, what do teachers report as instructional methods based on the influence of vocabulary development in ENL elementary students? Second, what type of technology and print-based resources do teachers can use to do it? The author used qualitative research through semi-structured teacher interviews to collect data. The researcher applied the interviews two times for one hour in an elementary school. Two teachers over the age of 18 (one male and one female) were the participants involved in this study. They thought vocabulary to 20

kindergartens and 20 fourth grade students using technological resources and instructional methods. Finally, the results showed that students benefited from technological-based recourses and printed materials to develop vocabulary. However, one of the teachers mentioned that printed materials were more useful in the classroom because there is not enough professional information about technological resources focused on teaching ENLs vocabulary.

Another research directed by Rosell (2017), sought to review current research projects about the benefits of mobile applications for language learning and present a list of available apps. Additionally, this article proposed a well-elaborated scheme of four categories for evaluating language learning mobile apps. These four categories included these: 1) Language learning, 2) Pedagogy, 3) User experience, 4) Technology. Also, the author elaborated a taxonomy of apps designed for language learning and a taxonomy of apps no designed for language learning but useful for students. The methodology used in this research article was bibliographic because the author required information from published materials for developing the study. To sum up, the author emphasized and recommended the potential for further investigations in the field of mobile applications for language learning including the following aspects: app design and quality, users, app-smashing, normalization, and attainment.

1.2 Theoretical framework

1.2.1 Educational Technology

The educational system has become more accessible and adjustable due to the invention and use of technological resources. This new concept adds new values to the educational system whose main implications for teaching, learning, and assessment are: the emphasis on theoretical concepts; the use of holistic comprehension; the amplification of the ability that learners have to access, adapt, and apply knowledge, to think independently, and to cooperate with others to make sense of new situations (Railean, 2012).

According to Brückner (2015), educational technology is the effective use of technological resources in learning process. Another concept of this term is the use and creation of both hardware systems and educational theoretic for improving learning performance. Educational technology concerns with several digital tools such as social media, machines, hardware, and networking with their respective theoretical frameworks. This term is also known as EdTech or technology-enhanced learning (TEL).

Thanks to modern educational technology, educators have the possibility to expand limits of interaction and learning a new language within school settings. Also, educators can apply different digital tools like voice recognition to train and enhance speaking skills in realistic contexts (Spector, 2001).

1.2.1.1 Domains of educational technology

Brückner (2015), claims that educational technology involves specific domains: learning theory, computer – based training (CALL), virtual learning, and mobile learning (MALL). In the same way, there are four main aspects to describe technical development and intellectual of EdTech.

- EdTech as theory and practice of educational approaches for learning process.
- EdTech as technological tools and media to enhance the communication of knowledge.
- EdTech technology for learning system management (LMS).
- EdTech as an educational subject such as "Computer programs" or "Communication technology" (ICT).

1.2.2 CALL

According to Beatty (2010), it is difficult to stablish a unique and useful definition for Computer-Assisted Language Learning (CALL) due to the constantly influenced of technological innovations and the new contributions from an emerging community of researchers. However, she defines CALL as any process in which learners use computer to improve his or her language skills. Computer-Assisted Language Learning is considering as an amorphous discipline because of the

different changes that computers have in terms of pedagogy and technological hardware and software innovations. According to Thomas et al. (2013), the principal objective of CALL applications is to create possible ways of transferring knowledge by evolving interactive environments focus on multimedia technologies.

1.2.2.1 A brief history of CALL

In the 1950s, the first computers for language learning were large mainframes. These computers were available just at university campus research programs because their processing power were too limited. During the Cold War, the importance of creating new ways to facilitate language teaching and learning process was essential, especially for military and political purposes. For this reason, the first CALL program was created and developed in 1959 by the University of Illinois. The name of the program was PLATO, which main objective was to translate Russian documents related to politic and scientific aspects (Susan, 2013).

Chapelle (2003), divides the history of CALL into two designs: behaviorist and constructivist. There are some marked differences between both:

Behaviorist design	Constructivist design
- Eliminates incidental information	- Supports natural complexity and content.
- Simplifies information	- Avoids oversimplification
- Uses task-analyzed model	- Contains multiple perspectives
- Replicates knowledge	- Enhance knowledge building
- Supports individual learning	- Supports collaboration
- Focus on acquiring skills	- Focus on reflective practice
- Presents instruction through experiences	- Presents instructions in real-world context.

1.2.2.2 Technology driving CALL

CALL materials have changed from the last four decades. In the past, CALL materials put more emphasis on basic and simple tasks such as textual gap-filling or programming exercises. Now, these materials focus on interactive multimedia presentations with innovative characteristics such as sounds, videos, and animations (Beatty, 2010).

However, this progress has not been considered linear in pedagogy context due to limited technical skills and the lack of ways to correct unpredictable student answers. For example, in an open question which the keyword answer must be talking and phone, the computer system might not accept variations in grammar like "He talks on the phone" (Beatty, 2010).

On the other hand, there are possible solutions for this technical problem. One of them is to mark those student 'answers and check them by e-mail. Another solution can be the use of academic web pages (The Pearson Test of English Academic) that offers higher validity and reliability during the testing process (Beatty, 2010).

1.2.3 MALL

Kukulska-Hulme and Shield (2007)**,** claim that mobile assisted language learning (MALL) is the use of any portable learning digital tool such as e-books, audio-cassettes, audio CDs, portable radios, and cellphones focus on language skills training. Also, they claim that this term comes from CALL, and it refers to a small adaptation of computers into portable devices that focus on communicative, business and educative purposes.

According to Burston (2013), in the 1990s MALL materials focused on five mobile systems:

- Pocket electronic dictionaries,
- Personal digital assistants,
- Mobile phones,
- Mp3 players,
- And most updated portable tablet PCs.

However, early MALL generations propose formally design activities elaborated by educators and technologists using emerging technologies. It means that modern mobile learning allows learners to take part on motivated activities based on their needs and interest (Kukulska-Hulme and Shield, 2007).

1.2.3.1 Mobile Apps for Education

According to Kukulska-Hulme (2019), the use of mobiles apps focused on teaching-learning process has been considered as a progressing major proclivity in education and language training. Sharples and Pea (2014), argue that mobile education has surprisingly expanded its boundaries. Today, it is common to see both children and adults involved in the use of mobile technology.

Undoubtedly, mobile devices are part of our daily life, because it is presented in every possible situation. Sharples and Pea (2014) also mention that mobile education allows to combine two different environments: formal and informal education. Digital mobile applications can serve as virtual partners or teachers for students producing interactive lessons, global digital citizens, and leaders. Godwin-Jones (2017), states that language mobile applications have many strong features in education such as its multimedia support, internet connectivity, communication capability, and functionality.

However, some other authors state that language digital apps tend to focus just on drill-type activities, rather than communicative exercises. For this reason, the most popular apps such as Duolingo, Busuu, 7 Little words, Word to word, ELSA and others present short time frames, language experiments and activities focus exclusively on vocabulary and pronunciation development.

1.2.3.2 Cake English Learning Mobile application

According to (TESOL, 2000), technology for teaching vocabulary is defined as pedagogical applications of digital tools, software, and Internet resources focus on helping students acquire words, multiword units, phrases, expressions, and others, in the target language.

For this reason, Cake – Learn English is a mobile digital application that pretends to facilitate and develop the English vocabulary of students using short English conversation videos updated every day. In addition, this mobile application motivates students to practice their English pronunciation and vocabulary through the use of communicative expressions presented in real daily common situations spoken by native speakers.

The Cake mobile application offers to its users learning slangs, idioms, phrases, and daily expressions curated from YouTube videos. All of them are divided into different categories based on students' levels, needs, and interests. For example, the app provides various topics such as travel, family, food, business, technology, and others divided into beginners, intermediate and expert's groups.

Gangaiamaran and Pasupathi (2017), state that a group of the global population between 18 and 24 years old spends 90.6 hours per month using smartphones apps to develop their English language skills. For this reason, language mobile apps should be accessible and functional in terms of usage. It is necessary to mention that the Cake – Learn English app is completely free. The owner of the app is the Playlist Corporation and its last version was updated on March 30, 2020. It is compatible with iOS 10.0 or later, with iPhone, iPad, and iPod touch. The app can be understood in 10 languages such as English, Indonesian, Japanese, Korean, Portuguese, Vietnamese, Spanish, and others. The authorized age to use this app is 12 years and older.

According to Kovac (2017), students who use computer programs and mobile applications to facilitate vocabulary learning have better results than students who use printed text and memorization techniques to study vocabulary. That is why the Cake mobile app offers students three supplementary and integrated tools: online dictionary, online treasures dictionary, and online vocabulary quizzes.

The following picture presents the main menu of the Cake – Learn English app. There are four main options at the bottom of the scream app (home, research, speak, library and profile). It is important to mention that the app needs a stable internet connection to operate.

Figure 1. "Cake – Learn English App menu"
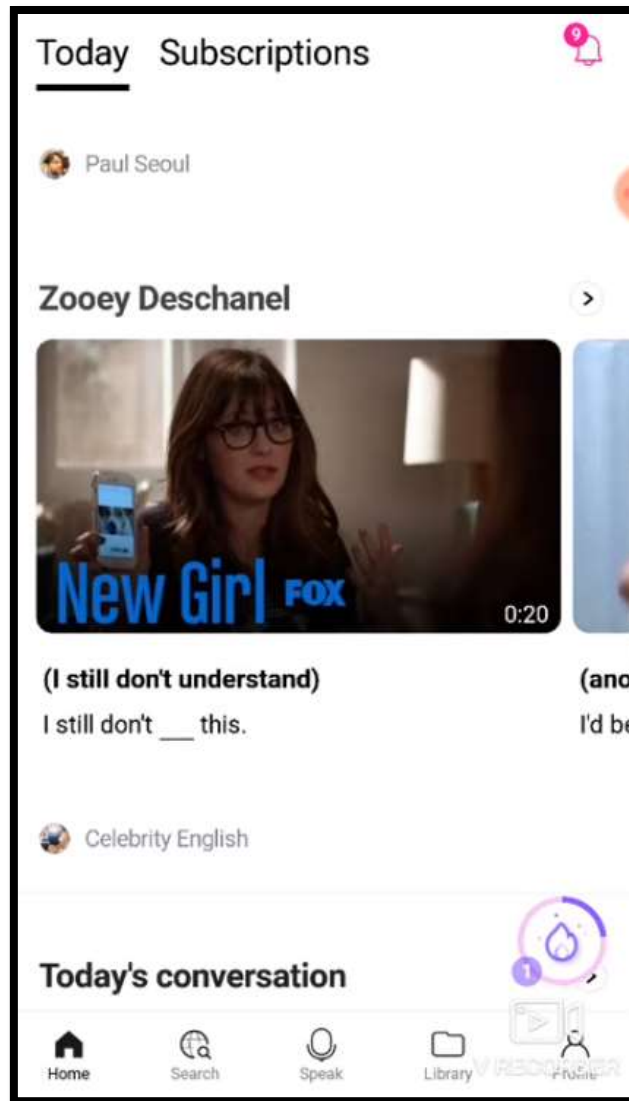
Before to start using the app it is necessary to choose a topic to practice new vocabulary. For this, the app offers different topics and categories in the search section, where users have the possibility to control what kind of expressions or new vocabulary they want to learn. In the same way, users can write on the search section the vocabulary topic they want to practice.

Figure 2. "Cake – Learn English App search section"
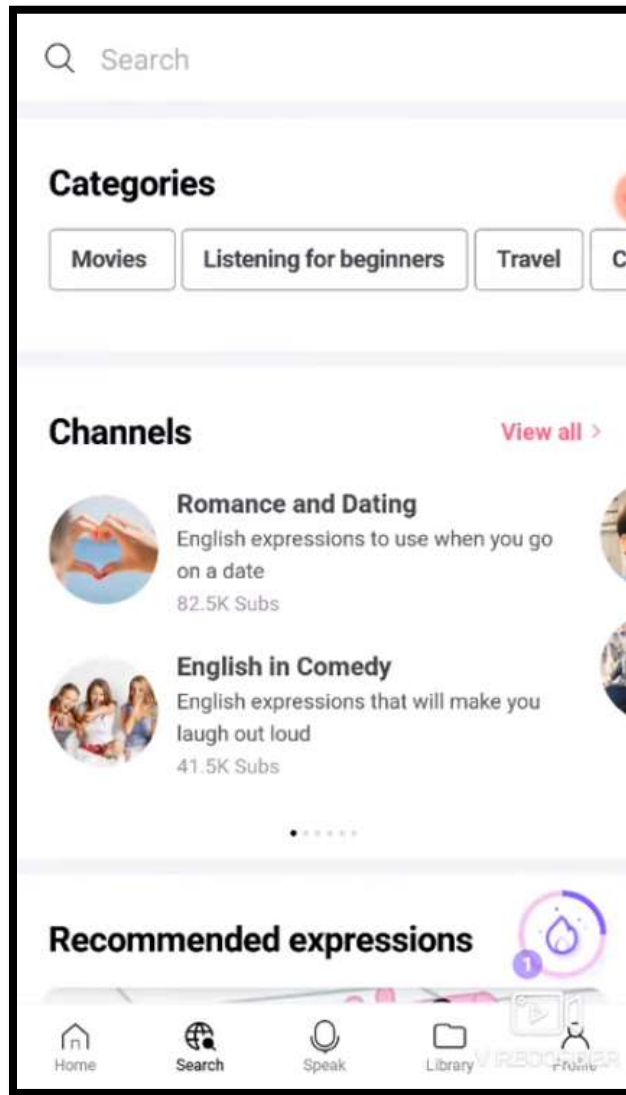
The following pictures show how the Cake mobile app works. There are 4 icons on the mobile screen, each one with a specific function. The first icon (1x) allows to users to control the speed of drill from 1x to 0.75x. In this way, the characters of the video will speak more slowly giving the chance to have a better understanding of what they are saying.

Figure 3. "Cake – Learn English App (1X) icon"
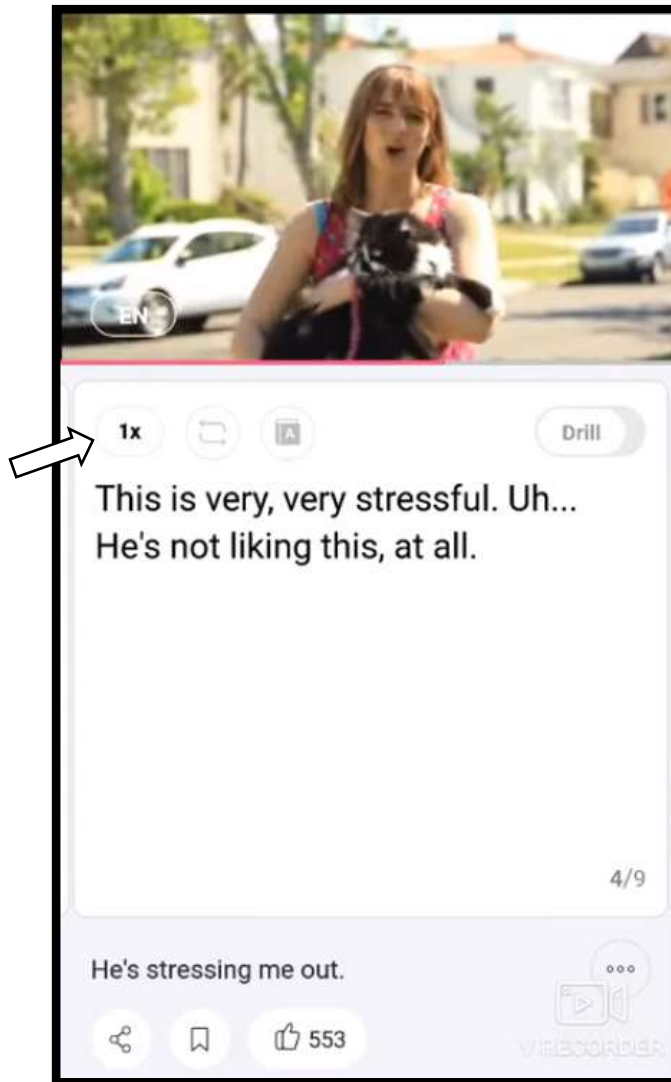
The second icon permits to control the subtitles of the video. Users can turn on or turn off the subtitles of videos taping on the icon represented EN. This option is really useful for beginner students who wants to analyze and compare what they hear with what the characters of the video say.

Figure 4. "Cake – Learn English App (EN) icon"
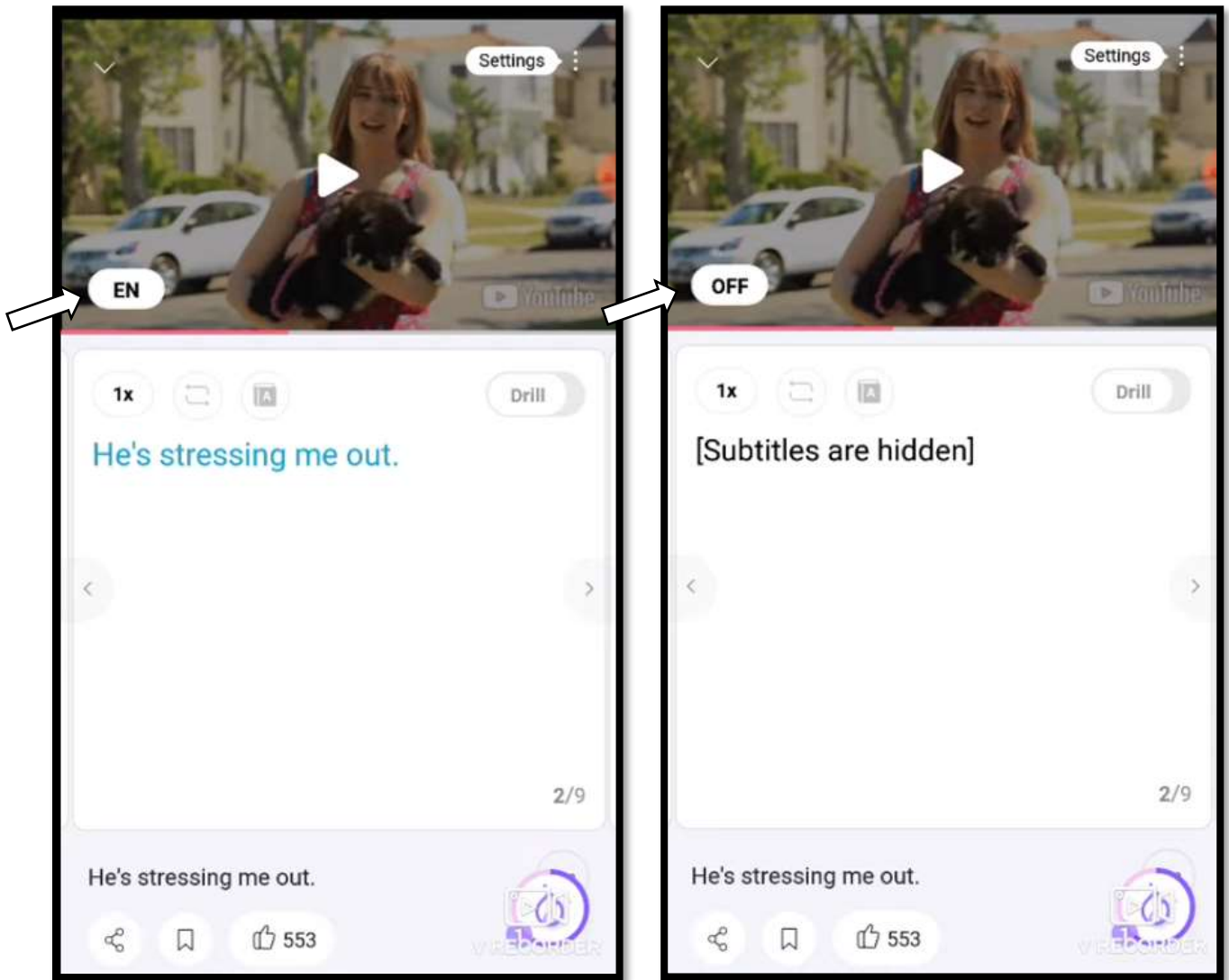
The third icon is represented with an A. This icon permits to use an online dictionary implemented by the app to check the meaning and synonyms of new words presented in the videos.

Figure 5. "Cake – Learn English App (A) icon"
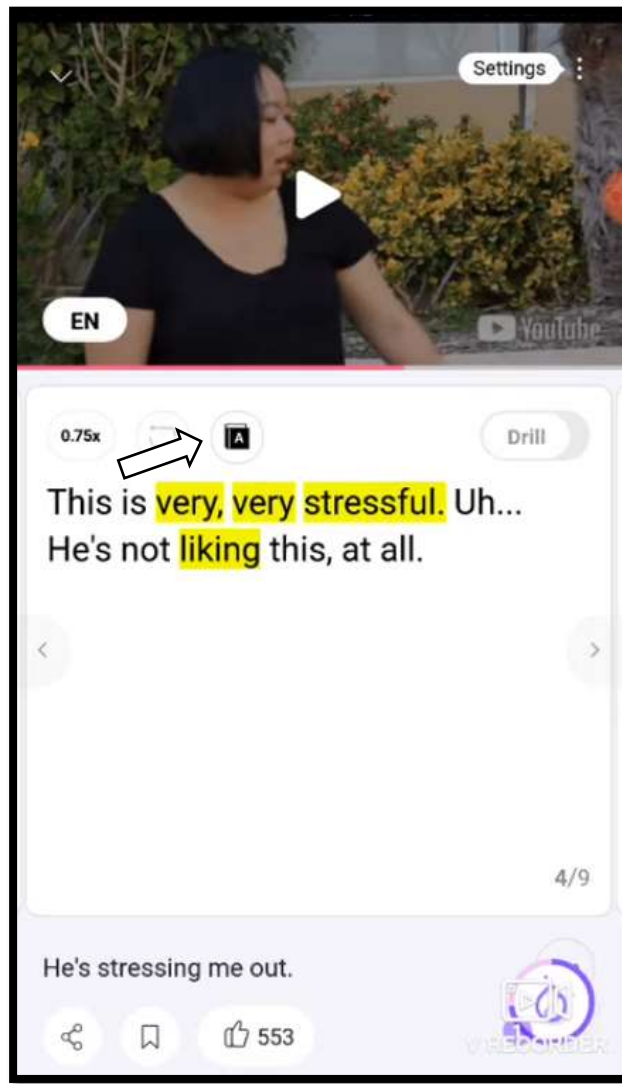
Source: https://play.google.com/store/apps/details?id=me.mycake&hl=en_US

Figure 6. "Cake – Learn English App dictionaries"
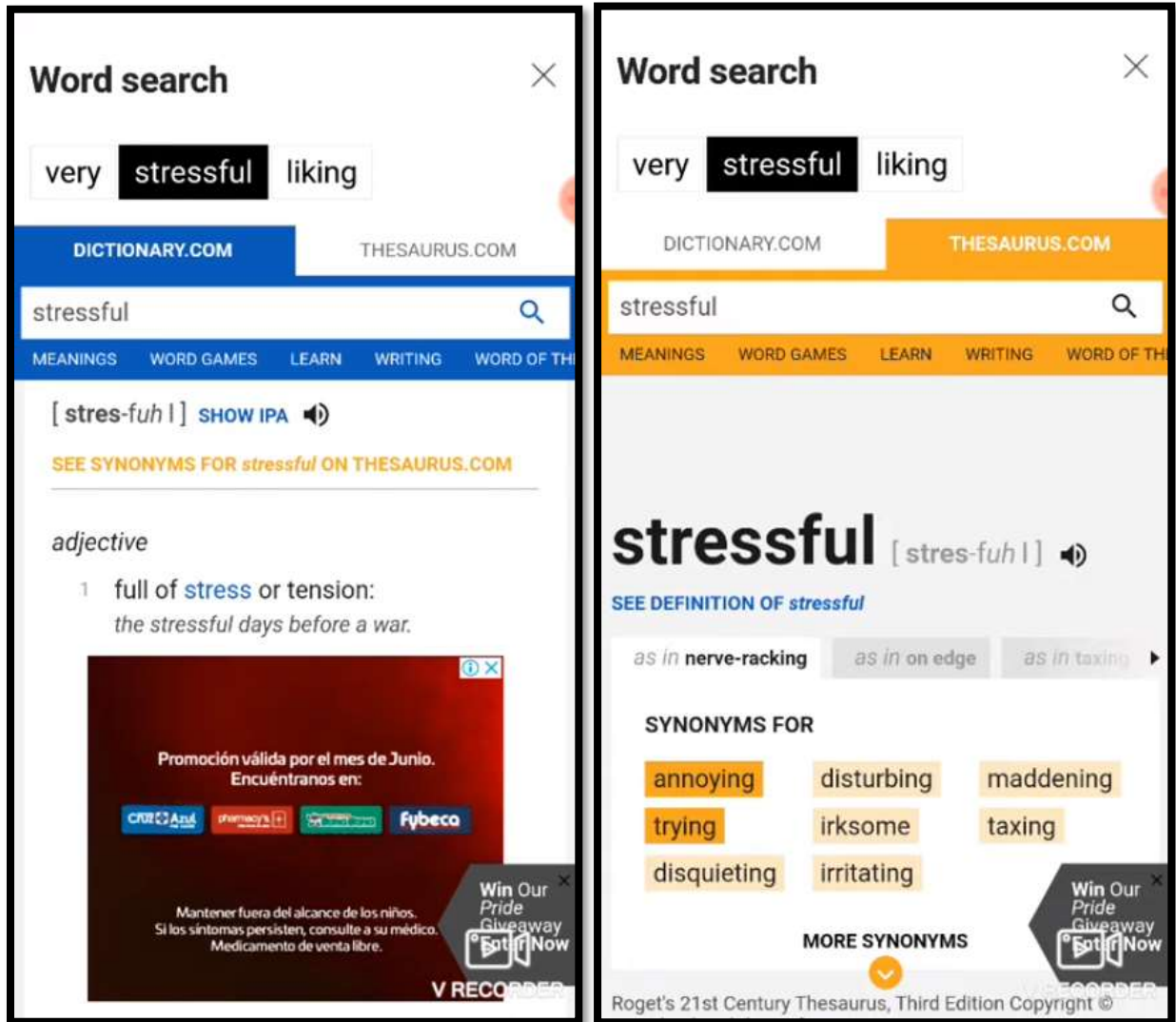
Finally, the app offers to its users the option to practice pronunciation using virtual speech recognition technology. This section scores users' pronunciation in a scale from A to C, where A is excellent pronunciation and C is regular pronunciation.

Figure 7. "Cake – Learn English App dictionaries"
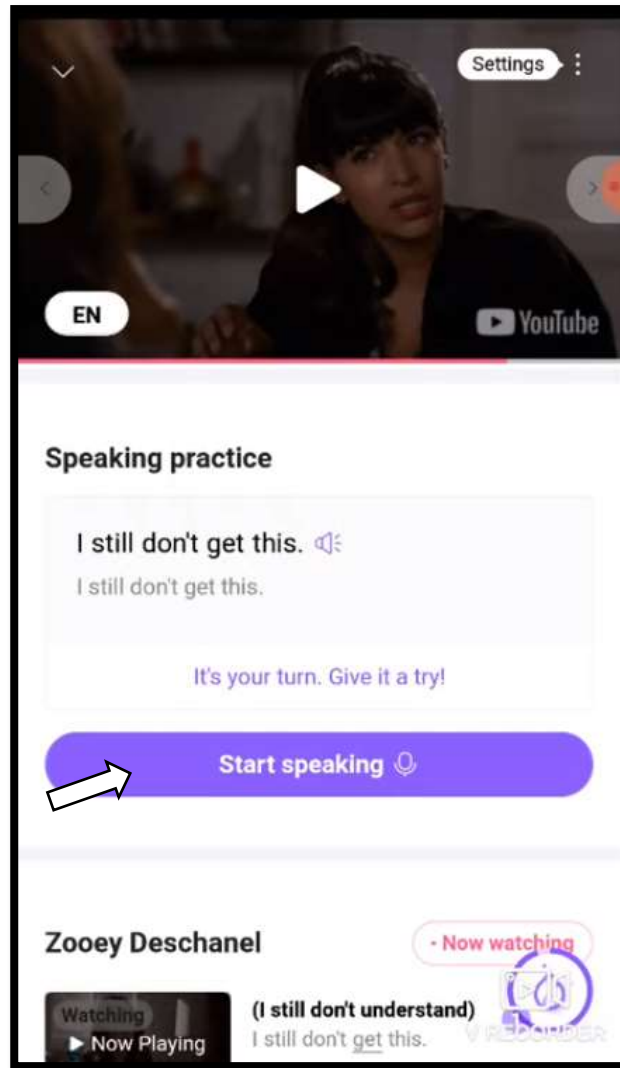
Source: https://play.google.com/store/apps/details?id=me.mycake&hl=en_US

1.2.4 English language

According to Parvathi (2016), English is considered one of the most important languages in modern world due to its academic and professional benefits. Also, he mentioned that English is vital for international trade and commerce allowing countries to adapt in this globalized world. In today's world, most of the companies prefer people who possess a good level of English communication. However, a lot of people face many English communication issues because, in some cases, this language is not viewed as a basic term to understand social and cultural interaction. Golkova and Hubackova (2014), strongly argue that second language acquisition involves many different aspects and categories which are mainly known and studied in the context of educational process representing by teaching and learning. In relationship to foreign language learning, the category of receptive skills or also known as passive skills, appears as the first essential ones to be comprehended.

1.2.5 Speaking

According to Rai (2010), communication represents the essential part for everything that we want to do. Communication is more than sending messages or talking to someone else. It requires that all our thoughts have being fully understood without any problem. A more accurate definition of communication is when a person can transmit his or her ideas, expecting that others can interpret and answer them. All this process will depend of the level of speaking that the person has.

Harmer (2007), claims that students should be aware of the importance of speaking skills in the development of the English language. Every possible situation for speaking English in class must be taken. In this way, learners will be able to increase their confidence with the language and start speaking in English more fluently. He also mentions that at first, it will be difficult trying to build self-consciousness in students. However, there are useful techniques, strategies and activities such as repetition work, pair work, role plays, and others, in which learners have the chance to practice their speaking.

Boonkit (2010), mentioned that the majority of undergraduate students are not able to speak in English with confidence, especially with English native speakers due to they do not have a good

range of vocabulary to face a real life English conversation. In addition, Oradee (2013), stated that this common issue can be generated by the lack exposure to authentic English language in classroom.

1.2.6 Vocabulary

When we think about the definition of vocabulary, most of our answers have something to do with the words of a language. Probably this is correct, because vocabulary has to deal with everything related to words. However, vocabulary is much more than just simple words, phases or expressions.

Rai (2010), claims that vocabulary involves the stock of words used by a person. It is important to say that vocabulary is one of the four speaking subskills. He also mentions that there are two groups of vocabulary lists based on different purposes: active and passive vocabulary. Passive vocabulary refers to all the words that a person can understand by reading or listening, while active vocabulary is related to all the words that a person can use to write or speak.

Alharthi (1436), states that the more words we learn and acquire, the more precise we can be in communicating our thoughts, ideas or expressions to others. The lexical words represent the basis of a good writing and speaking performance, it means that the more vocabulary learners know, the better they can understand what they hear, read and write.

1.2.6.1 The importance of vocabulary

According to Harmer (2007), vocabulary is more important than grammar rules for communication aims. Students are motivated to add and expand their vocabulary range, to understand the meanings of unknown words, or to become more proficient at the moment of choice words and expressions.

Harmer (2007), also claims that students are individualistic in the way they can usually learn and remember receptive vocabulary more than productive vocabulary.

1.2.6.2 Improving Vocabulary

Rai (2010), argues that an effective way to improve vocabulary is by using the dictionary and thesaurus. Dictionaries can contribute with important information about the meaning of usage, and collocations. A thesaurus dictionary is useful for synonyms and antonyms. This kind of dictionary helps learners to find fresh words and expand their vocabulary stock to express ideas or thoughts in a more effective way avoiding repetition.

There are many different types of dictionaries, all of them with different purposes.

- Dictionary for technical words
- Simple dictionary / Monolingual dictionary
- Bilingual dictionary
- Contemporary English dictionary

The most useful dictionaries for learners of English are:

- Cambridge International Dictionary
- Collins English Dictionary
- Oxford Dictionary
- Longman Dictionary

According to McCarthy (2014), teachers can help students to improve their vocabulary knowledge in the following ways:

- Giving vocabulary a high level of importance in the syllabus and the development of the class.
- Providing a well-elaborated lesson focus on vocabulary more than grammar sections.
- Encouraging students to use their target vocabulary set for practice inside and outside the class.
- Creating learning habits in which students can repeat and recycle vocabulary.
- Providing opportunities to arrange vocabulary in a meaningful way using thematic sets.
- Not overfilling students' minds with vocabulary. They need to have a limit of time to absorb and process everything learned during lessons.

1.2.6.3 Vocabulary learning and vocabulary acquisition

It is necessary to distinguish two marked concepts between what vocabulary learning is and what vocabulary acquisition means. According to (Restrepo, 2015), vocabulary learning is the process of acquiring building blocks in a foreign language learning. In other words, vocabulary learning has to deal with the way students learn meanings of new words with their different uses.

Harmer (2007), claims that there are some ways in which students can consciously learn, rather than acquiring vocabulary. The principal difference between both concepts is the level of difficulty that students have to remember new vocabulary. If the meaning is clear to understand, students' memory will retain new words without problems and this process is call vocabulary learning.

In addition, there are many factors affecting the vocabulary learning process. According to Hulstijn (2001), the first of these factors is codability of the morphological form of words. It refers to word form and how this may differ in difficulty for coding depending on the learner's prior knowledge. The second main factor that affects word's memorability is the arbitrariness of the form-meaning of existing lexical knowledge. Basically, when learners have to face new words they can find it easily if they got familiar with them before. Suppose, the new word for the class is "fogdoor", if students were familiar before with "door" or "corridor" they do not have troubles to learn the new vocabulary word. It means that the new word can be consider as non-arbitrary and transparent word form.

The other concept that is important to define is vocabulary acquisition. According to Harmer (2007), students who listen and read authentic language have the possibility to acquire vocabulary. It means that when students can guess or grasp the meaning of new words from the context, this process is called vocabulary acquisition.

However, Suárez and Varela (2002), comment that acquiring a language means acquiring its semantic structure. For the correct acquisition of new vocabulary there are some main strategies. One of this strategies is knowing the meaning of the word through context because learning a word in isolation does not enable us to use it adequately. New words, need other particular words to accompany them and use them for many lexical purposes.

1.2.6.4 Types of vocabulary

According to (Montgomery, 2007), there are 4 types of vocabulary: listening, speaking, reading and writing. The first two types correspond to spoken vocabulary and the last two, written vocabulary.

First, listening vocabulary refers to the words that we hear and understand. Many researches proved that babies can listening and learn words during their waking hours, and we continue to learn in the same way for the rest of our lives. By the time humans can acquire and reach 50.000 words during the adulthood.

Second, speaking vocabulary is the words that we use when we speak. Montgomery (2007), states that our range of speaking vocabulary is relatively limited. In the same way, many investigations about it proved that most adult use and estimated number of 5,000 to 10,000 words for their daily conversations and instructions. As we can see, this number is much less than our listening vocabulary due to ease of use.

Third, reading vocabulary refers to the words that we understand when we read a text. An interesting fact about it is that we can read and understand many words that we do not use in our speaking vocabulary. On the other hand, reading vocabulary represents the 2nd largest vocabulary only if you are a reader. It means that you cannot increase your range of vocabulary if you are not a reader (Montgomery, 2007).

Fourth, writing vocabulary can be defined as the words that we retrieve when we write to express our ideas to others by ourselves. Most of us find this type of vocabulary easier to explain or acquire by ourselves orally, using facial expressions and intonation to find the right words to communicate as we do in the same way in writing. The words that we can spell strongly influenced our writing vocabulary (Montgomery, 2007).

On the other hand, Mccarthy and O'Dell (1994), claim that vocabulary types are divided into two groups based on levels of formality. These two groups are common or everyday situations and academic situations. Academic vocabulary or also known as technical vocabulary involves all the words that learners can acquire and learn in texts across different academic subjects, disciplines, or domains. In contrast, vocabulary for common situations involves informal words, idioms, fixed expressions, and everyday expressions.

According to Mccarthy and O'Dell (1994), idioms are also represented as fixed expressions whose meanings are not clear or easy to understand. It happens because the individual words that set the expression do not help to distinguish and interpret its true meaning. The most typical example of an idiom is "raining cats and dogs" which means that it is raining extremely hard.

Everyday expressions involve fixed phrases for common English language conversations. These expressions are usually not complicated to be understood, but sometimes it is necessary to have or create a list of them because most of their meanings are difficult to find in dictionaries. (Mccarthy & O'Dell, 1994)

Good examples of everyday expressions are:

- You crack me up, which means laugh non-stop.
- My heart is racing, which means I am scared or nervous.
- What's the catch? which means that something sounds good to be true.
- Come to think, which means that something makes a person realize there are problems.

1.3 Objectives

1.3.1 General Objective

➢ To analyze the influence of the Cake English mobile application in the development of English vocabulary in students from second semester of "Pedagogía de los Idiomas Nacionales y Extranjeros" program at Technical University of Ambato.

1.3.2 Specific Objectives

➢ To evaluate the level of vocabulary knowledge in the students from second semester of "Pedagogía de los Idiomas Nacionales y Extranjeros" program at Technical University of Ambato before and after the implementation of the Cake English mobile application.

➢ To determine the strategies and technological tools that students use to learn new vocabulary.

➢ To identify the type of exercises from the Cake app that students consider more effective for vocabulary learning.

CHAPTER II

METHODOLOGY

2.1 Resources

2.1.1 Population

The participants of this study were 32 second semester students who are taking English II classes as part of the "Pedagogía de los Idiomas Nacionales y Extranjeros" program at Technical University of Ambato. The present research project lasted for 3 weeks where all the participants received five sessions via Zoom platform (20 minutes per session) with the researcher at the end of their English II classes.

2.1.2 Instruments

-   A pre-test to determine students' knowledge of English vocabulary focus on fixed phrases and daily expressions. This instrument was adapted from the standardized PET vocabulary practice test (Cambridge English exams) and units 1, 2, and 5 from the Top Notch II book. This evaluation tool was applied to both groups in the first session using Google forms and zoom platform. The researcher designed the pre-test based on students' level and needs (see Annex 4).
-   A post-test to measure students' level of improvement in contrast to the results obtained in the pre-test. This instrument was adapted from the standardized PET vocabulary practice test (Cambridge English exams) and the Top Notch II book. In the same way, this test was applied to both groups via zoom platform and using Google forms (see Annex 4).
-   A survey N°1 to determine the strategies and technological tools that students use to learn new vocabulary. This instrument was applied to students via Google forms (see Annex 5).

- A survey N°2 whose main objective was to establish which type of exercises from the Cake app are more effective for vocabulary learning. This instrument was applied to students via Google forms (see Annex 6).

2.1.3 Procedure

The researcher collected the data of the study for a period of 3 weeks in the academic year April – September 2020. The participants of the study had five interventions of 20 minutes with the researcher before finishing their English II classes.

In the first intervention, the researcher applied the vocabulary pre-test to students in order to determine their knowledge of English vocabulary. Also, students had to complete the survey N°1 about strategies and technological tools that they use to learn new vocabulary.

In the second intervention, the researcher divided all the participants into two groups: the control and the experimental group. Then, the researcher gave them clear instructions for each group about how to work on the vocabulary exercises (formats 1 and 2). For this, the researcher used a tutorial video about the Cake mobile application. It is necessary to mention that each format contained three vocabulary exercises related to units 1, 2, and 5 from The Top Notch Book II. The experimental group worked on the vocabulary exercises format 1, while the control group worked on the vocabulary exercises format 2. Both groups had to complete the vocabulary exercise N°1 focus on English fixed phrases and daily conversations about greetings (PET everyday conversations 1 - exercises) (Cake app - greetings exercises).

In the third intervention, students worked on the vocabulary exercise N°2 related to emotions such ash apologize, regret, and surprise (PET everyday conversations 2 - exercises) (Cake app - feelings exercises).

In the fourth session, students worked on the vocabulary exercise N°3 about personal care and appearance (PET healthy lifestyle - exercises) (Cake app - personal care exercises). Finally, in the last intervention the researcher applied the post-test to both groups and the survey N°2 just to the experimental group.

2.2 Methods

2.2.1 Basic method of research

2.2.1.1 Quasi - Experimental research

According to Ary (2012), quasi-experimental design permits researchers to reach reasonable conclusions in which random assignment to treatment groups is not used. For this reason, the current research project used quasi-experimental research with 32 students from the second semester of "Pedagogía de los Idiomas Nacionales y Extranjeros" program at the Technical University of Ambato.

The researcher divided all the participants into two groups; the experimental group with 16 students and the control group with 16 students. Both groups worked on 3 vocabulary exercises with emphasis on English fixed phrases and daily conversations about greetings, emotions, and personal care – appearance topics for three weeks. These vocabulary exercises were divided into two formats: Cake – English vocabulary exercises (format 1) and PET vocabulary exercises (format 2); each format contained 3 vocabulary exercises. However, both groups worked on different formats of vocabulary exercises using different materials and technological resources. The experimental group used the Cake - English mobile app to work on the vocabulary exercises format 1; while the control group used their texts (Top Notch II) and dictionaries to work on the vocabulary exercises format 2.

2.2.2 Research modality

2.2.2.1 Field and bibliographic research

This research project used a combination of field and bibliographic research. Field, mainly because the researcher worked with 32 students from second semester of "Pedagogía de los Idiomas Nacionales y Extranjeros" program from the Technical University of Ambato in the Tungurahua province. This type of research permitted to analyze the problem of the university course and

collect data. Also, this study used bibliographic research due to all the information was based on sources of scientific articles, projects, web-educational journals and others academic works.

2.2.2.2 Quantitative & qualitative research

The current research project used a mixed approach, quantitative and qualitative. Quantitative, mainly because it presented and used quantitative techniques to get as precise results as it can be possible. In addition, this research had a qualitative approach because it looked for the understanding of the facts presented by the use of a mobile app focused on the improvement of student's vocabulary.

2.2.2.3 Exploratory Research

Sparks (2020), takes the view that exploratory research produces qualitative data. It means that this type of research involves conversations between a researcher and the people being studied. For this reason, this project used exploratory research because the data obtained by the tests was divided into two categories qualitative and quantitative. Also, this project examined the reliability between the research instrument and its suitability for further researches.

CHAPTER III

RESULTS AND DISCUSSION

3.1 Analysis and discussion of the results

In order to collect measurable results, both pre and post-test were adapted from The standardized PET vocabulary practice test (Cambridge English exams) and the Top Notch II book. In the same way, 2 surveys were designed and given to the experimental and control group. The study lasted 5 sessions: (1) pre-test and survey N°1, (2) first vocabulary exercise - formats 1 and 2, (3) second vocabulary exercise – formats 1 and 2, (4) third vocabulary exercise – formats 1 and 2, and (5) post-test and survey N°2. All the information obtained was analyzed, thus it contributed to verify the hypothesis and come to conclusions.

3.1.1 Pre-test from the experimental and control group

Table 1. Pre – test average scores over 20

	Experimental	Control
Pre-test	8.31	8.31

Source: Students' Pre-test
Author: Mena, D. (2020)
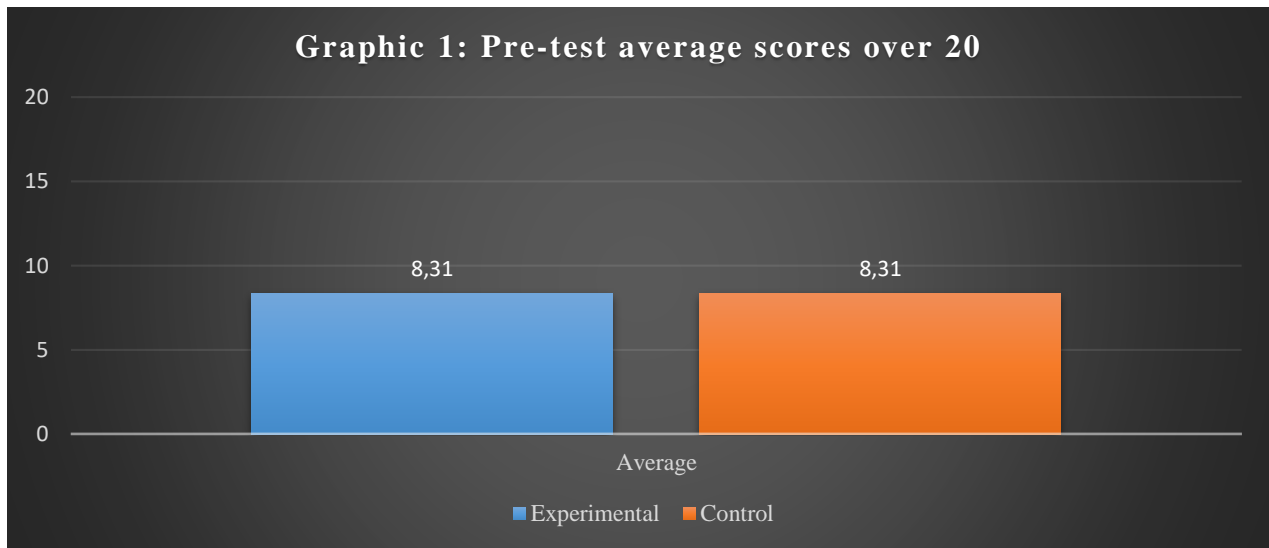
Graphic 1. Pre-test average scores over 20

Source: Students' Pre-test
Author: Mena D. (2020)

Analysis and interpretation

In graphic number 1, the first column represents the average score over 20 that the 16 students from the experimental group obtained in the vocabulary pre-test. In contrast, the second column represents the average score over 20 that the 16 students from the control group got in the pre-test. The experimental group' average was 8.31 points over 20, while the control group obtained 8.31 points over 20.

As a result, it was clear that students from both groups had a low level of vocabulary knowledge with emphasis on fixed phrases and daily expressions. Also, it is important to mention that there is no difference in average between both groups. Consequently, as both groups got the same low score, either could have been selected as the experimental group to measure progress afterwards.

The following analyses come from the results obtained in survey N°1 that the 32 participants involved in this project answered. The principal objective of this survey was to determine the strategies and technological tools that students use to learn new vocabulary. Survey N°1 contained 7 multiple choice questions. Also, it is important to mention that this survey was applied to students via Google forms.

3.1.2 Survey N°1 – Question 1
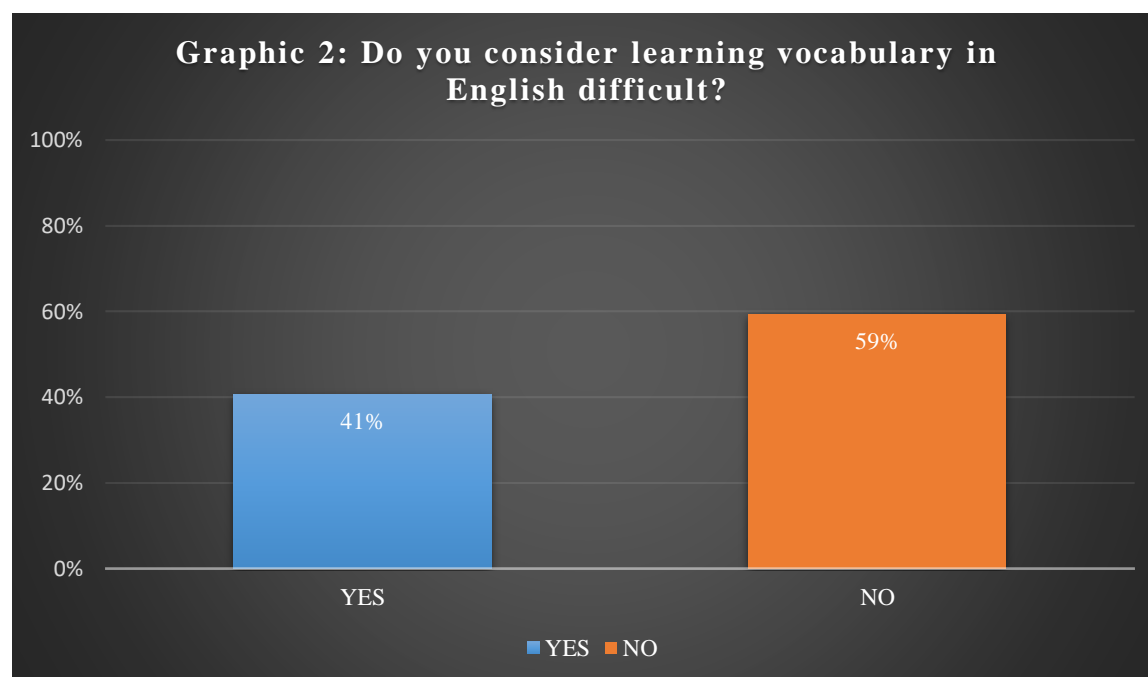
Graphic 2. Survey N°1 – Question 1

Source: Students' Survey N°1
Author: Mena D. (2020)

Analysis and interpretation

In general terms, 13 students affirmed that learning vocabulary in English is difficult (41%). On the other hand, 19 students stated that learning vocabulary in English is not difficult (59%).

Consequently, as there was a significant difference between both answers, it can be stated that students learning English vocabulary as a non-demanding process.

3.1.3 Survey N°1 – Question 2

Graphic 3: Which of the following strategies do you use to learn new vocabulary?

Word Map: 6%
Write, look, cover and repeat: 59,4%
Write a sentence with the new word: 34,4%
Draw pictures of the new words: 28,1%
Keyword method: 43,8%
Semantic feature analysis: 21,9%
Frayer Model: 12,5%
Others: 25%

■ Average
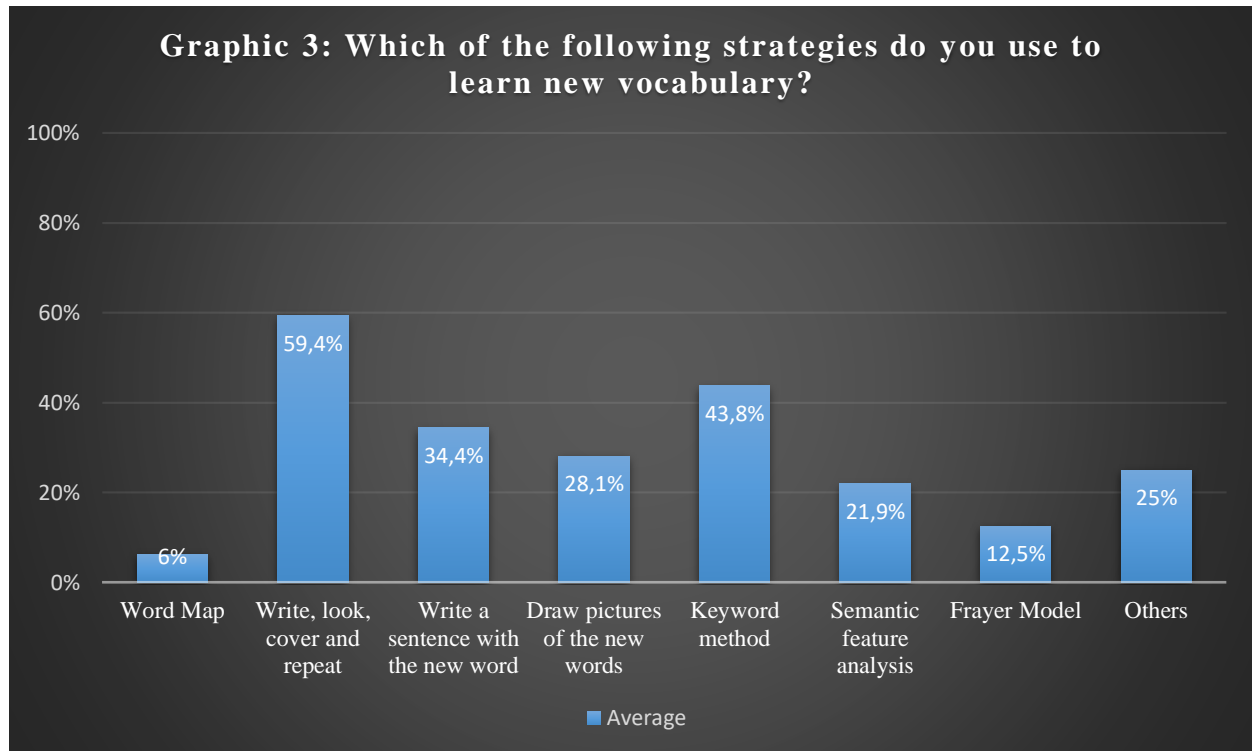
Graphic 3. Survey N°1 – Question 2

Source: Students' Survey N°1
Author: Mena D. (2020)

Analysis and interpretation

In general terms, 19 students affirmed that the strategy they use to learn vocabulary is to write, look, cover, and repeat the new word or phrase (59.4%). In the same way, almost half percent of students (43.8%) asserted that the keyword method is the second strategy most used for them.

As a result, students claimed to have used simple strategies rather than complex ones such as the Frayer Model, word maps and semantic feature analyses to learn new vocabulary.

3.1.4 Survey N°1 – Question 3

Graphic 4: Which of the following benefits have you reached using vocabulary learning strategies?

Graphic 4. Survey N°1 – Question 3

Source: Students' Survey N°1
Author: Mena D. (2020)

Analysis and interpretation

In general terms, results proved that most students have experimented and achieved some of the benefits mentioned in question 3. For example, more than half of the students affirmed to have improved their language and literacy skills, reading comprehension, and speaking skills by using vocabulary learning strategies.

Consequently, students are aware of the importance of using vocabulary strategies to have better results in their learning process.

3.1.5 Survey N°1 – Question 4

Graphic 5: Do you consider necessary the use of language mobile applications in the EFL classroom?
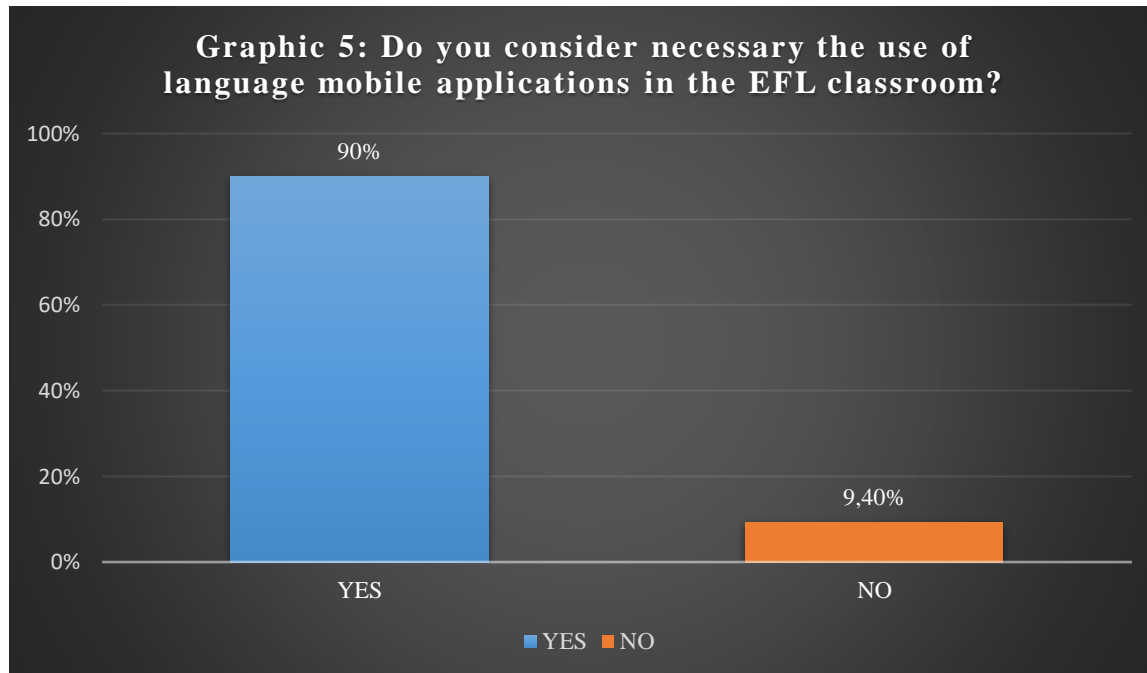
Graphic 5. Survey N°1 – Question 4

Source: Students' Survey N°1
Author: Mena D. (2020)

Analysis and interpretation

Substantially, 29 students considered the use of language mobile applications necessary in the EFL classroom (90.6%). On the other hand, 3 students affirmed that the use of mobile apps does not represent a necessity in the EFL classroom (9.4%).

Therefore, there is a considerable difference of 81.2% between both answers in question 4. It means that students are aware of the importance of using mobile applications and its usefulness in the development of the English learning process.

3.1.6 Survey N°1 – Question 5
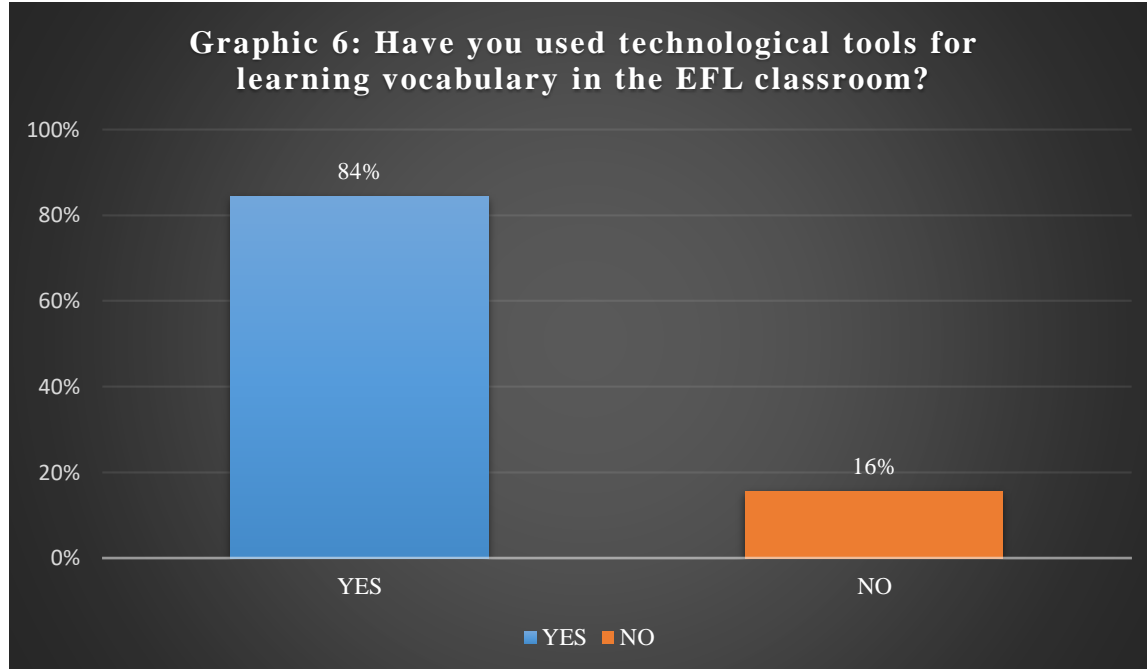
Graphic 6. Survey N°1 – Question 5

Source: Students' Survey N°1
Author: Mena D. (2020)
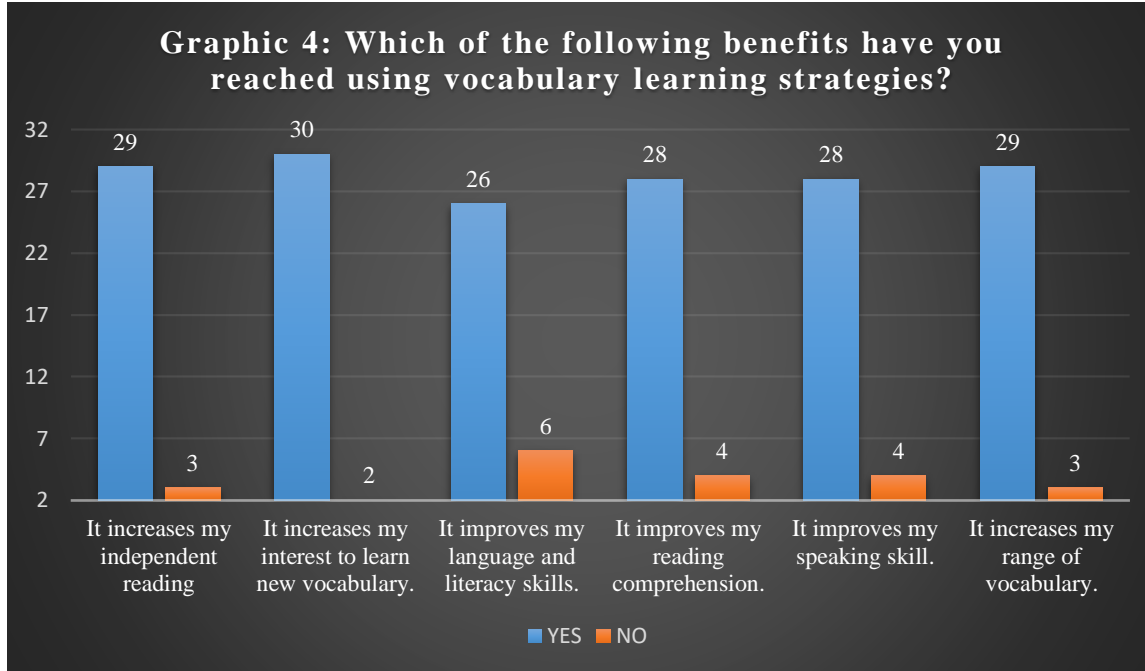
Analysis and interpretation

In general terms, 27 students claimed to have used technological devices for learning vocabulary in the EFL classroom (84%). In contrast, five students affirmed have not used technological tools for learning vocabulary (16%).

As a result, there is a considerable difference of 68.8% between both answers in question 5. It means that most students have experimented with the necessity of improving their vocabulary skills through the use of technological devices.

3.1.7 Survey N°1 – Question 6

Graphic 7: Which of the following technological tools has been used by your teachers in the EFL classroom?
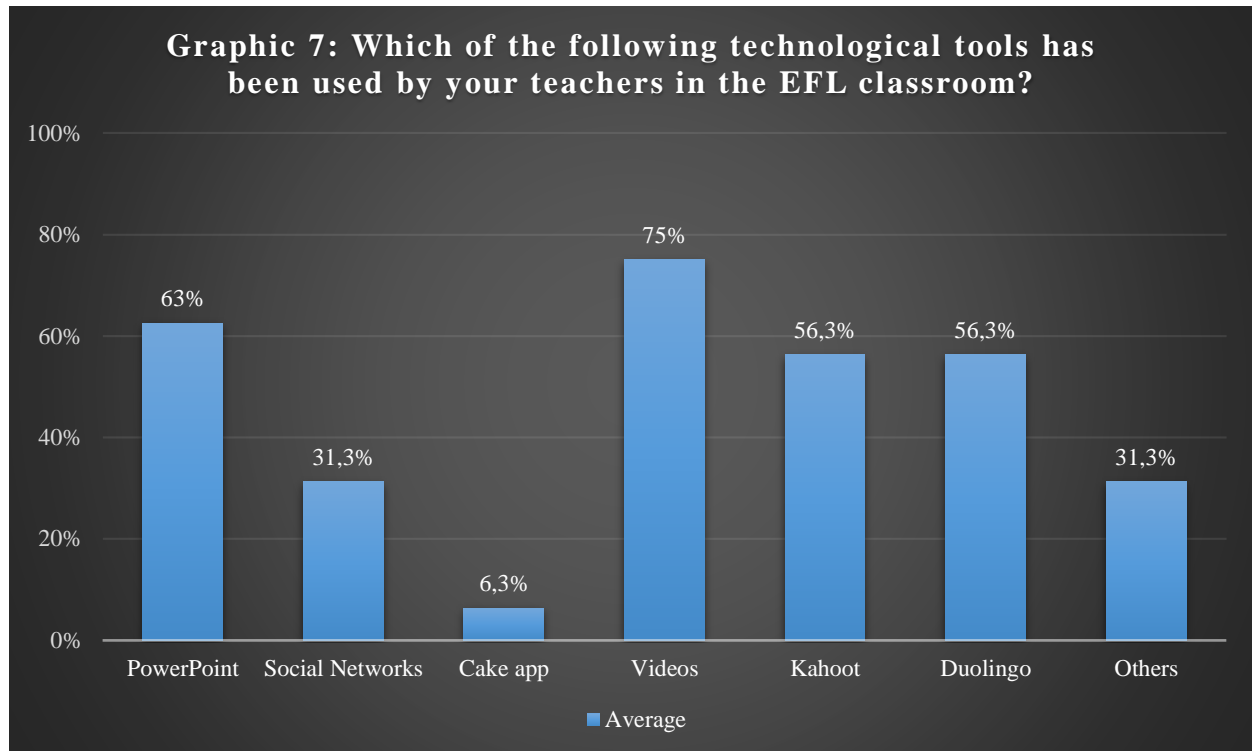
Graphic 7. Survey N°1 – Question 6

Source: Students' Survey N°1
Author: Mena D. (2020)

Analysis and interpretation

In general terms, 24 students affirmed that videos constitute the most common device used by their teachers in the EFL classroom (75%). Also, 20 students stated that the second most used technological tool is Power presentations (63%). In the same way, there are two similar results in which 18 students affirmed that Duolingo and Kahoot represents the third device most used in the classroom (56.3%). The Cake app was another alternative in this question, but only two students chose it (6.3%).

Consequently, students have not expanded their knowledge about new technological devices that focus on teaching and learning English as a foreign language.

3.1.8 Survey N°1 – Question 7

Graphic 8: Which way do you prefer to use for learning new vocabulary?
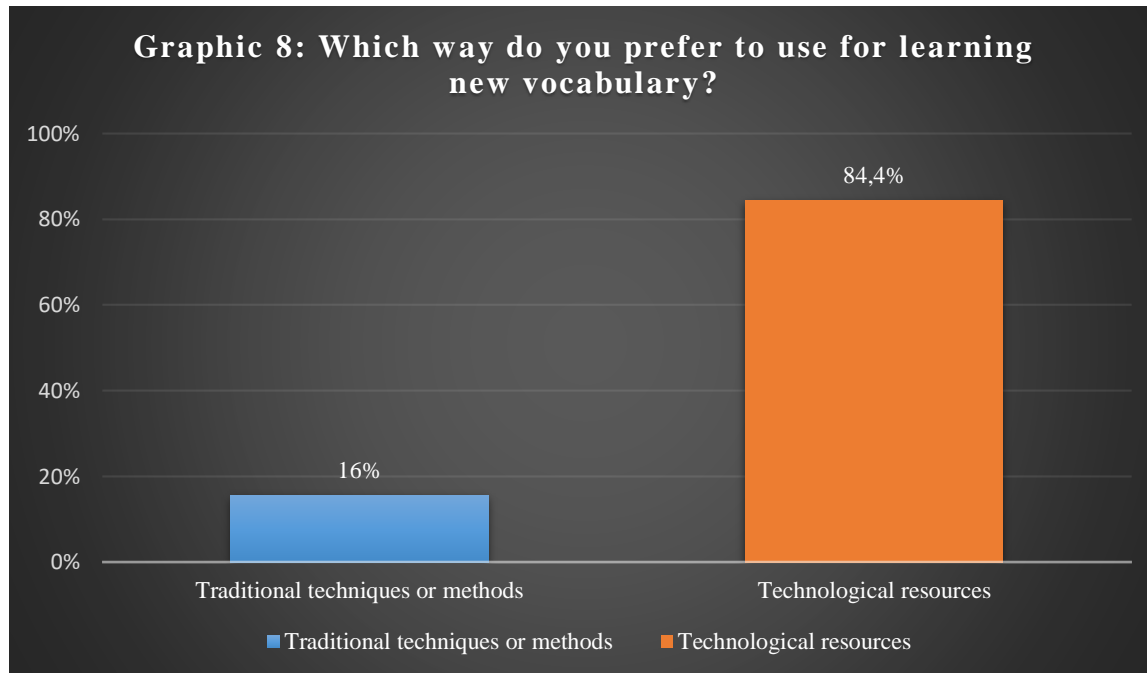
Graphic 8. Survey N°1 – Question 7

Source: Students' Survey N°1
Author: Mena D. (2020)

Analysis and interpretation

Substantially, 27 students affirmed that they prefer to use technological resources for learning new vocabulary (84%). On the other hand, five students stated that they prefer to use traditional methods or techniques to develop their vocabulary skills (16%).

Consequently, there is a considerable difference of 68% between both answers at this question. It means that most students consider the use of technology as a vital resource to have better results in the vocabulary learning process.

The following analyses come from the results obtained in survey N°2 that the 16 students from the experimental group answered. The principal objective of this survey was to identify the type of exercises from the Cake app that students consider more effective for vocabulary learning. Survey N°2 contained 7 multiple choice questions. It is important to mention that this survey was applied to students via Google forms.

3.1.9 Survey N°2 – Question 1

Graphic 9. Survey N°2 – Question 1

Source: Students' Survey N°2
Author: Mena D. (2020)

Analysis and interpretation

In general terms, six students affirmed that the Cake mobile app was highly efficient for learning and practicing new vocabulary (38%). In the same way, nine students considered the use of the Cake mobile app very helpful to learn English vocabulary (56%). However, only one student affirmed that the Cake app was scarcely useful (6%).

Consequently, the Cake mobile app received excellent rates in terms of effectiveness. It means that the components, systems, and context of the app are beneficial and practical for developing English vocabulary.

3.1.10 Survey N°2 – Question 2

Graphic 10: How do you rate the use of the Cake - Learn English app to learn vocabulary?
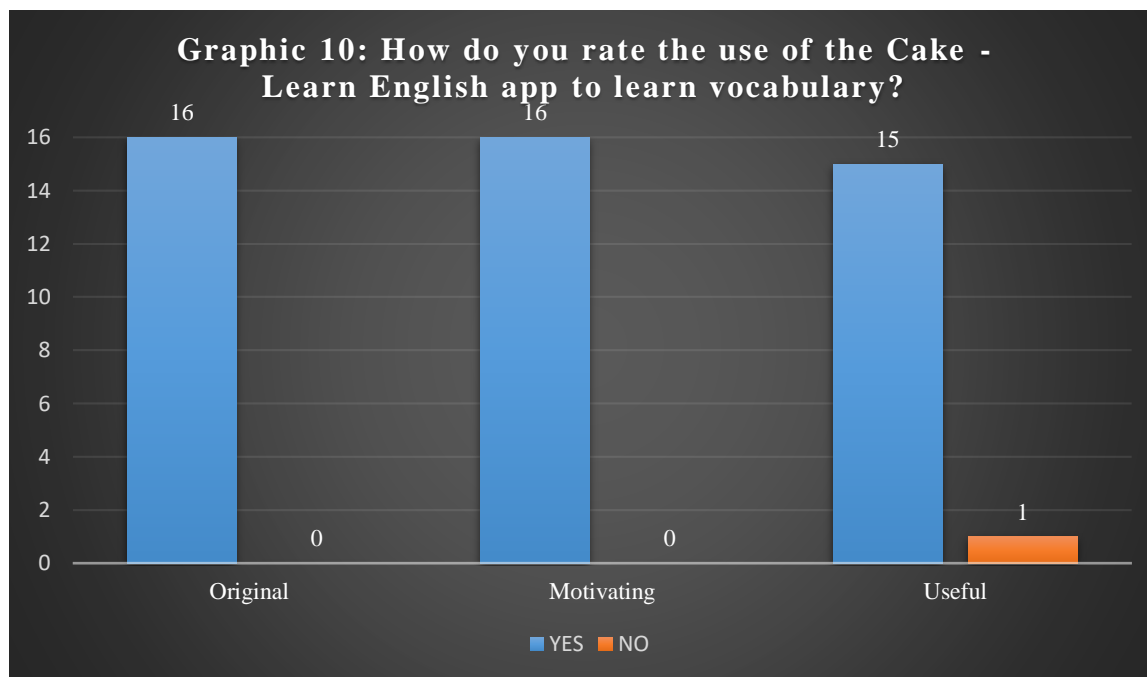
Graphic 10. Survey N°2 – Question 2

Source: Students' Survey N°2
Author: Mena D. (2020)

Analysis and interpretation

In general terms, all the participants from the experimental group rated the Cake English app as an original and motivating mobile device for learning and practicing new vocabulary (100%). In the same way, 15 students considered this application useful for learning vocabulary (93.75%). However, just one student affirmed that the Cake app was useless to develop vocabulary (6.25%).

As a result, the Cake app received an excellent rate due to its well-elaborated components, original mechanism, and useful context related to the development of English vocabulary.

3.1.11 Survey N°2 – Question 3
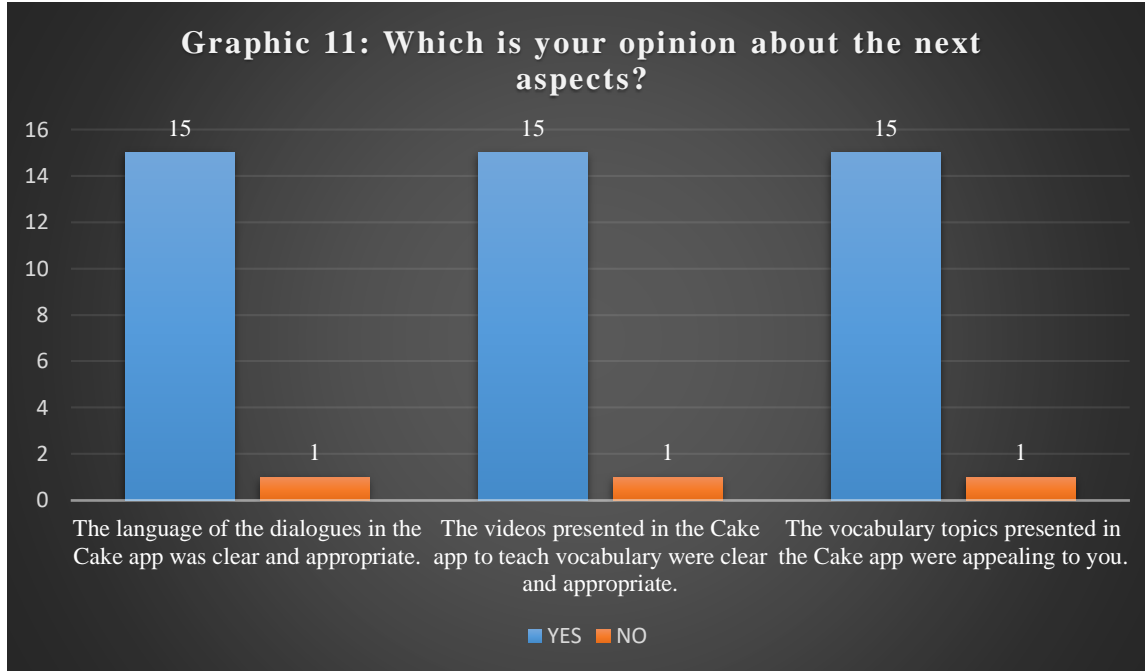
Graphic 11. Survey N°2 – Question 3

Source: Students' Survey N°2
Author: Mena D. (2020)

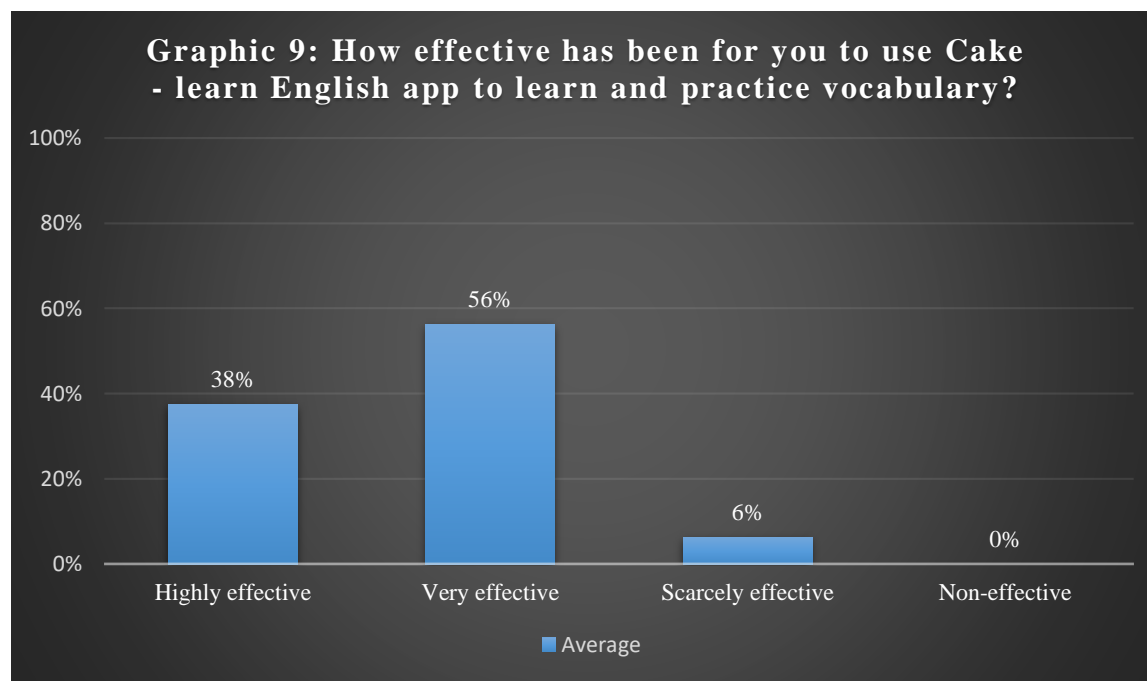### Analysis and interpretation

In general terms, 15 students, who constitute the 93.75%, affirmed that the dialogues, videos, and vocabulary topics presented in the Cake mobile app were clear, appropriate, appealing to them. However, only one student who represents the 6.25% did not maintain the same opinion about the mentioned aspects.

Consequently, the Cake app received an excellent rate in relationship to its indicators systems and approaches for correct functionality.

3.1.12 Survey N°2 – Question 4

Graphic 12: Which of the following Cake-exercises were the most useful for you to learn vocabulary?

average
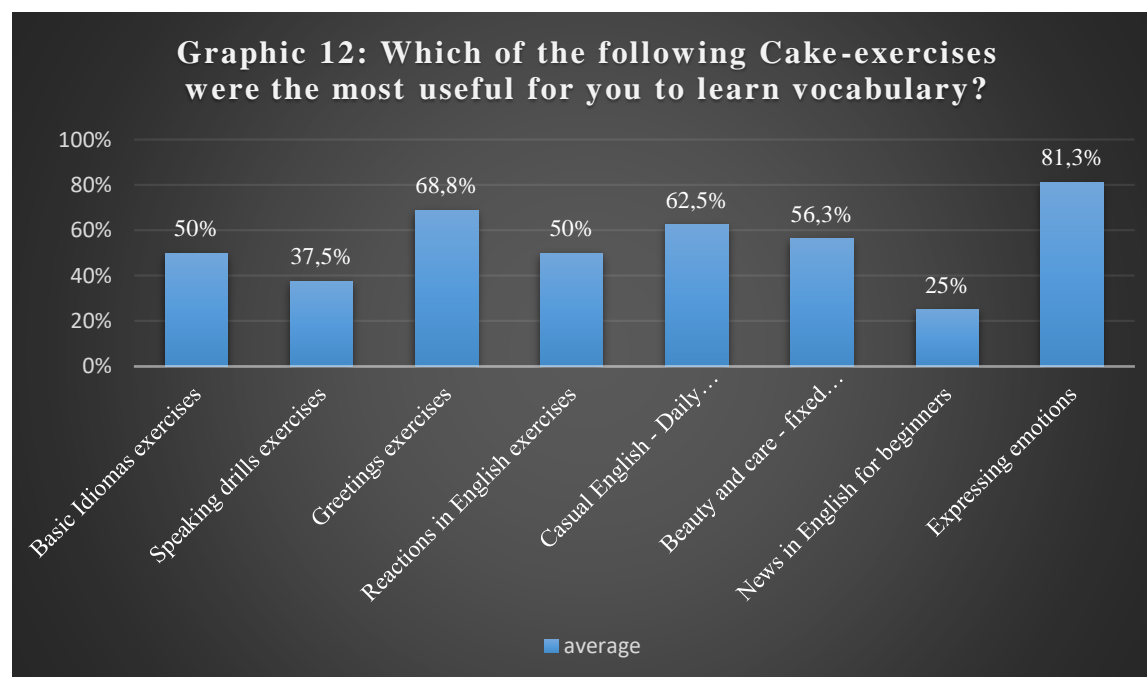
Graphic 12. Survey N°2 – Question 4

Source: Students' Survey N°2
Author: Mena D. (2020)

Analysis and interpretation

In general terms, 13 students affirmed that exercises related to emotions were the most useful ones for leaning vocabulary. However, it does not mean that the rest of the vocabulary exercises were useless. More than half of the students stated that daily expressions exercises, beauty-care fixed phrases, and greetings exercises also were useful in the development of vocabulary.

As a result, students prefer engaging topics to work rather than old-fashion and repetitive ones. It means that the Cake app offers accurate and appealing exercises for students considering their interest, levels, and needs.

3.1.13 Survey N°2 – Question 5
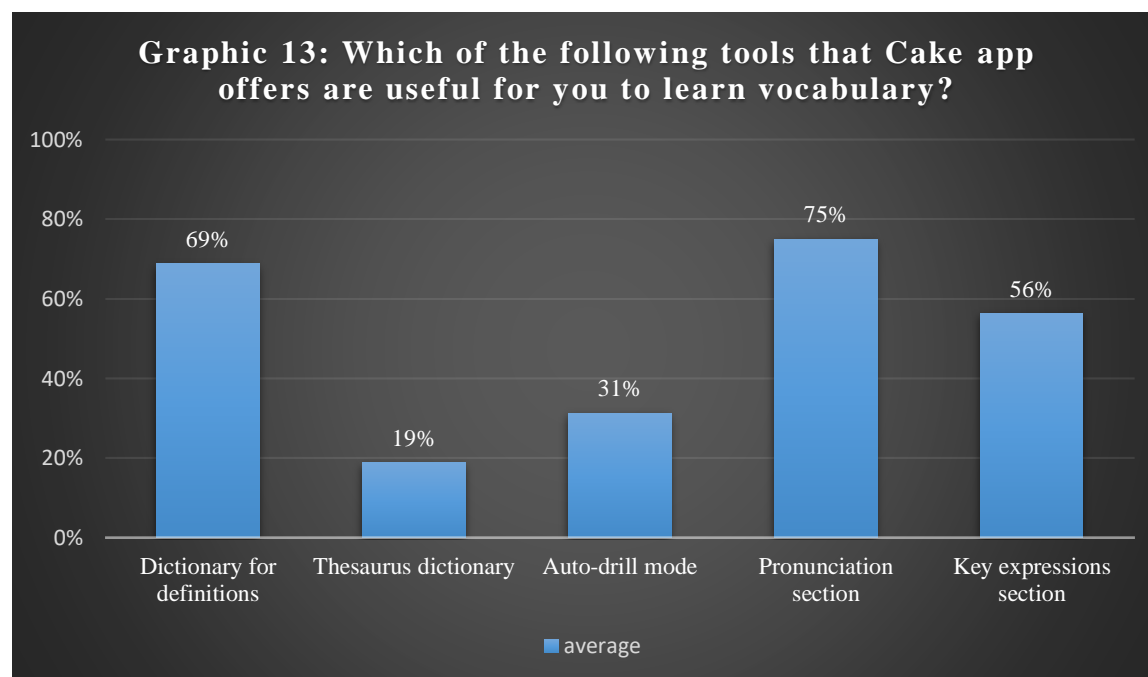
Graphic 13. Survey N°2 – Question 5

Source: Students' Survey N°2
Author: Mena D. (2020)

Analysis and interpretation

In general terms, 12 students, who constitutes the 75% affirmed that the pronunciation section from the Cake app was the most useful tool to learn and practice vocabulary. Also, results showed that 11 students, who constitutes the 69% considered the dictionary for definitions as the second most useful cake tool. According to 9 students (56%) the third most useful cake tool was the key expression section which allowed students to develop fixed phrases and daily expression.

Therefore, it can be said that most of the Cake–mobile tools were useful and well-received by students from the experimental group.

3.1.14 Survey N°2 – Question 6
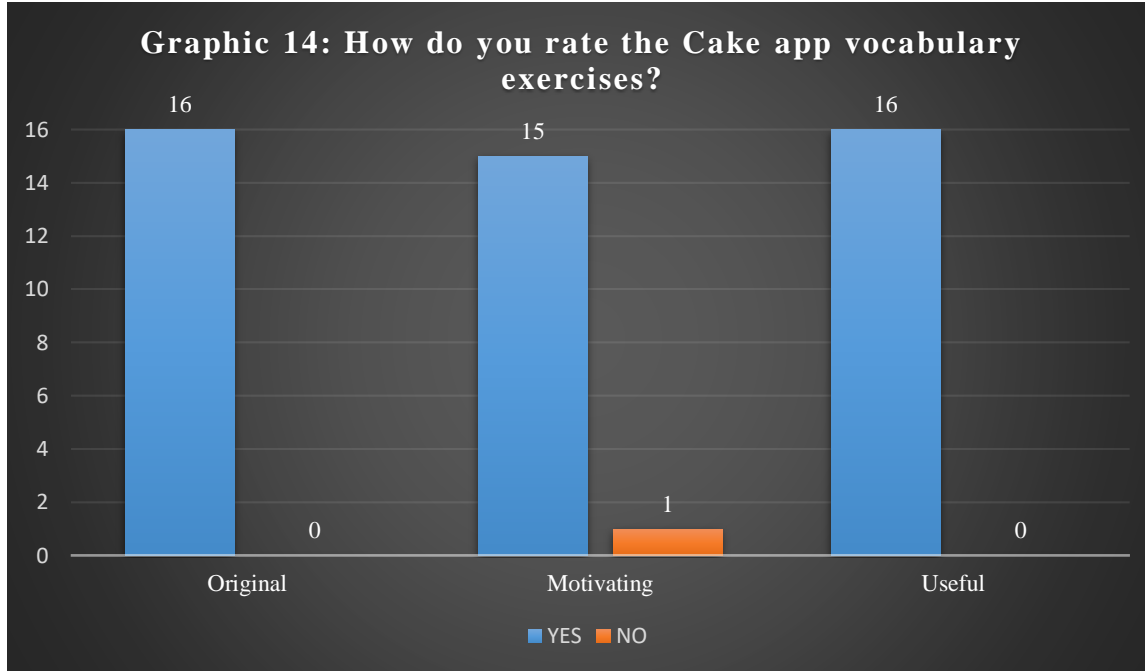
Graphic 14. Survey N°2 – Question 6

Source: Students' Survey N°2
Author: Mena D. (2020)

Analysis and interpretation

Graphic number 14 shows the average score over 100% that the 16 students from the experimental group answered in question 6 – survey N°2. In general terms, all the participants from the experimental group (100%) affirmed that the vocabulary exercises presented in the Cake – Learn English app are original and useful. In the same way, 15 students (93.75%) considered the Cake - vocabulary exercises app motivating but, only one student (6.25%) did not maintain the same opinion.

Consequently, it can be said that the Cake app vocabulary exercises received an excellent rate by 16 students from the experimental group.

3.1.15 Survey N°2 – Question 7

Graphic 15: Would you like your teacher to continue using the Cake - Learn English app to teach vocabulary in the future?
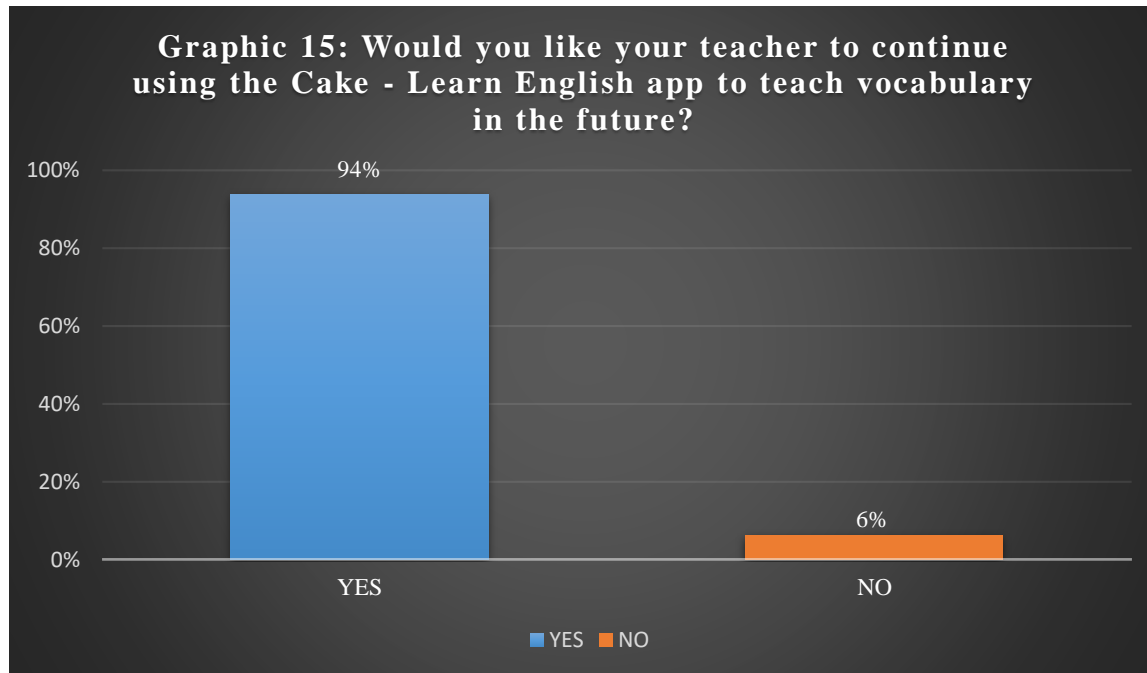
Graphic 15. Survey N°2 – Question 7

Source: Students' Survey N°2
Author: Mena D. (2020)

Analysis and interpretation

Substantially, 15 students affirmed that they would like their teachers to continue using the Cake – Learn English app in the EFL classroom (94%). On the other hand, only one student (6%) did not maintain the same opinion about the app.

Consequently, there is a considerable difference of 88% between both answers at this question. It means that the Cake mobile app constitutes a stable technological device for learning English vocabulary.

3.1.16 Post-test from the experimental and control group

Table 2. Post – test average scores over 20

	Experimental	Control
Pre-test	11.75	8.62

Source: Students' Post-test
Author: Mena, D. (2020)
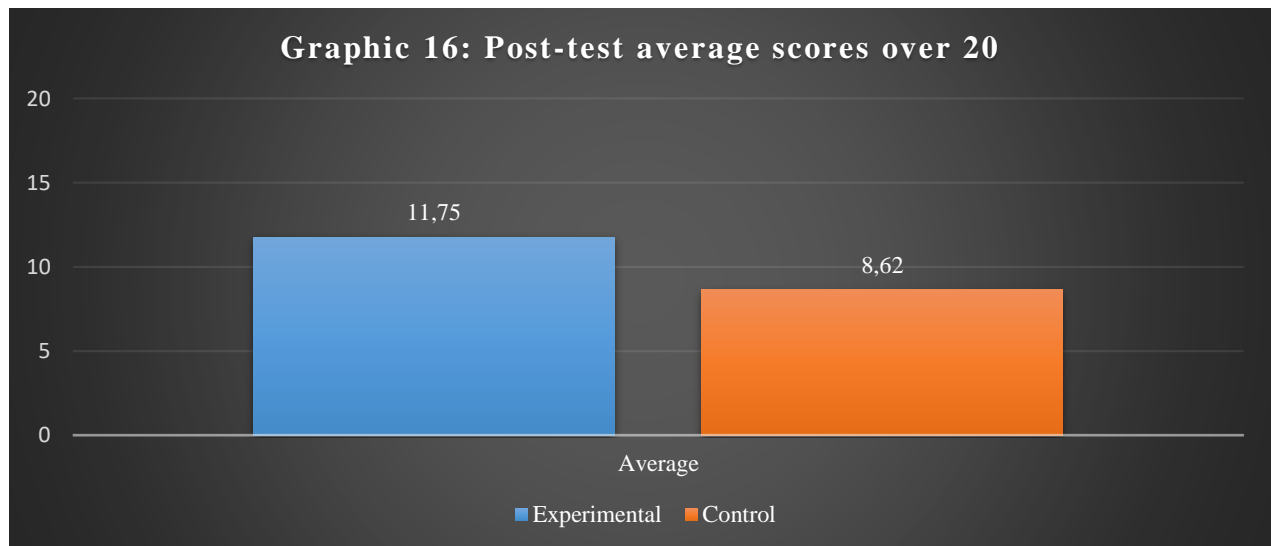
Graphic 16. Post-test average scores over 20

Source: Students' Post-test
Author: Mena D. (2020)

Analysis and interpretation

Graphic number 16, shows the average score over 20 that the 32 students from the second semester A obtained in the vocabulary post-test. The experimental group' average was 11.75 points over 20, while the control group obtained 8.62 points over 20.

As a result, it was discernible that students from the experimental group outperformed the control group in the post-test. The difference in average between both groups was 3.13 points.

3.1.17 Pre and post-test

Table 3. Pre and post – test average scores over 20

Experimental		Control	
Pre-test	**Post-test**	**Pre-test**	**Post-test**
8.31	11.75	8.31	8.63

Source: Students' Pre and Post-test
Author: Mena, D. (2020)
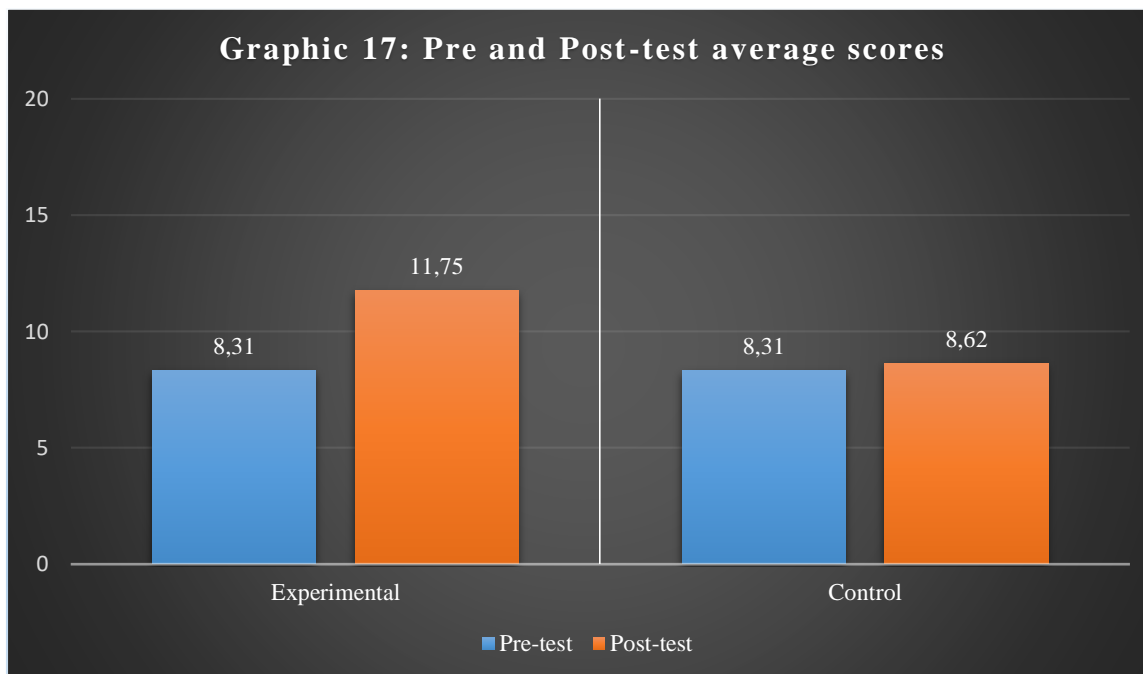
Graphic 17. Pre and post-test average scores over 20

Source: Students' Pre and Post-test
Author: Mena D. (2020)

Analysis and interpretation

Graphic number 17, shows a comparison between the average scores that both control and experimental groups obtained in the pre-and post-test. The experimental group obtained 8.31 points in the pre-test, while in the post-test it scored 11.75 points; therefore, the experimental group improved by 17.2%. On the other hand, the control group scored 8.31 points in the pre-test, while

in the post-test it obtained 8.62 points; therefore, the control group improved its performance by 1.55%.

As a result, the use of the Cake mobile application helped students to improve their vocabulary knowledge with emphasis on fixed phrases and daily expressions.

3.2 Hypothesis verification

For the analysis of the results obtained thought this research project, the author used the "T-student" statistical test.

3.2.1 Hypothesis Statements

3.2.1.1 Null hypothesis (Ho)

The use of the Cake mobile app does not influence the development of English vocabulary in students from second semester "A" of "Pedagogía de los Idiomas Nacionales y Extranjeros" program at Technical University of Ambato.

3.2.1.2 Alternative hypothesis (HI)

The use of the Cake mobile app influences the development of English vocabulary in students from second semester "A" of "Pedagogía de los Idiomas Nacionales y Extranjeros" program at Technical University of Ambato.

3.2.2 T-student test.

Table 4. SPPS - Test of normality

Tests of Normality

	EXPERIMENTAL	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
PRETEST	EXPERIMENTAL	,168	16	,200*	,956	16	,584
POSTTEST	EXPERIMENTAL	,197	16	,098	,924	16	,196

Source: Test of Normality
Author: Mena D. (2020)

Analysis and interpretation

According to the results obtained in the Test of Normality with the SPSS program, the first P-value, which corresponds to the Experimental Group's Pre-test, is more 0.584. The second P-value, which corresponds to the Experimental Group's Post-test, is more 0.196. Consequently, as both P values are more than 0.05, it can be determined that the data came from a normal distribution.

Table 5. T test with SPSS. Experimnetal group

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	PRETEST - POSTTEST	-3,438	2,581	,645	-4,813	-2,062	-5,327	15	,000

Source: Hypothesis verification - SPSS program
Author: Mena D. (2020)

Analysis and interpretation

According to the T-test analysis, there was a bilateral significance of -5.327, reflecting a P-value of 0.000, which is less than 0.05. As a result, this analysis rejected the null hypothesis and accepted the alternative one.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

After caring out this research project, the following conclusions have been reached:

➢ The experimental group obtained 8.31 points over 20 in the pre-test, while in the post-test, it got 11.75 points over 20. Consequently, the experimental group improved its performance in the pre-test by 17,02%. On the contrary, the control group got 8.31 points over 20 in the pre-test, while in the post-test, it got 8.62 points over 20. Thus, the control group increased its performance by 1.55%. In consequence, there was a significant difference between both groups in which the experimental group improved its performance by the use of the Cake mobile application.

➢ The results obtained in survey N°1 proved that the students from second semester A use noncomplex strategies such as write, look, cover, and repeat or the keyword method to learn new vocabulary. It means that learners do not want to spend a lot of time drawing pictures, creating semantic features analysis, or making word maps to learn new vocabulary. In the same way, the results obtained in survey N°1 showed that teachers use simple technological tools for teaching vocabulary. It means that students have been using videos or simple platforms such as Kahoot and Social networks rather than mobile applications focus on the development of English vocabulary.

➢ The results obtained in survey N°2 proved that most of the exercises from the Cake app were consider useful for vocabulary learning by students from the experimental group. These exercises were related to emotions, idioms, greetings, fixed phrases, daily expressions, and reactions in English. Consequently, learners from the experimental group improved their performance in the post-test and increased their vocabulary knowledge by the use of the mentioned exercises.

➤ The results obtained in the statistical analysis proved that the Cake English mobile application had a positive influence on the development of English vocabulary. It means the students improved their vocabulary knowledge, with emphasis on fixed phrases and daily expressions when they used the Cake mobile app. In contrast, the students who use different resources such as books, dictionaries, and web sites did not have a significant improvement in their level of vocabulary.

4.2 Recommendations

If teachers want to use the Cake – Learn English mobile app in the development of the English language vocabulary, they should consider the following recommendations:

➤ The Cake mobile app offers plenty of topics about English vocabulary with different levels and categories. However, this app needs a better organization in which learners can choose the most suitable topics according to their levels, interest, and needs. That is why teachers should select, organize, and create vocabulary exercises adapted from the Cake app and the current book that they are using in the academic program.

➤ It is important to check if the videos presented in the Cake app must be at a correct speed, grammar, and vocabulary level for learners. In this case, teachers should encourage students to use the auto-drill mode to have a better understanding of what the characters are saying in the videos. Also, the app offers the option to control the level of speed of videos.

➤ If students are beginners, teachers should encourage them to use all the tools from the Cake app to have better results in the devolvement of the English language vocabulary. The app offers a dictionary for definitions and a thesaurus dictionary. Also, the app has s peaking sections for students to practice the correct pronunciation of new vocabulary words and expressions.

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ANNEXES

Annex 1: Approval

CARTA DE COMPROMISO

Ambato, 27/04/2020

Dr. Marcelo Núñez
Presidente
Unidad de titulación
Currera de Idiomas
Facultad de Ciencias Humanas y de la Educación

Lic. Mg. Sarah Iza Pazmiño en mi calidad de Coordinadora de la Currera de Idiomas, me permito poner en su conocimiento la aceptación y respaldo para el desarrollo del Trabajo de Titulación bajo el Tema: **"CAKE – LEARN ENGLISH APP AND THE ENGLISH LANGUAGE VOCABULARY"** propuesto por el estudiante Christian Daniel Mena Bonifaz, portador de la Cédula de Ciudadanía 180491329-9, estudiante de la Carrera de Idiomas, Facultad de Ciencias Humanas de la Educación, de la Universidad Técnica de Ambato.

A nombre de la Institución a la cual represento, me comprometo a apoyar en el desarrollo del proyecto.

Particular que comunico a usted para los fines pertinentes.

Atentamente.

Lic. Sarah Iza Pazmiño, Mg.
0501741060
2818175
0984060528
sj.iza@uta.edu.ec

Annex 2: Lesson plans

Intervention 1: The application of the vocabulary pre-test and survey N°1

Date:	June 29th, 2020
Duration:	20 minutes
Class:	Second semester A
Number of students:	32
Teacher's Objective:	- To determine students' knowledge of English vocabulary by the application of the vocabulary pre-test. - To determine the strategies and technological tools that students use to learn new vocabulary by the application of the survey N°1.
Materials:	- The vocabulary pre-test focus on fixed phrases and daily expressions. Google forms link: https://forms.gle/hcaKCb3kr3Frskob6 - The survey N°1 about strategies and technological tools that students use to learn new vocabulary. Google forms link: https://forms.gle/B56kYSTA27mnwFaW8

Intervention 2: vocabulary exercises N°1 – Format 1 and 2

<table>
<tr><td rowspan="7" style="text-align:center">EXPERIMENTAL GROUP</td><td>Date:</td><td>June 30th, 2020</td></tr>
<tr><td>Topic:</td><td>Greetings</td></tr>
<tr><td>Duration:</td><td>10 minutes</td></tr>
<tr><td>Class:</td><td>second semester A (experimental group)</td></tr>
<tr><td>Number of students:</td><td>16</td></tr>
<tr><td>Learning objective:</td><td>- To use the Cake app to practice English fixed phrases and daily expressions about greetings.</td></tr>
<tr><td>Materials:</td><td>- Tutorial video
Link: https://www.youtube.com/watch?v=874xhGjovmY&t=227s
- Cake app – 5 vocabulary activities (greetings):
1. Casual greetings
2. 5 common ways to say "goodbye"
3. When meeting someone for the first time
4. 5 common ways to say "hello"
5. Long time no see!
- Handout N°1 - Format 1</td></tr>
<tr><td rowspan="7" style="text-align:center">CONTROL GROUP</td><td>Date:</td><td>June 30th, 2020</td></tr>
<tr><td>Topic:</td><td>Greetings</td></tr>
<tr><td>Duration:</td><td>10 minutes</td></tr>
<tr><td>Class:</td><td>second semester A (control group)</td></tr>
<tr><td>Number of students:</td><td>16</td></tr>
<tr><td>Learning objective:</td><td>- To use the Top Notch book II and PET online vocabulary exercises to practice English fixed expressions and daily conversations about greetings.</td></tr>
<tr><td>Materials:</td><td>- PET vocabulary exercises – daily conversations 1.
Link:
https://www.englishrevealed.co.uk/PET/vocabulary/pet_everyday_conversations_1.php
- Handout N°1 - Format 2
- Top Notch Book Unit 1, page 3.</td></tr>
</table>

Intervention 3: vocabulary exercises N°2 – Format 1 and 2

<table>
<tr><td rowspan="7" style="writing-mode: vertical">EXPERIMENTAL GROUP</td><td>Date:</td><td>July 01st, 2020</td></tr>
<tr><td>Topic:</td><td>Emotions</td></tr>
<tr><td>Duration:</td><td>10 minutes</td></tr>
<tr><td>Class:</td><td>second semester A (experimental group)</td></tr>
<tr><td>Number of students:</td><td>16</td></tr>
<tr><td>Learning objectives:</td><td>- To use the Cake app to practice English fixed phrases and daily expressions about emotions.</td></tr>
<tr><td>Materials:</td><td>- Cake app activities (emotions):
1. Funny situations
2. Phrases about sadness
3. Apologizing politely
4. Creepy situations
- I'm surprised!
- Handout N° 2 - Format 1</td></tr>
<tr><td rowspan="7" style="writing-mode: vertical">CONTROL GROUP</td><td>Date:</td><td>July 01st, 2020</td></tr>
<tr><td>Topic:</td><td>Emotions</td></tr>
<tr><td>Duration:</td><td>10 minutes</td></tr>
<tr><td>Class:</td><td>second semester A (control group)</td></tr>
<tr><td>Number of students:</td><td>16</td></tr>
<tr><td>Learning objectives:</td><td>- To use the Top Notch book II and PET online vocabulary exercises to practice English fixed expressions and daily conversations about greetings.</td></tr>
<tr><td>Materials:</td><td>- PET vocabulary exercises – daily conversations 2.
Link:
https://www.englishrevealed.co.uk/PET/vocabulary/pet_everyday_conversations_2.php
- Handout N° 2 - Format 2
- Top Notch Book Unit 2, page 15, 17.</td></tr>
</table>

Intervention 4: vocabulary exercises N°3 – Format 1 and 2

<table>
<tr><td rowspan="7" style="writing-mode:vertical">EXPERIMENTAL GROUP</td><td>Date:</td><td>July 6th, 2020</td></tr>
<tr><td>Topic:</td><td>Personal care and appearance</td></tr>
<tr><td>Duration:</td><td>10 minutes</td></tr>
<tr><td>Class:</td><td>second semester A (experimental group)</td></tr>
<tr><td>Number of students:</td><td>16</td></tr>
<tr><td>Learning objective:</td><td>- To use the Cake app to practice English fixed expressions and daily conversations about personal care and appearance.</td></tr>
<tr><td>Materials:</td><td>- Cake app vocabulary activities (healthy):
1. Beauty and care
2. Expressions related to hair
- Casual English – "Breaking out" phrases.
- Handout N° 3 - Format 1</td></tr>
<tr><td rowspan="7" style="writing-mode:vertical">CONTROL GROUP</td><td>Date:</td><td>July 6th, 2020</td></tr>
<tr><td>Topic:</td><td>Personal care and appearance</td></tr>
<tr><td>Duration:</td><td>10 minutes</td></tr>
<tr><td>Class:</td><td>second semester A (control group)</td></tr>
<tr><td>Number of students:</td><td>16</td></tr>
<tr><td>Learning objective:</td><td>- To use the Top Notch book II and PET online vocabulary exercises to practice English fixed expressions and daily conversations about greetings.</td></tr>
<tr><td>Materials:</td><td>- PET vocabulary exercises - healthy lifestyle.
Link:
https://www.englishrevealed.co.uk/PET/vocabulary/pet_healthy_lifestyle.php
- Handout N° 3 - Format 2
- Top Notch Book Unit 5 page 50, 51.</td></tr>
</table>

Intervention 5: The application of the vocabulary post-test and survey N°2

Date:	July 7th, 2020
Duration:	20 minutes
Class:	Second semester A (experimental and control group)
Number of students:	32
Teacher's objectives:	- To determine students' knowledge of English vocabulary by the application of the vocabulary post-test. - To stablish which type of exercises from the Cake app are more effective for vocabulary learning.
Materials:	- Vocabulary post-test Google forms link: https://forms.gle/ZCxxxqCp3abi7SdF6 - The survey N°2 (just to the experimental group) Google forms link: https://forms.gle/Lnmy3pLgEZK9emiF8

Annex 3: Pre and post-test

For the pre and post-test, a vocabulary part was taken and adapted from the standardized PET practice test (B1 level, Cambridge English Exams) and units 1, 2, and 5 from the Top Notch II book to determine students' knowledge of English vocabulary focus on fixed phrases and daily expressions. This test consisted of 20 multiple choice vocabulary questions. All the participants were given clear instructions on how to perform the test and how to mark their answers correctly.

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UNIVERSIDAD TÉCNICA DE AMBATO

FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN

CARRERA DE IDIOMAS

</div>

EXPERT'S GENERAL INFORMATION:

Full Name:	Ximena Alexandra Calero Sánchez
Profession:	English Professor
Workplace:	Universidad Técnica de Ambato

<div align="center">

Degrees

</div>

Undergraduate: Licenciada en Ciencias de la Educación, Especialidad Inglés

Institution: Universidad Técnica de Ambato

Year: 1998

Postgraduate: Master in English Applied Linguistics

Institution: Universidad Autónoma de Madrid

Year: 2016

VOCABULARY PRE AND POST-TEST

Instructions:

- Please, don't use your cellphone or any other supplementary digital resource to complete the test.

- You have 10 minutes to complete the test.

- Read the following statements and choose the best alternative.

- You must choose just one option for each statement.

- Please, answer this test just one time.

1. **Long _____ no see you!**
   a. way
   b. distance
   c. time
   d. day
2. **I'm getting my hair _____ at the salon.**
   a. done
   b. made
   c. prepared
   d. ready
3. **I _____ you an apology.**
   a. have
   b. offer
   c. give
   d. owe
4. **I had a nervous _____.**
   a. problem
   b. heartbreaking
   c. breakdown
   d. break up
5. **I'm certainly _____ to see you again.**
   a. glad
   b. good
   c. better
   d. fall in love
6. **Sorry about the_____. It's been a busy morning.**
   a. hour
   b. time
   c. delay
   d. disappointment

7. **There is often a traffic _____ at rush hour.**
a. jam
b. congestion
c. queue
d. problem
8. **I receive about 20 text _____ every day.**
a. letters
b. messages
c. mails
d. carts
9. **What a grey day! It's very _____.**
a. cloudy
b. sunny
c. cloudless
d. rainy
10. **He eats fast food every day. It's very_____.**
a. fat
b. healthy
c. unhealthy
d. thin
11. **Try to get home before rush _____.**
a. time
b. traffic
c. hour
d. day
12. **The opposite of loose is _____.**
a. find
b. tight
c. baggy
d. lazy
13. **Can you give him something to drink? He's very _____.**
a. hungry
b. thirsty
c. tired
d. hot
14. **Instead of saying "I don't have conditioner" I can say "I ran _____ conditioner"**
a. in
b. on
c. empty
d. out

15. You say this as a casual greeting with friends or your family:
a. What have you been up to?
b. I got to go
c. How are you?
d. So long, boys!

16. You can say this to express fear:
a. You crack me up
b. That is just absolutely heartbreaking
c. My heart is racing
d. That is hilarious!

17. You can say this to express happiness:
a. My heart is racing
b. That is heartbreaking
c. You crack me up
d. That is not hilarious!

18. You say this to express regret:
a. Absolutely, I don't regret it
b. I have goosebumps.
c. Probably shouldn't have done that.
d. I feel depressed.

19. You say this when you're not sure if you know someone, but you think you might.
a. Absolutely, I don't regret it
b. Don't I know you from somewhere?
c. Probably shouldn't have done that.
d. Long time no see you!

20. You say this to express sadness:
a. That is absolutely heartbreaking.
b. I have goosebumps.
c. Probably shouldn't have done that.
d. I'm getting the shivers.

THANKS FOR YOUR COOPERATION!

Google forms Pre-test Link: https://forms.gle/bvSMf4SGQwbzjjsh6
Google forms Post-test Link: https://forms.gle/ZCxxxqCp3abi7SdF6
Source: Mena (2020).

Final Resolution:

Approved	✓	Disapproved	

Source: Mena (2020).

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CARRERA DE IDIOMAS

EXPERT JUDGMENT EVIDENCE

I, Ximena Calero Sánchez, M.Sc. with I.D. No. 1802884062, certify that I conducted the expert judgment on this instrument designed by Christian Daniel Mena Bonifaz, with I.D. No. 180491329-9 for the Final Degree Project entitled "CAKE – LEARN ENGLISH APP AND THE ENGLISH LANGUAGE VOCABULARY" since it is a fundamental requirement to qualify for the Bachelor's Degree in Educational Sciences; Mention: English, at Universidad Técnica de Ambato.

Ecuador, June 23rd, 2020.

Sincerely,

Lcda. Ximena Calero Sánchez M.Sc.

I.D. 1802884062

Annex 4: Survey N°1

This instrument was elaborated in order to determine the strategies and technological tools that students use to learn new vocabulary. This instrument was applied to both experimental and control group via Google forms.

<div align="center">

UNIVERSIDAD TÉCNICA DE AMBATO

FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN

CARRERA DE IDIOMAS

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EXPERT'S GENERAL INFORMATION:

Full Name: Ximena Alexandra Calero Sánchez
Profession: English Professor
Workplace: Universidad Técnica de Ambato
Degrees Undergraduate: Licenciada en Ciencias de la Educación, Especialidad Inglés Institution: Universidad Técnica de Ambato Year: 1998   Postgraduate: Master in English Applied Linguistics Institution: Universidad Autónoma de Madrid Year: 2016

SURVEY N°1

Purpose: The aim of this survey is to gather information to determine the strategies and technological tools that students use for learning new vocabulary.

Part 1: Background information

Name:

Gender:

Age:

Part 2: Vocabulary strategies

1. **Do you consider learning vocabulary in English difficult?**

Yes ( )

No ( )

2. **Which of the following strategies do you use to learn new vocabulary? You can choose more than one option.**

- Word Map ( )
- Write, look, cover and repeat ( )
- Write a sentence with the new word ( )
- Draw pictures of the new words ( )
- Keyword method – using images and ( )

    rhymes to memorize something.

- Semantic feature analysis - using grids ( )

    (+, -) to categorize vocabulary word lists.

- Frayer Model – using graphic organizers to define ( )

new vocabulary by generating examples and
non-examples, pictures and characteristics.

- Others   ( )

3. **Which of the following benefits have you reached using vocabulary learning strategies?**

	Yes	No
It increases my independent reading.	( )	( )
It increases my interest to learn new vocabulary.	( )	( )
It improves my language and literacy skills.	( )	( )
It Improves my reading comprehension.	( )	( )
It Improves my speaking skills.	( )	( )
It Increases my range of vocabulary.	( )	( )

Part 2: Basic technological skills

4. **Do you consider necessary the use of language mobile applications in the EFL classroom?**

Yes   ( )

No   ( )

5. **Have you used technological tools for learning vocabulary in the EFL classroom?**

Yes   ( )

No   ( )

6. **Which of the following technological tools has been used by your teachers in the EFL classroom? You can choose more than one option.**

PowerPoint   ( )

Social Networks   ( )

Cake app   ( )

Videos   ( )

Kahoot   ( )

Duolingo   ( )

Others   ( )

7. Which way do you prefer to use for learning new vocabulary?

Traditional techniques or methods ( )

Technological resources   ( )

Google forms Survey N°1 Link: https://forms.gle/B56kYSTA27mnwFaW8
Source: Mena (2020).

Final Resolution:

Approved	✓	Disapproved	

Source: Mena (2020).

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CARRERA DE IDIOMAS

EXPERT JUDGMENT EVIDENCE

I, Ximena Calero Sánchez, M.Sc. with I.D. No. 1802884062, certify that I conducted the expert judgment on this instrument designed by Christian Daniel Mena Bonifaz, with I.D. No. 180491329-9 for the Final Degree Project entitled "CAKE – LEARN ENGLISH APP AND THE ENGLISH LANGUAGE VOCABULARY" since it is a fundamental requirement to qualify for the Bachelor's Degree in Educational Sciences; Mention: English, at Universidad Técnica de Ambato.

Ecuador, June 23rd, 2020.

Sincerely,

Lcda. Ximena Calero Sánchez M.Sc.

I.D. 1802884062

Annex 5: Survey N°2

This instrument was elaborated in order to stablish which type of exercises from the Cake app are more effective for vocabulary learning. This instrument was applied just to the experimental group via Google forms.

UNIVERSIDAD TÉCNICA DE AMBATO

FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN

CARRERA DE IDIOMAS

EXPERT'S GENERAL INFORMATION:

Full Name: Ximena Alexandra Calero Sánchez
Profession: English Professor
Workplace: Universidad Técnica de Ambato
Degrees Undergraduate: Licenciada en Ciencias de la Educación, Especialidad Inglés Institution: Universidad Técnica de Ambato Year: 1998   Postgraduate: Master in English Applied Linguistics Institution: Universidad Autónoma de Madrid Year: 2016

SURVEY N°2

Purpose: The aim of this survey is to gather information to stablish which type of exercises from the Cake app are more effective for vocabulary learning.

Part 1: Background information

Name:

Gender:

Age:

Part 2: Perceptions on the use of the Cake - Learn English mobile app

1. **How effective has been for you to use Cake - Learn English app to learn and practice vocabulary?**

   Highly effective   ( )
   Very effective   ( )
   Scarcely effective   ( )
   Non-effective   ( )

2. **How do you rate the use of the Cake - Learn English app to learn vocabulary?**

	Yes	No
Original	( )	( )
Motivating	( )	( )
Useful	( )	( )

3. **Which is your opinion about the next aspects?**

                                            Yes   No

The language of the dialogues in the Cake app was clear and appropriate. ( ) ( )

The videos presented in the Cake app to teach vocabulary were clear and appropriate. ( ) ( )

The vocabulary topics presented in the Cake app were appealing to you. ( ) ( )

Part 3: Perceptions about Cake app – exercises

4. **Which of the following Cake-exercises were the most useful for you to learn vocabulary? You can choose more than one option.**
   - Basic Idioms exercises
   - Speaking drills exercises
   - Casual English exercises
   - Reactions in English exercises
   - Casual English – Daily conversations
   - Idioms and common phrases exercise
   - News in English for beginners
   - Expressing thoughts

5. **Which of the following tools that Cake app offers are useful for you to learn vocabulary? You can choose more than one option.**
   - Dictionary for definitions
   - Thesaurus dictionary
   - Auto drill mode
   - Pronunciation section
   - Key expressions section

6. **How do you rate the Cake app vocabulary exercises?**

	Yes	No
Original	( )	( )
Motivating	( )	( )
Useful	( )	( )

7. **Would you like your teacher to continue using the Cake - Learn English app to teach vocabulary in the future?**

   Yes ( )

   No (|)

Google forms Survey N°1 Link: https://forms.gle/Lnmy3pLgEZK9emiF8
Source: Mena (2020).

Final Resolution:

Approved	✓	Disapproved	

Source: Mena (2020).

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CARRERA DE IDIOMAS

EXPERT JUDGMENT EVIDENCE

I, Ximena Calero Sánchez, M.Sc. with I.D. No. 1802884062, certify that I conducted the expert judgment on this instrument designed by Christian Daniel Mena Bonifaz, with I.D. No. 180491329-9 for the Final Degree Project entitled "CAKE – LEARN ENGLISH APP AND THE ENGLISH LANGUAGE VOCABULARY" since it is a fundamental requirement to qualify for the Bachelor's Degree in Educational Sciences; Mention: English, at Universidad Técnica de Ambato.

Ecuador, June 23rd, 2020.

Sincerely,

_____

Lcda. Ximena Calero Sánchez M.Sc.

I.D. 1802884062

Annex 6: Evidence of Exercises – Formats 1 and 2

FORMAT 1

CAKE APP – HANDOUT N°1

TOPIC: GREETINGS

Name: Ricardo Sebastián Carrera Sánchez   **Date:** 30/06/2020

Instructions:

- To answer the following questions, you must use the Cake app vocabulary section related to greetings. Activities: Casual greetings, 5 common ways to say "goodbye", When meeting someone for the first time, 5 common ways to say "hello", Long time no see!
- Please, paste a screenshot of just one of the Cake app – activity (greetings) when you finish it at the end of this file.
- Don't use another mobile app or technological tool to complete the exercises.
- Send this handout completed in PDF format to the following email: danymb152015@gmail.com

A) MATCH THE FOLLOWING EXPRESSIONS TO THEIR CORRECT EXPLANATIONS.

1 You say this when you haven't seen someone in a long time.

2 You say this when you're happy to see someone again.

3 You say this as a casual greeting with friends or your family.

4 You say this when you're not sure if you know someone, but you think you might.

Don't I know you from somewhere?

I'm certainly glad to see you again.

Long time no see!

What have you been up to?

B) CIRCLE THE POSSIBLE EXPRESSIONS TO SAY GOODBYE.

Bye!   How is going?   Take care   Great to see you guys   What's up

See you soon   Have a good one   What have you been up to?

C) WRITE YOUR OWN EXPLANATION FOR THE FOLLOWING EXPRESSIONS.
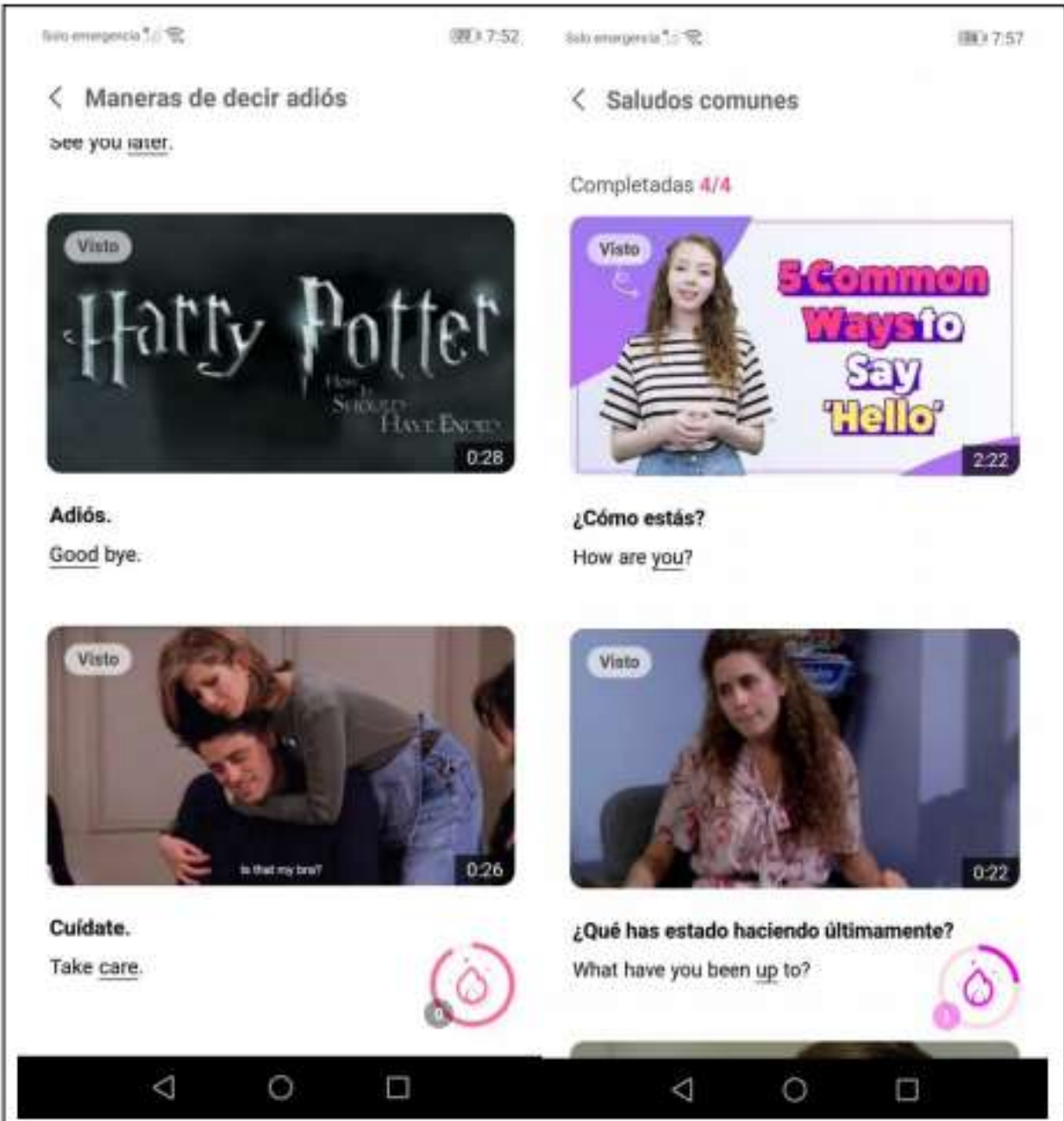
1. What's new?

Explanation: It is a common greeting that means, what new things have happened in your life?

2. Have a good one

Explanation: It is a way to say goodbye and express that the other person is expected to have a great day.

D) PASTE A SCREENSHOT OF THE CAKE APP - ACTIVITY (GREETINGS).

FORMAT 2

PET - HANDOUT N°1

TOPIC: GREETINGS – DAILY CONVERSATIONS 1

LINK: https://www.englishrevealed.co.uk/PET/vocabulary/pet_everyday_conversations_1.php

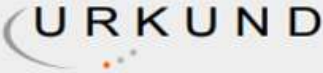**Group:** Belén Solis   **Date:** 30/06/2020

Instructions:

- To complete the following questions, you can use your books or dictionaries.
- Please, paste a screenshot of the activity when you finish it.
- Send this handout in PDF format to the following email: danymb152015@gmail.com
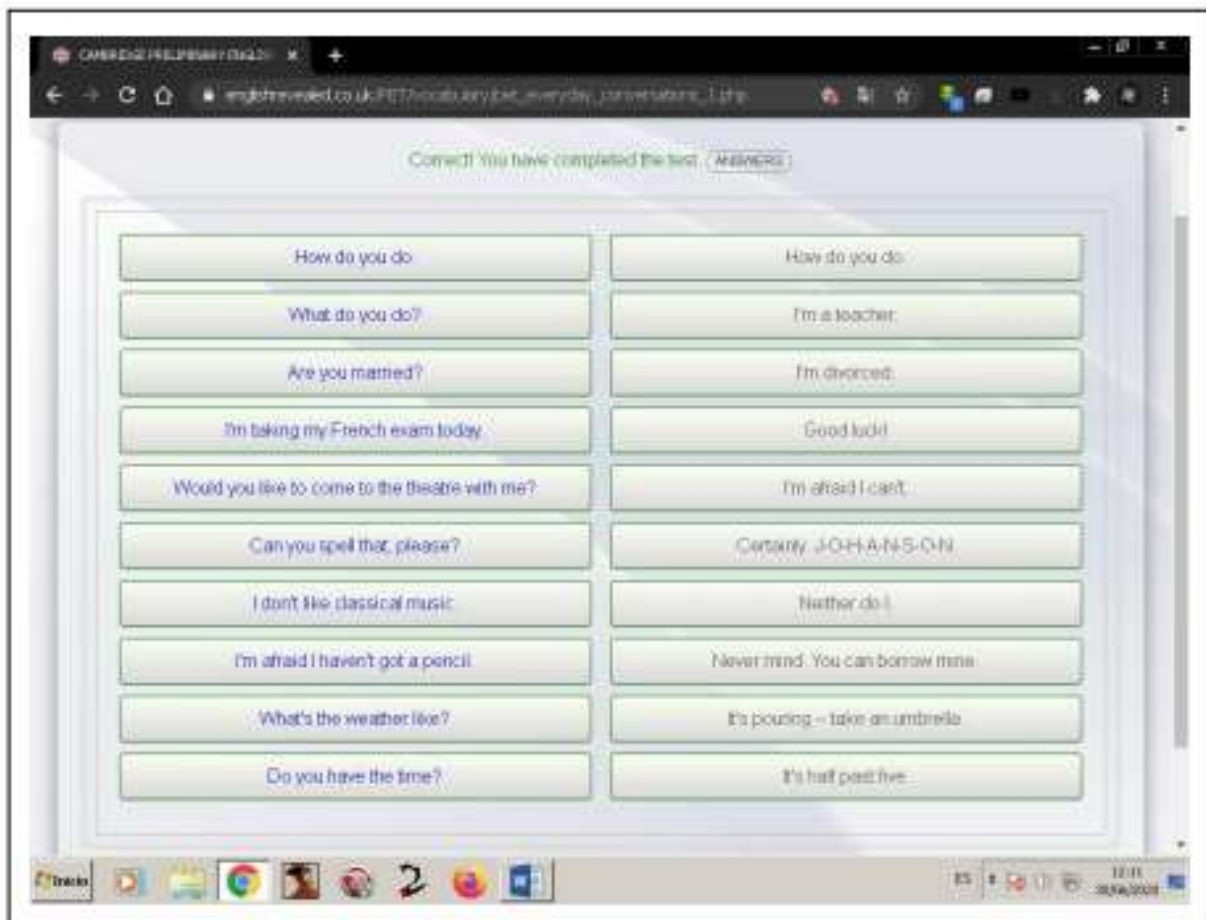
THANKS FOR YOUR COOPERATION!

Annex 7: Urkund

URKUND

Urkund Analysis Result

Analysed Document: DISSERTATION_MENA_DANIEL.docx (D77779101)
Submitted: 8/14/2020 3:10:00 PM
Submitted By: cmena3299@uta.edu.ec
Significance: 5 %

Sources included in the report:

EVE JIMENEZ TESIS _ TRIBUNAL.docx (D76151286)
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https://forms.gle/Lnmy3pLgEZK9emiF8
https://dspace.ucuenca.edu.ec/bitstream/123456789/24404/1/Final%20Thesis.pdf

Instances where selected sources appear:

30

Mg. Wilma Elizabeth Suárez Mosquera
TUTORA TRABAJO TITULACIÓN