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Maestría en Lingüística Aplicada a la Enseñanza del Idioma Inglés como Lengua Extranjera

The Implementation of the Student Response System (SRS) Kahoot! in EFL classes and its effects on Reading Comprehension

Trabajo de titulación previo a la obtención del título de Magíster en Lingüística Aplicada a la Enseñanza del Inglés como Lengua Extranjera

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Resumen

El uso de sistemas de respuesta basados en juegos para mejorar las habilidades del lenguaje dentro de una clase de inglés como Lengua Extranjera ha reportado ser benéfico principalmente para ciertas destrezas como gramática y estructura de oraciones. En este estudio, la plataforma online de juego *Kahoot!* fue usada específicamente para mejorar la destreza de lectura comprensiva a través de un período cercano a tres meses con estudiantes de nivel A2 de la Universidad de Cuenca en Ecuador. Las instalaciones del laboratorio de cómputo de esta institución fueron usadas semanalmente para aproximar a los estudiantes hacia la metodología digital que englobó la lectura de historias cortas verdaderas en inglés y la intervención de la página web *Kahoot!* enfocada hacia comprensión y memorización de detalles específicos. El tratamiento se documentó mediante un diario en el cual el investigador llevó apuntes sobre cada sesión, así como material del proceso en su celular. El diseño de investigación de este estudio usó un método mixto basado en el método Hipotético-Deductivo en base a las técnicas e instrumentos de recolección de datos, así como el posterior análisis de los mismos. Pre y post tests fueron tomados para comparar los resultados antes y después de la metodología. Los resultados revelaron un mejoramiento estadístico con efectos favorables en los pre y post tests y también una aceptación general hacia la mencionada metodología. Se sugiere más investigación con respecto al uso de *Kahoot!* para propósitos de mejora en la lectura comprensiva y su uso continuo como herramienta de apoyo para recordar detalles específicos de textos, así como de otras subdestrezas que podrían verse beneficiadas de esta metodología dentro del campo de la enseñanza de Inglés como Lengua Extranjera.

Palabras claves: Lectura comprensiva. Sistemas de respuesta basados en juego. Sistemas de respuesta de estudiantes. Gamificación. Recursos online.

Abstract

The use of game-based response systems for enhancing language skills inside an EFL classroom has reported benefits mainly for certain particular skills like grammar and sentence structuring. In this study, the online gaming platform *Kahoot!* was used specifically for enhancing the reading comprehension skill through a period of nearly three months on students of A2 level from Universidad de Cuenca in Ecuador. The computer lab facilities of this institution were used on a weekly basis to approach the students to the digital methodology which encompassed the reading of true short stories in English and the intervention of the *Kahoot!* website focused on the comprehension and remembering of their specific details by means of quizzes. The treatment was documented through a journal in which the researcher made entries about each session as well as keeping significant material of the process in his cellphone. The research design of this study used a mixed method based on the Hypothetico-Deductive Approach to research techniques and data collection instruments, as well as their further analysis. Pre and posttests were taken in order to compare the results before and after the methodology. The outcomes revealed a statistical improvement with favorable effects concerning the pre and posttests and also a general acceptance towards the mentioned methodology. Further research is suggested on the use of *Kahoot!* for reading comprehension improvement purposes and its continuous use as a supporting tool for remembering specific details of texts, as well as other subskills which could possibly be benefitted from this methodology in the field of EFL instruction.

Key words: Reading comprehension. Game-based response systems. Student response systems. Gamification. Online resources.

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Dedication

First and foremost, I would like to dedicate this work to my family, principally my mom Eloisa who taught me to strive and maintain a positive mindset through difficult times in life. I would also like to thank my father Hugo for being an excellent man who is always supporting his loved ones. I also dedicate this work to my brother Edwin, who inspired me to be better and reach higher purposes and to my brother Freddy and sister-in-law Leoni, without whom I would not have had the opportunity to move ahead with my academic progress.

To my sisters Nora and Janeth who have been nothing but caring and supportive to me. I consider you as my great inspiration to be resilient, intelligent, and strong without losing the affection and love. Last but not least, I dedicate this achievement to my lovely long-time partner Mercedes who has always been by my side taking every step together.

Thank you all.

CHAPTER I: Introduction

1.1 Introduction

The use of online gamification platforms for specific improvement of motivation in EFL contexts is part of a learning environment which seeks to assess participation and competence (Bicen & Kocakoyun, 2018). These authors regard gamification to be an important tool for consolidating topics and as an aid for better explaining the content. In result, it encourages motivation which is a key aspect of foreign language teaching, facilitating its learning process. Lack of engagement can create difficulties for the effective conduct of learning events as Heaslip, Donovan & Cullen (2014) stated.

There is a general low average English proficiency level in Ecuador concerning students who emerge from public high schools (British Council, 2015). Because of this, their progress throughout higher levels of language acquisition results affected. The mentioned aspects can influence negatively on successful EFL learning achievement in higher level education. According to the English First Annual Proficiency Index (English Proficiency EF, 2019), the indicators of the reading comprehension skill in Ecuador demonstrate a rather low interest about reading in general.

With this insight, the task of teaching English becomes even more challenging for EFL instructors, since the average tendency to read in L1 already presents stagnant low figures. The present study attempted to adapt the interactive online resource known as *Kahoot!* for fostering reading comprehension and remembering specific details of particular texts.

1.2 Problem statement: Context of the problem

Basic literacy can be regarded as essential for school achievement as well as essential to a country's well-being (Kutner Greenberg, Jin, Boyle, Hsu & Dunleavy, 2007). Some of the main aspects that facilitate better reading instruction for improving literacy include addressing key components such as phonemic awareness, phonics, fluency, vocabulary, and comprehension (National Reading Panel, 2000) along with providing pedagogical strategies which target lower and higher-order processes (RAND Reading Study Group, 2002; Shanahan, 2006).

Research indicates that through the schooling progress, it is the active use of higher-level strategies to be considered the main factor which predicts reading comprehension above word recognition and language ability (Lysenko & Abrami, 2014). One of the strategies that these authors incorporate is comprehension monitoring as a skill to verify understanding and from then on, making considerable improvements with the aid of digital resources.

Technology is a fundamental part of society, and in countries like the United States there is almost 100% access to internet in schools (Wells & Lewis, 2006). Nevertheless, it is not only the young generation who has adapted to a regular use of technology because according to the Entertainment Software Association (2010), the average game players are 34 years old, thus its significance associates with people's entertainment. Likewise, Facebook press room statistics (2011) show that its users spend more than 700 billion minutes a month in it, clarifying the advent of technology for communication among people with no specific discrimination of age. The major task is to find ways in which the veracity

of academic objectives through technological aids becomes sustained with measurable results through a symbolic enhancement of instruction not only in technologically-advanced scenarios, but also in habituated circumstances.

An examination of the British Council for policy, perceptions and influencing factors of English Learning in Ecuador in 2015, revealed that among the English learning motivations, the survey respondents (ranging from 16 to 44 years old) who came from various income levels, occupations and interests, were asked about why their English reading skills were lacking.

The largest share of respondents (45%) cited their own responsibility for not reading frequently enough. Lower percentages showed difficulties such as not having been studying English for a long time, the poor curriculum design in the educational system, and weak teachers (Education & Intelligence, 2015).

According to Snow's (2002) point of view, the process of comprehending is developmental and multifaceted, involving the orchestration of multiple skills. At an acceptable level, students would comprehend the meaning of a text by identifying words effortlessly and simultaneously using accurate decoding, especially at the elementary level (Verhoeven & van Leeuwe, 2008). As Cunningham & Stanovich (2001) point out, the lack of practice and exposure on the part of the less skilled reader delays the development of automaticity and speed at the word recognition level.

With these aspects in mind, it is imperative for an English teacher to consider the importance of having student motivation to read as the main influence for their own comprehension of academic texts (Guthrie, Hoa, Wigfield, Tonks, Humenick & Littles,

2007). With technologies progressing and updating each year, there could be more possibilities for which the use of a technique that encompasses digital means may be suitable to acquire refined results in terms of reading comprehension, student autonomy, and further language-making. To support this statement, Hall, Collier & Hilgers (2005) mention that such approaches "enable teachers and educators to facilitate meaningful and permanent learning in-and-out of the class hours, as well as increasing motivation, enrich instructional period, make more objective evaluations, and maintain hands-on tasks" (as cited in Aslan & Seker, 2016).

The Ecuadorian higher education context is still considered as deficient, and despite the governments' attempts in addressing this problem, English as a Foreign Language (EFL) students still present considerable lack of proficiency (Cronquist & Fiszbein, 2017). On a greater scale, Lions & Peña (2016) explain that the reading comprehension skill goes below the international standard in various Latin American countries. Without enough literacy of a key language such as English, individuals' competitiveness and fostering of their potential grows diminished in an ever-evolving world (Cronquist et al., 2017).

Reading comprehension taught through the use of specific tools such as online websites, can be regarded as a helpful system of customizing and categorizing the most adequate activities oriented to a better acquisition of subskills. All this becomes feasible with the use of Student Response Systems (SRS) which were developed in order to obtain better results in terms of participation and involvement inside the classroom (Dellos, 2015).

1.3 Scope of the study

The present study was carried out at the computing laboratory of Universidad de Cuenca in Ecuador from March to July, 2019. The group which underwent the intervention of the methodology involved 19 students principally from the Economy and Business Administration majors. These students had approved the first two mandatory English levels and were then in obligation of concluding the final level of English instruction as imposed by the institution before graduation.

1.4 Research Problem

In their research, Clark & Rumbold (2006) affirm the essential role of intrinsic and extrinsic motivation as complex constructs which can give rise to action. Readers who are intrinsically motivated are more likely to find a variety of topics which interest them, as well as greater reading frequency, enjoyment, retention of key information, and becoming self-determined in reading tasks (Hidi 2000; Cox & Guthrie, 2001; Wang & Guthrie, 2004; Guthrie, van Meter, Hancock, Alao, Anderson, McCann, 1998; Deci, 1999). By contrast, extrinsic motivation involves engagement in an activity in response to external values and demands usually coming from authorities' expectations as Ryan & Deci (2000) affirm. These authors state that there seems to be a cultural barrier and a lack of constructive reading habits among English learners since pupils do not read because they are motivated, but because they want to attain certain outcomes. Such outcomes specifically mean recognition, grades, and competition as Wigfield & Guthrie (1997) point out.

As of 2019, Ecuador ranks as the lowest English-proficient country in Latin America, and number 81 among 100 countries or regions according to English First Annual Proficiency Index (English Proficiency EF, 2019). Such daunting figures become evident in

our context since the Azuay province has a general low level of 50.23/100 with an average proficiency of 47,72/100 in men, and 45,81/100 in women. English teachers can attest the fact that students (among other academic issues) simply maintain a language barrier, keeping them from being competitive in an ever-evolving and technologically-advanced world. According to the observations of Thornbury (1998) as cited by Mohammed (2006), teachers have not deviated from traditional approaches based on grammar.

The great majority of students who participated in this study where not initially fond of reading in English. There was a general low awareness about the subskills which support in promoting a better comprehension of texts in the target language such as reading for detail, reading for gist, and selective reading.

Similarly, it was also apparent that students' motivation to read was mostly low for their level in higher education. According to Ellis (1997), interest also involves attitude and affective state which influence the degree of effort that a learner invests to learn a foreign language. Hence, learners can reinforce positive conducts towards achieving immediate goals driven by interactivity in a game scenario by being the protagonists as Lieberman (2006) mentions. This author asserts that with the right stimulus, a ludic environment can be naturally inserted in the class context and allows students to learn without realizing, thus promoting skills such as teamwork. For this study, the researcher wanted to apply the online media called *Kahoot!* in the classroom to see its effect on students' reading comprehension performance.

1.5 Justification

The previously mentioned facts for which English can be considered as a key component in the development of global communication imply aspects such as economy, work, modernism, and culture, to mention a few (English Proficiency EF, 2019). The EF index goes on to state that a good knowledge of English is a strong indicator of international mobility, and political compromise. For these matters, people who adopt English as a second language can use it as a global tool to communicate, increase openness, and lower inequality.

English knowledge in adults relates to the Power Distance Index (PDI) which measures the point to which the less powerful members of an organization could accept the power being distributed in an unequal manner. In this regard, a higher score in the PDI index is a main characteristic of rigid and hierarchical systems where subordinates and young people must simply obey their superiors' orders; in these societies injustice is the norm. Nevertheless, a knowledge of English does not counteract this hierarchy directly, but it may contribute to enlarge a society's horizon (English Proficiency, EF 2019).

The importance of an EFL instructor relies in encouraging, applying, and updating the acquisition of skills in the target language by employing innovative techniques. Reading literacy is one of those receptive skills, which is defined by the Organization for Economic Co-ogperation and Development (OECD) (2015), as the ability of understanding and reflecting on written texts to improve the knowledge and prospective to live in a society. The source mentions that, with the cognitive competencies that reading literacy promotes (decoding, word knowledge, grammar structures and linguistic features), a learner is in greater advantage of better using their own metacognitive proficiency towards particular academic objectives.

An approach to this active personal and social experience phenomenon can be grounded within the Constructivist theory, as pointed out by Lee (2008), who mentions that social constructivism allows learners to interpret social experiences to further create knowledge independently.

Together with the unrelenting course of globalization, techno-aids uphold a scaffolding-based theory called Active Processing Assumption (Lee, 2008) which focuses on how the information is processed once it is obtained by the learners. This theory divides such process into three parts: selection of information, organization of information, and the integration of information. According to this author, when selecting information, learners are deciding which words and images they need to input through the auditory or visual channel. Once this information is selected, they organize these images and words to help make better sense of what they are absorbing. Finally, the images and words that have been selected and organized can be integrated into the new knowledge by means of the multimedia technology. The web-based resource that holds these learning characteristics is a Student Response System (SRS) called *Kahoot!* which integrates the steps in the process of learning acquisition mentioned as the Active Processing Assumption theory (Lee, 2008).

Practices which, together with a meticulous planning and a rich vision of what is intended to be accomplished, elicit the interest and ambition of students to succeed on a short scale as Bicen (2018) reports, along with a general positive impact on their motivation. By enabling the employment of updated teaching trends, students can benefit from an in-depth process of assimilation of the target language reading skill through *Kahoot!*.

Considering the fact that *Kahoot!* has generally been used in studies for keeping track of students' feedback on class instruction, this study focused specifically on improving the reading comprehension performance on EFL learning in the Ecuadorian higher-level education context. There are not records about the employment of the mentioned means in our context for refining this specific skill; therefore, the researcher's purpose was based on the findings of similar scenarios for consideration and contrast with current EFL educational procedures taking place in higher education in Ecuador.

Having motivation as a key factor of students' reaching of academic goals, the proposed web resource (which features easy access and customization) presented feasible opportunities for refining the statistical outcomes at the end of the determined course of action by means of teacher guidance, team work, and immediate feedback. According to Taylor (1990), "a combination of stimuli is desirable, with written consolidation for adults, in order to facilitate transfer from short-term to long-term memory" (p. 17). Meaningful tasks instead of grammar and linguistic structures should be included in the selection of objectives as stated by the Council of Europe (2001) and consequently, the objectives must focus on giving a reliable and practical purpose to the learning of EFL from a didactic perspective.

1.6 Research Question

What would be the effect of using the Student Response System *Kahoot!* intended for the development of reading comprehension skills of A2 level students at Universidad de Cuenca?

1.7 Objectives and Hypothesis

1.7.1 General Objective

To evaluate the effect of *Kahoot!* in the acquisition of reading comprehension on A2 level students at Universidad de Cuenca.

1.7.2 Specific Objectives

To determine the initial reading comprehension proficiency of the participants before applying the Student Response System (SRS) methodology by using the TELC A2 free access test as main instrument of pre and posttesting.

To identify the changes produced by the use of customized Student Response Systems (SRS) for enhancing reading comprehension intended for A2 level after a controlled intervention.

To analyze the perceptions of students towards the use of Student Response Systems (SRS) by means of a focus group interview.

1.7.3 Hypothesis

The hypothesis of this study can be conventionally stated as follows:

Null Hypothesis (Ho): The controlled use of *Kahoot!* does not promote a better performance in the reading skill in A2 level students at Universidad de Cuenca.

Alternative Hypothesis (H1): The controlled use of *Kahoot!* promotes a better reading skill performance in A2 level students at Universidad de Cuenca.

CHAPTER II: Theoretical Framework

2.1 Learning Theories

Steven Krashen (2009) defines the *Affective Filter Hypothesis Theory* with its emphasis on affective variables to reach academic success when acquiring a second language. The author specifically mentions motivation, self-confidence, and anxiety. These variables are connected in a way that learners have the possibility of accomplishing learning objectives by their proper intervention.

Another relation occurs when citing the *Connectivism* theory. Siemens (2005) states that learning in a network and technology-trending era helps learners to become empowered about exploring knowledge by using the same technological means that predispose their lifestyle. Hence, when the technological and psychological aspects are applied, the effect on learners must be also adapted and used. As mentioned by Parkay (2000), the *Behaviorist* theory would be applied to this notion, because there is an emphasis on the changes in behaviors that come from stimulus-response associations made by the learner.

2.2 Reading Comprehension

As stated by Mikahilov (2001) reading is a complex cognitive process of decoding symbols in order to obtain meaning which can be used as means of language acquisition, communication, and sharing of information. According to this author, a good reader's job is not just to think about the contents communicated by the writer, but also about the

messages that can be collected and stored into the students' schemata, because in the reading process, schemata and language skill must be used to reveal the message of text.

On a socio-cultural perspective, the focus on schemata as a source of variability (Reynolds, Taylor, Steffensen, Shirey & Anderson, 1982) reported that when students read culturally familiar material, they did it faster, recalled it more accurately and made fewer comprehension errors.

Consequently, the comprehension which occurs in a person's reading process is a result of the filter gathered from their foundation of knowledge and belief (Shanahan, 2005). This author clearly stated that it is also necessary for a given text to be logically well-structured in order to make the reader think about the writer's message by making inferences.

Another in-depth definition of reading comprehension is devised by Snow (2002) where she defines it as "the process of simultaneously extracting and constructing meaning through interaction and involvement with written language" (p. 11). This author states that the words *extracting* and *constructing* are used to emphasize both the importance and insufficiency of the text as a determinant for reading comprehension.

She goes on to state that this process entails three main elements: the reader, who is doing the comprehending with all their capacities, abilities, knowledge, and experiences; the text that is to be comprehended, and the activity where purposes, processes and consequences are associated with the act of reading. These three dimensions are "interrelated across phases as a developmental process which includes pre-reading, reading,

and post-reading in order to be considered as a distinction between what the reader brings to reading and what the reader takes from reading" (p. 12).

Snow (2002) clearly states that at the pre-reading dimension, the reader arrives with a set of characteristics including cognitive, motivational, language, and non-linguistic capabilities, along with a particular level of fluency. At the reading dimension, some of the mentioned characteristics may change, and finally, during the post-reading dimension, some of the same characteristics may vary once more. The previous dimensions define a phenomenon which occurs within larger sociocultural contexts that shape and are shaped by the reader, who interacts with each one of these elements (Snow, 2002).

With these perspectives, it is better to have a text with language inputs that contribute to the student's schemata, along with messages and contents for further enhancement of reading comprehension.

2.3 Reading comprehension subskills

Gunn, Smolkowski, Biglan, Black & Blair (2005) stated that "fluent word recognition allows the reader to allocate increased attention to key comprehension processes" (p. 70) which also involves meaning-making and meaning-relating. Students placed on lower levels of the English learning process are bound to remember and try to further identify key words which can encompass asserted descriptions of their own ideas and thoughts, conveying meaningful language use. This assumption gives clarity on the importance of familiarizing students with reading subskills from an early age of their schooling progress to help them connect their previous knowledge with their comprehension of written texts.

2.3.1 Reading for gist

The British Council (2007) states that reading a text for gist is also known as skimming. In that way, gist is the general purpose of a written or spoken text. Its practice consists of learners reading the general idea of a text before answering key details about it. Conversely, reading for gist counts as one of the main strategies employed when teaching reading together with prediction, scanning, and intensive reading.

Skimming and scanning are considered by Brown (2000) as the two main reading strategies for students. In his definition, skimming consists of running one's eyes through an entire text in order to have the advantage of predicting the purpose of the text. This reading skill is used by students to quickly get the main points of the text, and also previewing a passage before reading in detail as IeduNote (2017) asserts.

2.3.2 Reading for detail

IeduNote (2017) additionally states that the Reading for Detail technique is used for obtaining information accurately from the whole text. With this technique, readers get a general idea of the text by using skimming in order to return and read the text again in detail. Macmillan (Improve Advanced Reading, n.d.) accounts on this sub skill considering the relevant parts of the text which readers are looking for, reading them, and obtaining the relevant part for a fuller understanding of it. Moreover, Macmillan (n. d.) describes that reading for detailed information can be of particular importance for obtaining answers to multiple-choice questions by means of scanning only what is required. As stated by Ngoc (2015), teachers should be encouraged to promote the practice of skimming and scanning of

texts because "it prevents students from inefficient reading habits such as reading word by word, reading aloud, moving lips, translating, reading for form and details" (p. 197).

2.3.3 Selective reading

Paperchoice (2018) accounts for selective reading as a combination of reading and research with a specific purpose, instead of running through a text which may not necessarily have a useful significance. In concordance with Beckford (2018), selecting the right type of books to read and not only sections in them is another important part to select only the specific information needed.

The findings by Mikahilov (2001), Reynolds, Taylor, Steffensen, Shirey & Anderson (1982), and Shanahan (2005) are yet again supported by the *Affective Filter Hypothesis* by Steven Krashen (2009) where the inference is that the success of learning (or reading specifically) can be real if the variables are applied and utilized accordingly by learners.

The importance of considering the reading skills as a foundation for knowledge and learning relies heavily on Krashen's Reading Hypothesis (Krashen, 1994; 2003, 2004, 2018), skill which he describes as a form of comprehensible input and results in the acquisition of literacy-related aspects of language (Krashen, 2018). Considering the wide range of reading literacy, Cheung & Slavin (2012) argue about the importance of technology for making the most of students' engagement by providing them with meta-cognitive strategies for text comprehension and other reading skills.

2.4 Language Learning Through Online Resources

It is imperative for a teacher who needs to engage their students, to logically utilize viable alternatives in order to encourage the attention on texts which normally have many words, but few images. Chun & Plass (2000) identified some features of the Internet that have the potential to improve language learning. These include a) the universal availability of authentic materials, b) the communication capabilities through networking, c) the multimedia capabilities, and d) the nonlinear (hypermedia) structure of the information.

Technology for purposes of engagement and motivation has the potential of prompting the reaching of academic objectives through self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals (Zimmerman & Schunk, 2011).

On this account, Qiu & Bai (2013) express the importance of games with their multiple formats for presenting information including motionless or animated text, pictures, movie segments, video clips and audio information.

When teaching language subjects specifically, Wells (2011) declares that games can particularly alter on-task behavior, as well as word acquisition and content understanding. These findings relate directly to the aforementioned *Behaviorist Theory* proposed by Parkay (2000) emphasizing a change in the learners' behavior coming from online and offline-based stimulus and their correlations with responses.

2.5 Gamification

One of the aspects that make learning through games more attractive resides in its own perceptual validity since they affect internal motivation, helping to focus on social, cognitive, and emotional results as Bicen & Kocakoyun (2018) describe. These authors go

on to state that such features increase cognitive effort, enhance skills, and moreover improve reward and motivation through the active participation of users. Learners can be benefitted with this technique, specifically for higher-difficulty level assessment, presenting it in a fun and engaging way.

Gamification may be accounted as a support for students to think, and for creating a competitive environment. As part of the elements through which motivation takes an important role, points, badges and leader-boards are used "in order to persuade the participants and change their behaviors towards positive stimuli" (p. 73).

With these authors' statements, it can be specified that for gamification designs to have a positive impact on educational results, the learning environment must combine dynamics, and mechanics. In other words, a gamification application where all these components are used could facilitate a needs-oriented learning process in the classroom (Bicen & Kocakoyun, 2018).

2.6 Student Response Systems

A way of customizing material to be taught in EFL classes incorporates Student Response Systems (SRS) or sometimes also called Interactive Response Systems (IRS). These online approaches require students to interact in real time by using technological strategies that allow them to access websites and interventions, which according to Pond (2010), "utilize connecting devices as learning tools to immediately deliver learners' feedback to the instructor, thus helping students engage in classes" (p. 13).

Students who use SRSs must interact with the activities displayed on a screen with the use of projectors, computers, and/or smartphones (Wang, 2017). According to Dellos

(2015), the website *Kahoot!* is a student response system that engages students through games in form of impromptu quizzes, discussions, and surveys (as cited in Byrne, 2013).

The term "Web “2.0” refers to a second generation of the internet which is more user-friendly and dynamic, and *Kahoot!* is part of these new type of websites. Siegle (2015) defined *Kahoot!* as an online game that can assess the knowledge of students in the reading skill. The intervention can be accessed from laptops, PCs, smartphones and tablets (through an app).

Akdemir, Kunt & Tekin (2015) state that such techno aids have the ability of presenting immediate feedback for teachers and students, as well as reinforcing mental and physical participation during class hours. This particular SRS is an online Norway-based global educational brand that offers a free platform. Since *Kahoot!* offers a platform of questions with various answers to choose from, it was assertive to appeal to the receptive aspect of reading comprehension.

This type of learning is linked to the reading skill because of the contextual features that a text has. Due to the motivation and renewed confidence in reading that other studies have claimed, (e.g., Brown, n.d.; Hayashi, 1999; Mason & Krashen, 1997), it is considerable to think of writing and speaking skills as to be furtherly benefitted from this approach according to Cho & Krashen (1994), Janopoulos (1986), and Robb & Susser (1989).

2.7 Technology and Reading

Mobile Assisted Language Learning (MALL) is a subdivision of Computer Assisted Language Learning (CALL) in general terms; as mobile technologies have advanced, so

have interventions for enhancing language education. The term MALL came into focus as an emerging query for language learning through technology. Research suggests that it provides language learners with rich, real-time collaborative experiences in and out of the classroom (Duman, Orhon & Gedik, 2014). Among the assets which MALL features, there is the customization of learners' environment, the encouragement of self-study, the providing of experience outside of the classroom, the boosting of the students' morale, the making of the process of learning more interesting and joyful, and the flexibility and access to all the learners (Kondal & Prasad, 2016). These authors state the association of students to the web through mobile devices, which have become an essential part of life, and how these technologies "provide wider possibilities with better learning characteristics and interventions for higher education focused on learner mobility and personalization for a lifelong knowledge" (p. 112).

In earlier decades, several authors accounted for the systematic use of technology for improving the reading comprehension skill (Blok, Oostdam, Otter & Overmaat, 2002; Cheung & Slavin, 2012; Dynarski, Taylor, Steffensen, Shirey &Anderson, 2007; Kulik & Kulik, 1991; NRP, 2000; Slavin, Lake, Chambers, Cheung & Davis, 2009).

Angers and Machtmes (2005) added that teachers must provide their students with new ways of learning through the use of technology or digital material, since the world is surrounded with such communicative standards. Having in consideration that there is great potential for students to become motivated by their own learning progress through the focused use of technology, research also revealed that self-regulation interventions directed for reading comprehension were particularly beneficial for individual learning achievement (Pintrich, 2003). It is also important to address on this particular matter since the self-

regulation framework also offers a base for reading comprehension, with emphasis on higher-order processes working together during information processing (Lysenko & Abrami, 2014).

2.8 Literature review

2.8.1 Kahoot! in the classroom

There is account of a study carried out by Wang (2015) where the author researched about the wear out effect of using the SRS *Kahoot!* in classroom teaching for comparing the results from students who used this platform for the first time in a single motivational lecture, versus using *Kahoot!* in every lecture for five months. The results of the quasi-experimental study which was focused on user-friendliness, engagement, motivation, classroom dynamics, concentration, and perceived learning showed a slight reduction in the students' motivation and engagement. The only statistically significant wear out effect was related to classroom dynamics (Wang, 2015).

In contrast, Caldwell's (2007) study on SRSs found that both students and instructors present a positive attitude towards the use of SRSs; through the controlled use of clickers, which are categorized SRS's, the author summarizes that these constitute a powerful and flexible tool for teaching, being used in a variety of subjects with no specific distinction of learners regarding their level of academic training.

She asserts the idea that SRS's may occupy either a peripheral or central role during class and that they can also be incorporated in a standard lecture course to increase student-instructor interaction, or for a more radical change in teaching style with many styles of questions. The "rule" for designing questions is that each question and content reflect

specific learning goals. Finally, in this author's view, SRS's have an overall positive effect on student performance, and also create a better and active atmosphere in classrooms (Caldwell, 2007). Other authors stated about how the combined use of SRS's together with lecture-based activities, helped learners in further processing of their understanding; more specifically, the effects of using *Kahoot!* included improvement on working with problems presented during class (Cutts, Kennedy, Mitchell, & Draper, 2004), student attendance rose to 80-90% (Burnstein & Lederman, 2001), and about 88% of students either "frequently" or always" enjoyed using the mentioned SRS.

2.8.2 Kahoot! and motivation

Regarding the motivation characteristic, Bicen & Kocakoyun (2018) carried out a similar study on 65 undergraduate students with aim of knowing about their perceptions. The positive impacts of gamification that *Kahoot!* presented included a greater interest in the class and ambitions for success. The authors described gamification to make the process of learning more attractive to learners and as an experience that increased their motivation because competition was present. In this sense, motivation accounted as an important outcome from lessons were *Kahoot!* was actively used by the participants. Additionally, as an ice-breaker and motivation tool, Damara (2016) accounted for the benefit of using *Kahoot!* with its simple-to-use template as an aid with student learning materials.

Several authors coincide in their findings, revealing that students had favorable attitudes toward the integration of *Kahoot!* into the classroom, where for instance, a study in order to know students' satisfaction and concentration was carried out (Lee 2017, Yang 2017, Wang 2016, & Wang 2017), as well as determining other benefits (Awedh, Mueen,

Zafar & Mazoor 2014; Chiang 2016; Huang 2016; and Wash 2014) specially comparing English motivation at the beginning and ending of the semester.

Hou (2018) reported that for females particularly, motivation to learn was a relevant aspect, having it as a key element of differentiation between the initial and final part of the treatment. The author stated that students with better English proficiency, especially females, had an overall better result regarding satisfaction and motivation.

Ismail and Mohammad (2016) studied the effectiveness of *Kahoot!* for assessing two learning platforms among 113 freshman medical school students in Malaysia. The two platforms were *Kahoot!* and an e-learning portal. The results indicated that *Kahoot!* is a reliable assessment tool because it is easy to use, consistent, fun, and enjoyable. In this study, gender differences in *Kahoot!* use indicated that males scored higher on motivation and knowledge retaining than females. These authors conclude that both men and women agreed that using *Kahoot!* could encourage engagement and motivation, enhance the focus on learning, facilitate it, offer effective feedback, and also promote reflection. Nevertheless, the students who participated in the study did not consider *Kahoot!* as a good tool for simplifying complex subjects.

Wichadee & Pattanapichet (2018) led a quasi-experimental study with 77 sophomore students at a private university in Thailand to investigate the influence of *Kahoot!* on students' learning performance, motivation, and attitudes towards gamification in language learning. Thirty-eight students were assigned to an experimental group, and thirty-nine were assigned to a control group.

Ten vocabulary quizzes and five grammar quizzes were intended to help the students evaluating each lesson. The experimental group engaged in *Kahoot!* assessments,

while the control group was tested via traditional paper tests. The outcomes showed that students in the experimental group demonstrated better learning performance and motivation than students in the control group. Additionally, students in the experimental group communicated positive views and outlooks regarding *Kahoot!*. They seemed to approve of *Kahoot!* as a learning tool because it made a more fun course, promoted a competitive atmosphere, and augmented students' interest in the lessons.

Yip (2016) found that the vocabulary posttests outperformed the pre-intervention ones after the use of *Kahoot!* in the teaching and learning process. The results indicated that *Kahoot!* was an effective media for vocabulary instruction, student motivation, and improved test results.

Medina and Hurtado (2017) conducted a quasi-experimental study with 70 university students about the efficiency of using *Kahoot!* for vocabulary learning in the classroom. Vocabulary assessments were directed to the students as a pretest during the fifth week of the research process. Later, the students were divided into a control group and experimental group, each with 35 students. For the experimental group, the vocabulary assessments were administered via *Kahoot!* at the culmination of each unit. The two groups of students took a posttest after ten weeks of the experimental procedure. The outcomes specified that students in the experimental group performed better on the posttest than those in the control group.

On the satisfaction survey regarding using *Kahoot!* to learn vocabulary, the students agreed that *Kahoot!* was easy to use (100%), that they enjoyed playing *Kahoot!* (95%), that *Kahoot!* kept them on task (84%), and that they favored technology in the classroom (83%). Thus, the authors concluded that *Kahoot!* improved students' engagement, motivation,

interaction with content, and vocabulary acquisition. Furthermore, they recommended that educators apply *Kahoot!* to teach any subject, especially vocabulary at the university level.

Licorish, Li, Owen & Daniel (2018) conducted a qualitative study on fourteen university students' perceptions of *Kahoot!* as part of an information systems plan and governance course in New Zealand. In this study, *Kahoot!* aided as a tool to understand how students experienced the use of SRSs and to examine the influence of *Kahoot!* in classroom dynamics and engagement, motivation, and learning progression. *Kahoot!* was used in seven of thirteen lectures that had an average length of 30 minutes. Semi-structured interviews were conducted at the end of the course. The results exposed that *Kahoot!* improved the features of the learning process in terms of students' attention, focus, participation, knowledge retention, revision, and enjoyment.

Other findings presented differing outcomes, such as in Lin's (2016) study, where there were no significant differences among college students' situational attention and interest using IRS through tablets. Nevertheless, the use of *Kahoot!* and other gamification techniques or SRSs has been accounted to be effective for learners in terms of promoting awareness, enthusiasm (Wang & Lieberoth, 2016; Zarzycka-Piskorz, 2016), commitment (Ismail & Mohammad, 2017; Licorish et al., 2018; Matthews, Matthews, & Alcena, 2015; Wang & Lieberoth, 2016), socialization (Wang, 2015), and interpersonal exchanges (Coca & Slisko, 2013; Wang, 2015) through the learning process (Papastergiou, 2009), as well as employing it as the central part for student attention and involvement (Caldwell, 2007).

2.8.3 Kahoot! and Reading

In a study carried out by Hou (2018), the author researched about the training of students for using *Kahoot!* to provide answers about questions related to their different reading literacy materials. The author's research adopted 16 of 21 questions developed by Wang (2017) to discover learners' perception towards teaching through SRS's, covering teacher interaction, engagement, self-efficacy, and degree of learner satisfaction at the beginning of the semester (pretest) and at the end of it (posttest).

The reliability of the research questionnaires were .932 for students' feedback about using *Kahoot!,* as well as .838, and .872 for the pre-test and post-test of students' English learning motivation, respectively. With the reliability coefficient of between .838 and .932, the research instruments were quite reliable. MALL (Mobile Assisted Language Learning) tasks were used mainly to assess students' comprehension and to enhance their participation and attention on reading through *Kahoot!*

Questions used in *Kahoot!* were mainly multiple-choice items, and used as review games before the end of class. Students could submit their answers by individual or with peers based on their choice.

It was concluded that by using *Kahoot!,* both teachers and students could notice how well the reading materials were assimilated, and it also inspired students to think actively and critically via questioning and thus, increasing their motivation on English learning.

Kahoot! has proven to be a key element in supplementing students with the comprehension of reading literacy materials (Cutts, 2004), improving concentration (Chiang, 2016) and necessarily comparing the learners' performance and satisfaction of the methodology at the end of their treatments (Hou, 2018; Lee, 2017;Yang, 2017, Wang,

2016; Ismail & Mohammad, 2016, Wichadee & Pattanapichet, 2018; Medina & Hurtado, 2017; Wash, 2014; Lin, 2016).

In addition, research has proven that *Kahoot!* is valuable in complementing learning as a formative assessment tool for medicine students due to its practicality (Ismail & Mohammad, 2017).

However, Licorish et al. (2018) noted that one possible disadvantage of a game-show learning setting is that students may become uninterested once they are habituated to it. Nonetheless, since *Kahoot!* involves only a short extent of time during a class period, it is less possible to become dull. In view of these authors, how learners feel about using *Kahoot!* in the classroom continues uncertain, particularly at higher level settings.

CHAPTER III: Methodology

3.1 Research Approach

This study is framed under a Hypothetico-Deductive Approach to research. Bernal (2010) proposes that this type of approach starts with an affirmation in the form of a hypothesis, which the results either demonstrate or refute. For this research, the hypothesis suggests that the controlled use of the SRS' *Kahoot!* has a constructive effect on the development of the reading for detail skill in a group of A2 EFL level students at Universidad de Cuenca. This hypothesis has been compared with the results of the analysis of data collected in the study.

3.2 Research Method and Variables

A comprehensive view of Mixed-Method Research as an intellectual and practical synthesis based on qualitative and quantitative exploration emerges when the importance of joining these two traditional models is recognized. The result is a third paradigm that will often provide the most informative, complete, balanced, and useful research results as Johnson, Onwuegbuzie & Turner (2007) clearly asserted.

This study aimed at a thorough examination of data by means of using Mixed-Methods, because of the realistic procedures taken for attaining the necessary information in order to determine the success or failure of the proposed methodology. The researcher had complete access and the necessary permissions to carry out the study in a context where there was consistency of elements necessary to perform a meticulous examination of variables. The selection of Mixed-Methods was previously intended, since the behavior of the two paradigms would generate greater EFL knowledge in the Ecuadorian higher-level education background practice.

This Mixed-Method research was labelled under a quasi-experimental quali-quantitative study for collecting data, and it had one intervention group. This type of method is considered as pragmatic, because the decisions concerning design are in concordance with the suitability of the purposes and objectives of the study (Gheitasi & Lindgren, 2015).

It was an empirical interventional study that looked to estimate its impact on a group of A2 EFL level students to determine the effect of Student Response Systems (independent variable) as a reading comprehension evaluation tool for fostering students' reading for detail performance (dependent variable).

Mixed-Methods research encompass the use of more than one approach or method of design and data collection or data analysis integrated within a single program of study as Bazeley (2006) stated. In this sense, Bryman (2006) commented on the importance of having further examination practice regarding Mixed-Methods, since at the EFL field, there is little understanding of the prevalence of different combinations. The author makes a strong call of support towards the study with Mixed-Methods since "there is considerable value in examining both the rationales that are given for combining quantitative and qualitative research and the ways in which they are combined in practice" (p. 111). To obtain richer data, both methods were employed for achieving accurate and detailed results.

3.3 Level and type of research

3.3.1 Primary research

This intervention was a primary level-type of research because it was the researcher the one who collected all the quali-quantitative data and thus, it was allowed for him to control the treatment condition. A primary-type of research consists of studies which are developed from original data, meaning that researchers collect data by themselves by means of interviews, questionnaires, observations, and students' journals as Brown & Rodgers (2002) affirm. According to Bernal (2010), quantitative social research is developed on the basis of measuring specific features of the social phenomena.

The qualitative method in contrast, attempts to understand the research phenomenon as a whole (Zacharias, 2012) having an in-depth description instead of a generalization as a result (Bernal, 2010; Mackay & Grass, 2010). The study has used pre and post multiple-

choice interventions as well as an eight open-ended question post-study interview. All of this was meticulously prepared to obtain data directly from the participants of this study.

3.3.2 Case study research

Yin's (2014) two-part definition focuses on the scope, processes, and methodological characteristics of case study research, emphasizing the nature of inquiry as being empirical, and the context's importance to the case.

The context for this particular study is higher-level EFL education in Cuenca, Ecuador, due to the availability, proximity, and ease-of-access features which facilitated the collection of information for the researcher. Regarding this assertion, a case study research aims at the in-depth study of a unit of analysis from the research universe as Bernal (2010) stated. Such unit of analysis can incorporate a single individual, a group of participants, an entire class, or a complete institution to explain causal links in real-life situations (Mackay, 2010). Bernal (2010) moves on to state that case studies make use of both quantitative and qualitative techniques by means of data collection, analysis, and further interpretation.

The main sources of data for this type of research were the individuals who come from a specific part of the unit of analysis, together with the documented information that they produced. Concordant with the previously mentioned features of case study research, this study analyzed the influence of *Kahoot!* on the development of reading comprehension skills in a particular group (case) of 3rd level EFL students at Universidad de Cuenca.

3.4 Population and sample

The researcher was assigned with an initial group of 21 participants, men and women coming mainly from the Economy, Marketing, and Business Administration majors at the Economy Faculty of Universidad de Cuenca, Ecuador. The 3rd level credit students are undergraduates who were taking their final English level in concordance with the institution's policies. This unit of analysis for the research study was eventually composed of 6 men and 13 women with ages ranging from 19 to 26 years old. These native Spanish participants attended classes on a normal basis, and agreed to participate in the study. The selection of the mentioned unit was in strict concordance with the research background for this study and the practicalities of convenience sampling such as easy accessibility, geographical proximity, availability at a given time, the willingness to participate included for the purpose of the study, as well as its applicableness to both quantitative and qualitative studies as Etikan (2016) stated.

It is important to emphasize the importance of this study in not attempting to generalize, but to comprehend and describe the influence of *Kahoot!* as a tool for improving the proficiency of the reading skill on a specific group of students. Each 3rd level class normally admits no more than 30 students, and the class periods last 120 minutes, according to the given weekly schedule. English is regarded as a mandatory subject to approve before graduation.

3.5 Treatment

The content taught on a 3rd level credit course at the Language Institute of Universidad de Cuenca is based on the Common European Framework (CEFR) and its overall A2 level expected proficiency. The rationale for choosing 3rd level students for this study is that since it signifies the mandatory last level of English to approve, the researcher

sought to attest that the proficiency of the learners was sufficient, considering that most of them had previously approved the first two levels.

A few participants had taken a placement English test at the same institute to avoid completing all the three levels. According to the Council of Europe (2001), an A2 learner is expected to read and comprehend texts with everyday language use, composed of different topics of general, personal, and academic importance.

In concordance with these characteristics, there was a clear orientation with the purpose of this study, because the learners could comprehend and work with the pre-selected stories, since they matched the mentioned A2 references. The reading comprehension activities were grounded on this framework considering the subskills which were specifically evaluated for this study: Reading for Gist, Reading for Detail, and Selective Reading. The researcher had to determine which of these skills presented the lowest score by means of applying a pretest.

The English classes started on March, 2019. For the adequate intervention of the study, the researcher who is also a member of the faculty staff of the Language Institute of Universidad de Cuenca had previously reserved the computer laboratory to be used every Thursday for a 120-minute period. The total number of hours for the treatment had been previously set as 32 in concordance with the number of weeks that the treatment was intended to last.

The first week of the intervention was requested for students to read and sign the consent form voluntarily in order to prevent potential ethical issues. Mackay & Grass (2005) state that by signing the form, the subjects of the study acknowledge their voluntary participation in a study where sufficient information has been provided. This form

explained in detail what the study was going to be about, which English skill was aimed to be fostered, the option of voluntary withdrawal in case any student did not want to continue participating at any point, and the assurance of complete anonymity during and after their participation in the study.

On the first week of the intervention, the researcher had the participants read and sign the consent form individually with all these details written in Spanish for a thorough comprehension. A further description of what they would be involved in during the intervention proceeded. Providentially, all the initial 21 participants agreed to be part of the study, and signed the form. Subsequent to this, the participants advanced to take the pretest on the computers provided by the laboratory using the Moodle platform. Because there were only 17 computers available (one was out of order), 4 students had to use alternative devices for completing the pretest. Two tablets and two smartphones were used. The A2 pretest employed originated from TELC (The European Language Certificates) language tests organization website, which strictly considers the goals of the Council of Europe for offering tests with reliable international verified standards. The A2 level free-access test that was used evaluates sections of vocabulary and grammar, listening comprehension, reading comprehension, writing, as well as an oral examination section. Being a free-access exam that can be downloaded, there was no inconvenience for the researcher to cope with copyright issues, nor to select the reading sections which were intended for creating the quiz and uploading it to the Moodle platform "E Virtual". The time for taking the pretest had been previously configured to last for 20 minutes and no inconvenient was presented aside from the lack of access to computers for each and every one of the initial participants. Each subskill consisted of four questions and a total value of 3.33 points. Additionally, the

scoring of 6/10 was established by pondering the original instrument, considering that the participants who scored less than 6 points over 10 did not have enough skill development to reach the desired A2 level; therefore, students with scores between 6 and 6.9 points passed the test; those with grades ranging from 7 to 7.9 points had a satisfactory performance; participants who scored from 8 to 8.9 points had a good performance, and those that obtained 9 to 10 points had a very good performance.

The overall results of the reading comprehension pretest presented a rather low score of 4.93 over 10 points regarding the previously mentioned reading skills, making the students unable to reach the A2 level satisfactorily at the beginning of the treatment. With the help of the pretest it was evident for the researcher that there was a high dispersion among scores and only 3 students reached the A2 level successfully. The results of the pretest presented a higher performance regarding the Reading for Gist and Selective Reading sections. In contrast, a lower performance on the Reading for Detail section was noticeable. The importance of improving the Reading for Detail subskill was the focus of the research after comparing the scores of the pretest among these subskills.

Considering these preliminary outcomes, it was then apparent that if more attention was directed to the details of a text, students would be more attentive on being able to evaluate, comment on or clarify the peculiarities of a text as Gilmanova, Nikitina, & Khasanova (2016) pointed out. As reference, the scope of their research was focused on the use of authentic literature in the process of teaching EFL reading, and for this, it was considered that Reading for Detail was the most significant subskill as it requires the combination of other previously learned skills which would be useful for further

interpretation. As cited by these authors, the overall goal of teaching reading is to "ultimately have the students read unfamiliar, non-adapted texts" (p. 358).

In consideration of these data, the researcher used the previously mentioned SRS *Kahoot!*, which was intended as a reading evaluation tool for progressively accompanying the content of the level and improving the Reading for Detail skill overall performance. Specifically, *Kahoot.com* was the site where the quizzes with multiple-choice questions about specific details of the selected texts were customized. These quizzes were displayed from a computer by means of a projector to help keeping track of the individual scores of the students during each intervention. The reading material from where the questions for this interactive platform were created, came from the second edition of Longman's "True Stories in the News, A beginning reader" by Sandra Heyer (1996) due to its newspaper format stories which aligns with the outcomes of the CEFR scales for reading comprehension for A2 level. The stories included in the textbook initiate with simple short texts and progressively develop to be more complex and contain more vocabulary. Before each session in the particular quiz game, each student had to interact with the instructor about some elements prior reading each story. These elements included: questions about the people, places, or objects depicted in the pictures before each story, inferences about the content of the story, and predictions for the ending.

After reading each story in detail, the researcher's role was of conducting the students to an external website (kahoot.it) for obtaining a unique accessing code and playing each pre-designed quiz individually on their device. Each quiz was designed according to the specified A2 level altogether with the free access reading material "True Stories in the News, A beginning Reader." To keep track of each session during the study,

the researcher used a notebook where annotations about attendance, adequate equipment functioning, and his own perceptions were written. As of reminders, evidence pictures, and other useful material, the use of a smartphone came in as a practical solution throughout the treatment.

During the study, slight issues appeared; mainly, the withdrawal of two students who stopped attending for English classes, the lack of computers for each participant and the need for a smartphone when necessary. Absences were also frequent, but attendance was never below 50% of the participants. At the beginning of the second part of the study, the researcher decided to assign the last five stories from the "True Stories in the News" book to five groups of students. These groups were in charge of reading their stories to locate key words and elaborate their own multiple-choice quizzes directed for the rest of the class, based on each assigned story.

The researcher decided to have the participants familiarize with this hand-on-task approach to maintain the involvement aligning with Dancer and Kamvounias' (2005) statements about participation which can be discussed with elements such as: preparation, contribution to discussion, group skills, and communication skills. Inquiries like motivation and Graham, Tripp, Seawright & Jockel's (2007) claims about the positive formative effects that SRSs had on students, had to be subjected by the researcher to practical scenarios.

For this part of the study, students used online dictionaries and apps to identify the meaning of words. With the help of the researcher, each group of participants elaborated a

set of ten questions for further uploading to the *Kahoot!* platform. Bringing into line the previous assertions, an increased involvement at this part of the process was evidenced.

The researcher facilitated the groups to sign up and create their accounts to *Kahoot!*. The groups of participants presented their stories for the rest of the class with minor grammar mistakes which were corrected and explained by the researcher.

3.6 Data collection

To adequately collect data for this study, the researcher used reliable and validated instruments. The A2 mock test which was adapted for pre and posttest was developed by TELC (The European Language Certificates) education organization that offers language tests based on international standards which align with the Common European Framework of Reference for Languages of the Council of Europe. It contained all the aimed reading comprehension subskills to be evaluated, and it granted free access with no issues regarding copyright.

A researcher might use available instruments such as the one detailed above, or might need to develop specific instruments for the two phases of the study as Riazi & Candlin (2014) detailed. For the current research, both of the mentioned components were used for having an adequate operationalization of the constructs of the study, fulfilling accountability along with validity.

All the information gathered via pre and posttests focused on statistical analysis to report the findings. It was obtained by uploading the content of the Reading sections needed from the TELC A2 exam. This data and results were collected and kept via Moodle which Universidad de Cuenca holds as its main digital platform for academic assignments.

Moodle is the required repository platform that students use, and it is configured by the Language Institute instructors in concordance with their necessities for allowing creation, organization, delivery, communication, collaboration, and assessment activities as Costa, Alvelos, & Teixeira (2012) assert. For these authors, Moodle represents one of the most widely used open-source e-learning platforms, that enable the creation of a course website, allowing the exchange of information among users geographically dispersed, through mechanisms of synchronous (chats) and asynchronous communication (discussion forums) and easily configurable features permitting the creation of student assessment processes such as quizzes, online tests and surveys (Costa et al., 2012).

In order to examine students' perceptions and attitudes towards the technological strategies used in class, a focus group interview was carried out at the end of the treatment. This interview was video recorded with the researcher's smartphone. The questions for the interview as well as the rubric had been previously piloted with a different 3rd level group of students who were also taught English by the same researcher at the time the study took place. This endowed the instrument with validation.

The necessity of having a focus group at the end of the treatment is defined by Morgan (1996) as a "research technique that collects data through group interaction on a topic determined by the researcher" (as cited in Chionsel, Van der Veen, Wildemeersch & Jarvis, 2003). These interactions between participants allow observing, understanding and analysis of the degree and significance of agreement or disagreement between participants concerning the specific topics (Chioncel et al., 2003).

The validity of the test included a number of six randomly selected participants. As suggested by Morgan (1997), such procedure ensures more reliable results, because it gives the participants the opportunity to raise more facts and arguments. For this part of the

research, there was variety to obtain a range of responses to the research questions such as the sense of gender dimension, among other interesting aspects.

For the descriptive validity (factual accuracy) and interpretative validity (language of participants) a recording technique is required, and it is considered as accurate as possible although a lot of non-verbal communication is missed (Chioncel et al., 2003). Morgan (1997) goes on to state that videotaping the group session would result in a better transcription which would be later transcribed literally.

The selection of students for the focus group was carried out by an online randomizer which helped to pick six random names from the complete list of students. Randomization essentially removes the bias in selection because by doing it, all participants possess an equivalent chance to be involved in the study (Focus groups, n.d.). Consequently, a random sample of sufficient size was an adequate substitute for surveying the entire group of students.

The quiz included eight open-ended questions which sought to know perceptions about the interest each story rose, their format, the overall methodology, favored features of *Kahoot!*, their own thoughts about variation on their reading skills, and suggestions or recommendations for future use. Morgan (1998) affirms that all the feedback from the focus group is important because these participants fundamentally represent a way of listening to people and learning from them by creating a line of communication.

3.7 Data processing and analysis

The statistical processing of data was done in the SPSS 25 program by an expert statistician. For the editing of graphics and tables, the program Microsoft Excel 2019 was used. The results of levels and produced changes are shown through absolute frequencies, as well as central tendency and dispersion measures.

A quasi-experimental design was circumscribed within this study, as it determined the safety and effectiveness of the treatment. For encompassing quantitative analysis to obtain proportional numerical results as well as a focus interview for the qualitative account, Mixed-Methods were employed. The compatibility of these results was revealed subsequently to their analysis and discussion, accomplishing holistic outcomes. The analysis of information was carried out by using inferential statistics which allowed to compare the pre and posttests. To compare the pre and post intervention of students' statistical results, a T-test was used for assessment of the outcomes.

The transcription of results from the focus group interview was processed by means of the Microsoft Word software, which allowed an initial and final editing of the information obtained. The answers from this group were analyzed using the Atlas.ti 7.5.18 software and the categories of analysis emerged in an empirical manner, based on the questions that the researcher particularized and the analysis itself.

At the post-intervention interview, organizing data in a Microsoft Office Word compatible with Atlas.ti 7.5.18 was required. This program allowed the researcher to carry out a thorough examination of the responses.

The process encompassed the identification of specific quotes and the codification of these quotes arousing from the questions and answers included in the focus group questionnaire. The categories of analysis that were considered as codification procedure by

the researcher at the Atlas.ti software were: motivation, interest, methodology, acquisition of new vocabulary, along with positive and negative aspects about *Kahoot!*. Such categories emerged from considering the outcomes of similar studies were these elements were found.

The discussion of the results was done in a question-to-question format that allowed perceptual analysis and the inclusion of pertinent quotes. To guarantee confidentiality and anonymity, the names of the participants were omitted. Finally, discussion progressed with the presentation of the interview results.

CHAPTER IV: Results and discussion

4.1 Analysis of Pretest results

Data behavior according to Shapiro Wilk's test resulted in not normal ($p < .05$) for which the non-parametrical Wilcoxon test for related samples was employed. The results showed that prior to the intervention, the students had oscillating scores between 0 and 3.32 for each subskill, being Reading for Gist the most consistent due to an average performance of 2.49 (DE=0.78), followed by Selective Reading (M=1.27; DE=0.58). Finally, Reading for Detail was the weakest subskill in this group of students, with an average score of 1.16 (DE=0.5); in every case, high dispersion of data was registered, which implies heterogeneous behavior. See Table 1.

Table 1.
Pretest results

	Minimum	Maximum	Mean	SD
Reading for Gist /3.33	0.83	3.32	2.49	0.78
Reading for Detail /3.33	0.00	2.49	1.16	0.55
Selective Reading /3.33	0.00	2.49	1.27	0.58
Total pre test /10	2.50	7.50	4.93	1.41

The global score oscillated between 2.5 and 7.5 with a mean of 4.93 (DE=1.41) having the students in a general state of reading comprehension deficiency. It can be observed in Figure 1 that 3 of the 19 students reached the required score (1 pass and 2 satisfactory level).

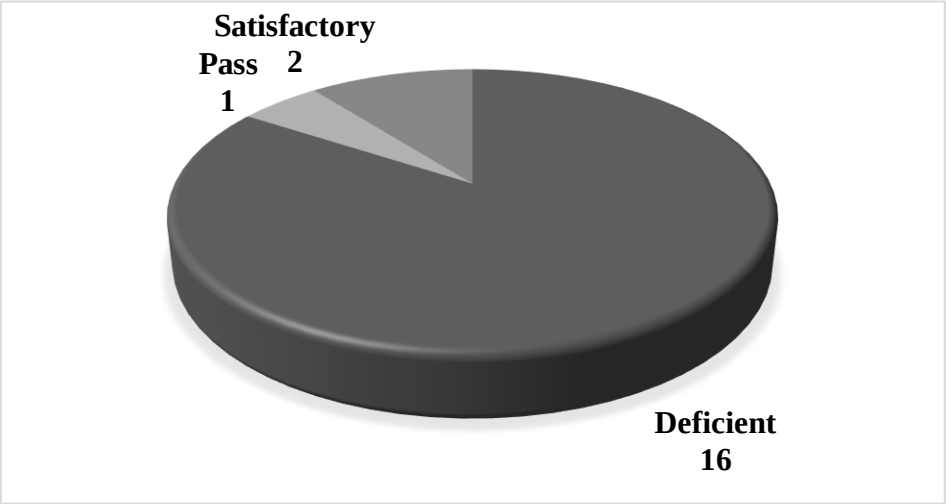


Figure 1. A2 level category pre test

4.2 Analysis of the Posttest results

In light of these results, *Kahoot!* was applied for strengthening the Reading for Detail subskill. After its intervention, there was an average difference of 0.17 points in the Reading for Gist subskill, without representing a significant change (p=.248). 10 participants did not present any variation, 7 participants had a positive change, and 2 had a negative change. The Reading for Detail subskill, had an average increase of 0.53 points, representing the greatest progress subskill (p=.014) with an increase of successes in 10 participants; finally, the Selective Reading subskill showed an average progress of 0.39

points. In spite of having 11 participants with increase of successes in this section, no significant changes were found (p=.09). Details in figure 2.

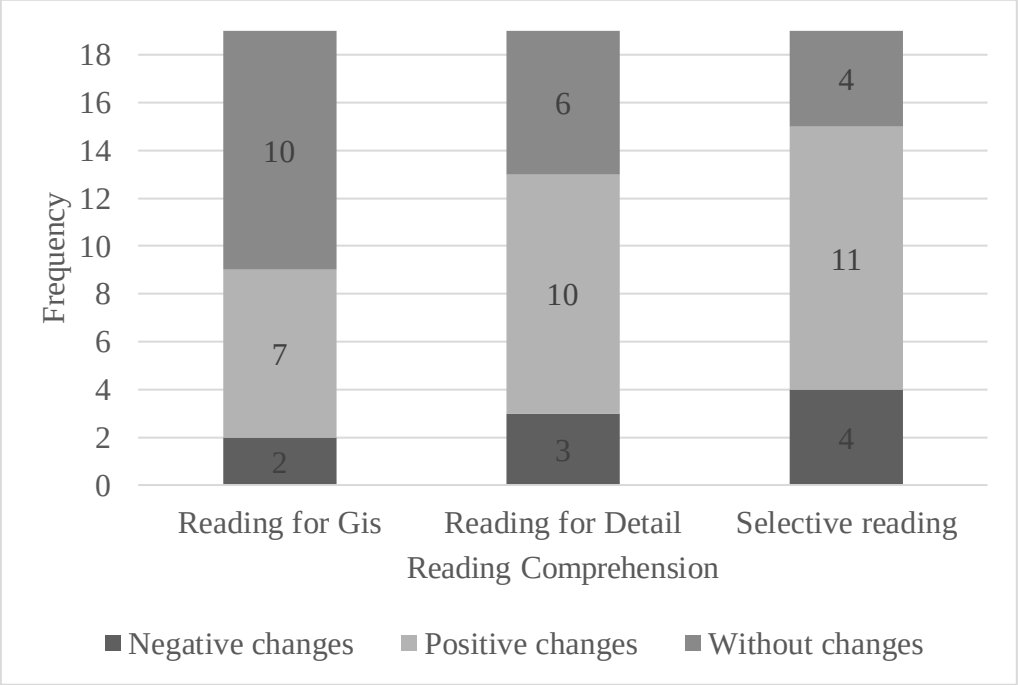


Figure 2. Changes post – pretest.

The posttest results are shown in table 2. There, it can be observed that Reading for Gist was the most developed reading comprehension subskill (M=2.66; DE=0.76), followed by Reading for Detail (M=1.69; DE=0.66), and Selective Reading (M=1.66; DE=0.92). In spite of registering a high dispersion of data, the results were inferior compared to the pretest, which implies that after the intervention, the students presented similar trends. Aside from that, it was generally found that every skill reached at least half of the maximum score.

Table 2.
Posttest results

	Minimum	Maximum	Mean	SD
Reading for Gist /3.33	0.83	3.32	2.66	0.76

Reading for Detail /3.33	0.42	2.91	1.69	0.66
Selective Reading /3.33	0.00	2.49	1.66	0.92
Total pre test /10	2.50	8.33	6.03	1.67

After the intervention, the results for reading comprehension oscillated between 2.50 and 8.33 with a mean of 6.03 (DE=1.67) obtaining the required skills needed to meet an A2 level with a significant average increment of 1.37 points by student (p=.029). In Figure 3 it can be observed that 7 students had the necessary competences (Pass= 2, Satisfactory= 4, and Good= 1), whilst the remaining 12 (deficient) presented an average score of 5.38 (DE=1.74) consisting of a very near to the minimum value, and denoting that the controlled use of *Kahoot!* for incrementing the Reading for Detail subskill performance results accounts as a consistent tool.

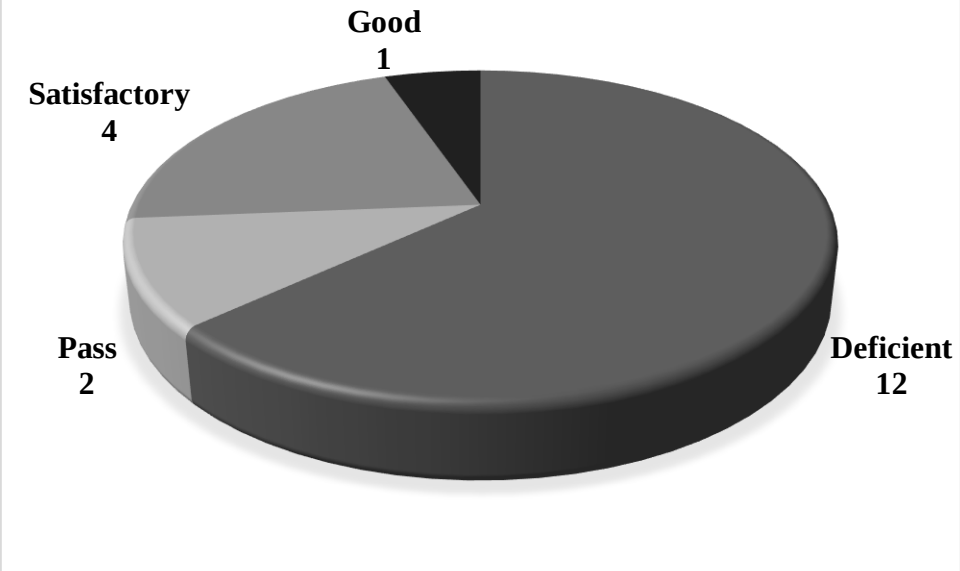


Figure 3. A2 level category posttest.

4.3 Focus group interview

The following interview was carried out at the end of the treatment of this study with six randomly chosen participants who took part in it. The majority of students agreed on the positive stimulus that *Kahoot!* added to their own learner experience. Categories like motivation, interest, vocabulary acquisition, dynamics of the game and interactivity are present in it. These postures are illustrated in their mother tongue, followed by each translation with the excerpts below.

Pregunta uno

¿Las historias presentadas durante el estudio fueron interesantes para usted?

"Las historias fueron interesantes porque yo no las conocía y el contexto en el cual se desarrollaban era agradable. Pude practicar inglés porque hubieron muchas palabras que eran nuevas para mí".

"El estudio fue motivante porque las historias también incluían un detalle interesante como un cambio inesperado de eventos, lo cual las hacían más interesantes e impredecibles".

"Las historias incluían un detalle que me hacía sentir interesado en ellas ya que, junto con la práctica de vocabulario, incluían elementos que no eran conocidos desde mi propia cultura".

Question one

During the study, were the presented stories interesting for you?

"The stories were interesting because they were unknown to me, and the context in which they were developed was enjoyable. I could practice English because there were many words that were new for me".

"The study was motivating because the stories also included an interesting detail like an unexpected turn of events which made them more appealing and unpredictable".

"The stories included a detail that made me feel interested about them, because together with vocabulary practice, they included elements that were not familiar from my own culture".

Pregunta dos

¿Considera usted que el formato digital de las historias fue adecuado durante el estudio? ¿Por qué?

"Es mucho más práctico tener las historias en un formato digital en vez de usar mucho papel".

Question Two

Do you consider that the digital format of the stories was suitable during the study? Why?

"It is much more practical to have the stories in a digital format instead of using so much paper".

Pregunta tres

¿Cuál fue su opinión acerca de la metodología de Kahoot! para mejorar la comprensión lectora de historias en inglés?

"Fue dinámico, interactivo y parecía que las historias tenían un elemento "chispa" que me hacía querer seguir leyendo. Preparar un juego para cada

historia fue más entretenido porque tratar de entender cada palabra, aunque yo no tuviera un diccionario, mantuvo mi concentración en contextualizar lo que las palabras significaban para una comprensión adicional de la historia".

"Su aspecto interactivo me hizo hacer un esfuerzo para entender mejor y responder las preguntas basadas en la lectura".

Question Three

What was your opinion about the Kahoot! methodology to improve the reading comprehension of stories in English?

"It was dynamic, interactive, and it seemed that the stories had a spark element, which made me want to continue reading. Preparing a game about each story was more entertaining because trying to understand every word even though I didn't have a dictionary, maintained my focus on contextualizing what the words meant for a further comprehension of the story".

"Its interactive aspect made me make an effort to better understand and answer the questions based on the reading".

Pregunta cuatro

¿Qué aspecto le gusto más acerca de Kahoot!?

"La música que Kahoot! presenta fue muy divertida y entretenida porque se sumó a la tensión del juego, así como su interfaz colorida, la cual lo hizo muy vívido".

Question Four

Which aspect did you like more about Kahoot!?

"The music which Kahoot! presents was very fun and amusing because it added to the tension of the game as well as its colorful interface, which made it very vivid".

Pregunta cinco

¿Qué dificultades encontró durante la aplicación de Kahoot!?

"Tuve que estar constantemente revisando en un diccionario".

"Hubo que hacer bastante memorización y ese aspecto contaba mucho porque a veces yo recordaba algunas cosas, pero olvidaba otras".

"No hubieron dificultades mayores ya que la dinámica del juego fue fácil de entender y no fue nada difícil para mí".

Question Five

What difficulties did you find during the application of Kahoot!?

One student mentioned that there were many unknown words in the stories.

"I had to constantly be checking with a dictionary".

"There was a lot of memorization involved and such aspect sometimes counted a lot because I remembered some things, but also forgot other things".

"There weren't any significant difficulties because the dynamics of the game were very easy to understand so it wasn't difficult at all for me".

Pregunta seis

El estudio tuvo dos momentos: uno en el cual el investigador preparó las preguntas con antelación, y un segundo en donde grupos fueron formados y las preguntas fueron elaboradas por los miembros de los mismos. ¿Cuál de los dos momentos prefirió y por qué?

"En el segundo momento cuando tuvimos que estructurar y contrastar las preguntas, fue agradable porque teníamos que entender detalladamente la historia con el vocabulario dado en la misma".

Question Six

The study had two moments: one in which the researcher prepared the questions beforehand, and the second one where groups were formed and the questions were elaborated by themselves. Which of the two moments did you prefer and why?

For one of the students, the two moments where okay. She mentioned that at the first moment they didn't know anything about what the researcher was going to ask about the story.

"At the second moment when we had to structure and contrast the questions, it was also nice because we still had to carefully understand the story with the vocabulary given in it".

Another student mentioned that despite the lack of vocabulary for communicating with other classmates, in both cases they had to comprehend the stories to also check their knowledge and be able to play *Kahoot!*.

Pregunta siete

¿Cree usted que Kahoot! le ayudó a mejorar su comprensión lectora en inglés? ¿Por qué?

"Especialmente en la segunda parte o el segundo momento del estudio porque teníamos que crear nuestro propio juego y necesitábamos un mayor conocimiento de palabras para este propósito".

"La modalidad fue insertada de manera progresiva y yo recuerdo la parte en donde teníamos que crear nuestro propio juego buscando la mejor manera de estructurar las preguntas aprendiendo a usar vocabulario extra para las opciones".

"Me di cuenta de cómo estaba mejorando porque gradualmente podía leer más rápido y comprender más de la historia al final".

Question Seven

Do you think that Kahoot! helped you improve your reading comprehension in English? Why?

One participant mentioned that Kahoot! indeed helped her improving reading comprehension.

"Specially at the second part or the second moment of the treatment because we had to create our own game and we needed a greater knowledge of words for this purpose".

"The modality was inserted in a progressive manner and I remember the part where we had to create our own game looking for the best way to structure the questions and learning to use vocabulary for the extra options".

"I noticed how I was improving because I could gradually read faster and comprehend more about the story at the end".

Pregunta ocho

¿Qué sugerencias y recomendaciones daría en caso de que un estudio similar tomara lugar en el futuro?

"El juego podría ser no solamente para lectura, sino también para escucha y habla porque creo que leer fue más fácil que expresar lo que acababa de leer o dar mi punto de vista oralmente en inglés; podría también funcionar para escritura".

Question Eight

What suggestions and recommendations would you give in case a similar study would take place in the future?

"The game could be also used not only for reading, but for listening and speaking because I think that reading it was easier than expressing what I just read or giving my point of view about it orally in English; it can also work for improving writing".

4.3.1 Interpretation of focus group interview

In the first question, the researcher wanted to have a clearer take on the general interest that the stories represented for the participants, for which he obtained three answers; these answers confirmed that the stories aside from being interesting, also allowed them to learn new vocabulary. Three out of six participants expressed their agreement on this matter. With this finding one can expect that the general understanding that students present towards unknown texts without going deep into details as well as maintaining interest on them (Gilmanova et al., 2016), is existent with stories which come from realistic contexts, encompass the Reading for Gist subskill and their development implies further attaining of vocabulary and information.

In the second question, two of the six participants agreed that the format was suitable and one of them mentioned the conciseness of the stories and the clear message within their few lines. Similarly, with the study carried out by Gilmanova et al. (2016), a participant addressed environmental protection issues, aligning with the opinion of maintaining the practicality of using technology instead of overusing paper and preserving it instead.

Regarding the dynamic aspect addressed in the third question, there were three students who agreed that *Kahoot!* featured this characteristic; two others mentioned that

motivation improved. The participants in the study felt comfortable about using a digital familiar approach as they come from an era where communication and interaction with information is always available, or they feel safer in this kind of game-based learning environment (Licorish et al. 2018). With the previous assertion it could be said that the students accepted the methodology of *Kahoot!* in the classroom. It can be implied that students from the digital era benefit from the numerous aids of online resources. While *Kahoot!* is a multimedia assessment means, it also represented an innovation instrument, bringing into line studies where it accounted as a successful assessment tool for teachers (Dellos, 2015; Ismail & Mohammad, 2017; Medina & Hurtado, 2017).

The participants also remarked the importance of having technology inside of the classroom and using it for better purposes instead of the traditional ways or paper-based methods. There was account on the versatility and adaptation in education, as well as the positive competence environment that *Kahoot!* stimulated.

Regarding the fourth question, it was also mentioned by another participant that *Kahoot!* did not count as a traditional methodology for him, and that it overall made learning English fun. These two assertions bring into line the ludic competitive environment that *Kahoot!* induced, as well as being entertaining and allowing creativeness on the participants' side. One can corroborate Huang's (2015) study, where the author specifically compared the development of vocabulary against traditional pen and paper and text board methods (PPT), and the participants who underwent the technology-based treatment outscored the traditional group.

As of the fifth question, the lack of initial vocabulary and rote memorization of words were mentioned by two participants, who had trouble internalizing this information

in a short period of time. To lessen this difficulty, the need for an inquiry-based methodology such *Kahoot!* induced an intensified alertness regarding the vocabulary used in each story and its possible connections to real-world definitions (Young, 2005). While two of the participants mentioned the struggle that the methodology represented for them, there was a positive overall reception because of the interactive aspects of the game.

Seemingly, the answer from one student in the sixth question denotes interest in working with *Kahoot!* because there were no initial expectations on what the stories were going to be about, nor the methodology itself. The lack of vocabulary was not a barrier to work with the comprehension of the story as the second participant affirmed. The process that the participants embraced was of piecing together the information composed of content through active investigation and recognition of words (Subramaniam, 2012). It can be deduced that having the participants on an active mode of lexical exploration benefitted their involvement and retention of key elements from the stories.

In the seventh question, a participant declared the importance of skimming the story before actually reading it. It is clearer that two participants preferred using *Kahoot!* due to its own particular game modality, as well as the actual steps for a better reading comprehension that the researcher employed prior answering the particular quizzes. Engagement of audiences, problem solving, and elicitation of game-like thinking are features of gamification which according to Pede (n.d.) stimulate other aspects such as independent and collaborative learning. These aspects were present in the study and permitted a continuous practice of skills.

Finally, at the eight question, another student suggested the use of similar applications for other skills like listening, writing, and speaking.

Two students became aware on the potential that *Kahoot!* includes for further studies regarding other English skills and how these could be enhanced. As with multimodal resources, Lauermann & Barbosa (2018) seemingly suggest an extent in the application inside of the classroom in order to follow the effectiveness on reading and other English skills. The opinions from the focus group regarding this last inquiry match this criterion, as the opinions of two participants remarked the possibilities in which *Kahoot!* could be further used in other EFL scenarios. All the participants in the study gave positive feedback regarding the use of *Kahoot!*. The game environment was a great part of why the participants enjoyed the platform. This finding is supported by other studies which comprise motivation, interest, and generally making English classes more fun (Dellos, 2015; Ismail & Mohammad, 2017; Licorish et al., 2018; Medina & Hurtado, 2017; Wang & Lieberoth, 2016; Zarzycka-Piskorz, 2016). The qualitative section of the research establishes a precise outcome of the observations obtained from the participants after the intervention. In their general view, the modality and transfer of information that *Kahoot!* prompted, was gradually adapted and acknowledged to their own English skills.

4.4 Discussion

The statistical analysis and comparison of the pre and posttests complements the qualitative post-intervention interview results previously addressed. These demonstrate that both qualitatively and quantitatively, the use of *Kahoot!* had constructive effects on the participants' reading comprehension subskills. The scores were esteemed between 0 – 0.33 for both pre and posttests. The findings are supported by the p value employed to measure the results of the pre and posttest interventions, consisting of less than .05. Each of the

assessed reading subskills presented half of the total pondered score, and it can be noted that *Kahoot!* does not merely work for evaluation means, but it helps joining students' previous knowledge with relevant new schemata as the Reading for Gist subskill results illustrate.

The participant who had the lowest score at the Reading for Gist section presented 0.83, but the overall scores presented a mean of 2.50 over 3.33 implying that the Reading for Gist skill was the most proficient Reading subskill among this group of students. It is relevant to mention that the Reading for Gist skill may be accounted as elementary, because it is necessary to deal with any unknown text at the very first stage to understand its genre, general purpose, and main idea (Gilmanova et al., 2016).

The skimming aspect that Reading for Gist indorsed was evident at the pretest. The standard deviation for the Reading for Gist section is 0.78 with respect to 2.49, suggesting that all the participants had a very similar behavior in this section. It is noted that since Reading for Gist counts as one of the elemental strategies that become developed together with skimming, scanning, and predicting, the participants of the study also relied on this background knowledge to fulfill the pretest.

On the contrary, the Reading for Detail general score represented 1.16 over 3.33 at the pretest results. Such outcomes reveal that the background knowledge and memorization skills of the participants to understand new texts was deficient prior to the study. About this matter, the low scores aligned significantly similar to the previously mentioned research carried out by the English Proficiency, EF (2019) where proficiency in Azuay presented a

general low level of 50.23/100, adding to the fact that the practice of remembering key details and information about English texts was merely absent.

Similarly, the Reading for Detail section presented a standard deviation of 0.55, which in respect to its mean of 1.16 represents almost half of the participants showing disperse data, illustrating the fact that for a more thorough comprehension of a text, it takes a greater background knowledge regarding vocabulary and retention of information.

For this particular understanding, technology-based instruction used by teachers increases active word learning, which goes hand in hand with the development of vocabulary (Dalton & Grisham, 2011). As the results showed, there were participants with either very high or very low scores. At the general scheme, the participant with the lowest score obtained 2.50 over 10 and the participant with the highest score obtained 7.5 over 10.

There was a global deficient proficiency in the Reading Comprehension skill regarded for an A2 level which represented 16 of the 19 participants unable to properly grasp the language presented in the stories. See Figure 1.

Similarly, at the posttest, the results from the Reading for Gist section still accounted it as the most developed reading subskill. It is denoted that after the treatment, the participants had similar behaviors. The oscillation of results between 2.50 and 8.33 obtained a mean of 6.03 (DE=1.67), successfully achieving the skills necessary for A2 level with a general increment of skill proficiency in each student. It was acknowledged that the addition of *Kahoot!* to the course of learning indisputably affected the perception in which students constructed their schemata (Reynolds et al., 1982) because its visual features surrounding the main points conveyed through text, permitted them not to only think about

the contents; students could also reflect about the message through the practice of language skills. See Figure 3.

As mentioned before, English texts have certain particularities which can be interpreted according to the learner's experience, evaluated, and elicited about their meaning with a prior sufficient knowledge plus the combination of other subskills (Gilmanova et al., 2016). The responses from the focus group represented the need of new vocabulary for comprehending the stories, as well as memorization of words. It encompassed the practice of reading and more particularly, addressing the details by means of a methodology that incorporated interactive quizzes provided by *Kahoot!*.

Additionally, it became apparent that a tool which gathers interest and engagement ultimately makes the learners want to know more about the words that they read as Wolsey, Smetana & Grisham (2015) stated. At the focus group interview, these assertions were demonstrated by participants who claimed that they felt in need of finding out more about the new words to join the subsequent elements of a particular story. *Kahoot!* indorsed the necessary attentiveness about the vocabulary used in each story, supporting the learning of real-world definitions and their further practice, bringing Young's (2005) statements on this particular into line.

About the effectiveness of *Kahoot!* for improving language learning regarding affective factors such as attention, participation, and feeling, the participants' opinions at the focus group interview aligned with previously reported literature on the subject were this SRS appears as a tool for stimulating these from a competitive environment perspective

(Bicen, 2018; Dellos, 2015; Ismail & Mohammad, 2017; Licorish et al., 2018; Zarzycka-Piskorz, 2016).

In a study conducted by Chiang (2020) *Kahoot!* was used as a warm up activity to activate the prior knowledge in students for every new unit of a Reading class. The results from this author indicate that students accepted the use of *Kahoot!* as a reading comprehension complement. It is elucidated that the notion of digital natives reaps innumerable benefits of being online, including taking quizzes through a multimedia such as *Kahoot!* even if it involves assessment. Such results represent a great influence of a game-based technique which features factors of attitude and motivation; aspects which added up in great part of the answers coming from the focus group interview, where acceptance towards the methodology was prominent.

Studies carried out by Hender (2014) and Robinson (2005) stated that factors like anxiety and motivation are strongly connected to English learning achievement. Such notions are based on the Affective Filter Hypothesis proposed by Krashen (1982) in his monitor model. Since the Affective Filter may account for several variables such as boredom and anxiety, these could also be lowered by means of an engaging, interactive, and overall positive atmosphere where cooperation and attentiveness are present from the learners' perspectives (Ataiefar & Sadighi, 2017).

As seen previously, there were no particular studies in which *Kahoot!* was particularly used for enhancing reading comprehension performance among higher-level education students. This reality made the researcher consider the literature gap that exists about this aspect of EFL research, with the aim of contributing with its field.

Kahoot! may not only be used as an evaluation tool, but it can work as a supplement activity developer, since it helps improving learners' competences as well as counteracting the negative backwash effect. Such effect is regarded as considering tests to have a great effect on the way teaching and learning is done (Wang, 2016). Among the suggestions that this author mentions about counteracting the negative effects of backwash effect, the student-centered concept appears by switching the knowledge-based teaching to skill-based teaching. *Kahoot!* helps diversifying the ways in which learners promote their cognitive skills. The importance of having active thinkers by means of comprehensive development, relies in cultivating their learning initiative (Wang, 2016).

In summary, the controlled use of *Kahoot!* does allow to improve attention, awareness, motivation, and on a more specific level, allows a better learning environment. In result, it permits the enhancement of the Reading for Detail subskill by working together with other subskills pertinent to English learning such as fast reading, memorization, and vocabulary acquisition for instance.

4.5 Limitations of the study

One of the drawbacks of the present study was the unevenness of students' initial English proficiency level. As usual, there were cases in which a few participants had postponed the final English level as their last subject, making it difficult for the instructor to advance with the contents of the 3rd level with an unvarying style. On this account, the Language Institute of Universidad de Cuenca, which is responsible for the students' registration in English levels for most careers, established some assigned hours to the

instructor for personalized tutoring every week. This system helped the instructor and learners to maintain a constant learning progression with the English classes.

Another weakness for an in-depth accomplishment of the study concerned the fact that not all the students were present throughout the treatment, which took place every Thursday at the computer labs from 1 to 3pm. This could be understood as a partial lack of commitment that students probably had on the specific days when the study took place, since it was informed to them about how taking part in it would not affect their progress grades.

Additionally, at the laboratory where the study took place, there were not enough computers for each student; initially there were 21 individuals with access to 18 desktop computers. To overcome this problem, some students had to use their own tablet or smartphone to access the Moodle platform and subsequently the *Kahoot!* game during each session.

For carrying out a successful procedure of the methodology, each participant would need to have their own individual device at similar working conditions, instead of relying on personal devices such as cellphones, laptops, or tablets to accomplish the proposed interaction with *Kahoot!* in class.

Finally, there was a limitation regarding the free access A2 tests that were going to be used for this study, since the majority of samples had to be paid in order to be accessed. The A2 mock test from TELC language tests website used for this study could be downloaded and employed appropriately without infringing into copyright issues.

CHAPTER V: Conclusions and Recommendations

5.1 Conclusions and Recommendations

The present study sought to facilitate the language learning process by using *Kahoot!* to aid in the comprehension of details in specific texts. Immediate goals and objectives were part of the stimulus which the quizzes from *Kahoot!* activated in each session, reinforcing positive conducts for achieving them (Liebeman's, 2006). All these efforts conveyed through logically-structured patterns which led to make the reader think about the message qualities that were being communicated in the mentioned texts. This assertion aligns with the importance of having intrinsically-motivated readers who learn to use higher-level strategies like predicting and comprehending above word recognition.

There is great part of academic failure coming from the lack of intrinsic motivation on the learners' side. Its scarcity associates with the engagement and updated quality education that an institution needs to deliver, since it encourages reflection on the learners' side in order to take action (Wolf-Wendel, War & Kinzie, 2009). It is important to address on the constructive principles which a methodology such as the one presented in this study embraced.

Lee (2008) accounted on the Processing Assumption Theory which lets the readers select the words they are going to adapt to their schemata through a visual channel. *Kahoot!* precisely featured the mentioned channel. Through its adaptation, the results of the study promoted greater reading knowledge, as well as enjoyment and retention of information.

During the 2nd half of the study, the intervention and main role of the students was beneficial for their own individual learning achievement because they could self-regulate and assimilate their knowledge. This could be done because higher-level procedures worked together during the integration of detailed information about the texts, agreeing with Lysenko & Abrami's (2014) take on the matter.

Ecuador's English proficiency level resides and continues on lower levels, and the importance of making students self-aware of the capabilities that online resources facilitate is always at the hands of instructors who need to adapt such methods to keep motivation ahead. This last factor had to be emphasized in various sections of the present study since authors like Hou (2018) and Bicen & Kocakoyun (2018) stated that the influence of SRSs together with satisfaction and interest count as a relevant key to academic formation and also promote students in becoming ambitious for success.

As a practical aspect, it is recommended that the future activities would continue to be oriented for students to think, as it would make learning more significant. It would be imperative to use *Kahoot!* for consolidating material reviewed during a process of learning. Finally, tracking each session's immediate feedback results throughout the study with *Kahoot!* may bring significant data to be measured by the researcher at the end of the treatment. It will maintain students focused on their individual advancement.

References

Angers, J., & Machtmes, K. (2005). An ethnographic-case study of beliefs, context factors, and practices of teachers integrating technology. The Qualitative Report, 10 (4), 771-794.

Akdemir, O., Kunt, K., & Tekin, I. (2015). The effects of interactive exercises on students' achievement: Using the Open Source Authoring Intervention. *Glokalde, 1*, 177-185. Retrieved from http://dergipark.ulakbim.gov.tr/glokalde/article/view/5000135245

Aslan, B., & Seker, H. (2016). Interactive Response Systems (IRS) Socrative Intervention Sample. *Journal of Education and Learning*, *6*(1), 167. https://doi.org/10.5539/jel.v6n1p167

Ataiefar, F., & Sadighi, F. (2017). Lowering foreign language anxiety through technology: A case of Iranian EFL sophomore students. *English Literature and Language Review, 3*(4), 23–34.

Awedh, M., Mueen, A., Zafar, B., Mazoor, U. (2014). Using Socrative and smartphones for the support of collaborative learning. Int. J. Integrating Technol. Educ. 3(4), 17–24

Bazeley, P. (2006). The contribution of computer software to integrating qualitative and quantitative data analyses. *Research in the Schools, 13*(1), 64-74.

Beckford. A. (2018). Selective Reading: What Books to Read and Which Sections to Read. Retrieved from http://theinvisiblementor.com/selective-reading-books-read-sections-read/

Bernal, C. (2010). Metodología de la Investigación, (3ª ed.) Bogotá, Colombia: Pearson

Bicen, H. & Kocakoyun (2018). Perception of Students for Gamification Approach: Kahoot as a Case Study. *iJET , 13*, 72.

Blok, H., Oostdam, R., Otter, M., & Overmaat, M. (2002). Computer-assisted instruction in support of beginning reading instruction: a review. Review of Educational Research, 72,101–130.

Bonilla, E. & Rodriguez, P. (2005). Más allá del dilema de los métodos. Bogotá, Colombia: Nomos

British Council. (2007). Gist. Retrieved from https://www.teachingenglish.org.uk /article/gist

British Council. (2015). *English in Ecuador. An examination of Policy, perceptions and influencing factors.* [PDF file]. Retrieved from https://ei.britishcouncil.org/sites /.../English%20in%20Ecuador.pdf

Brown, J., & Rodgers, T. (2002). *Doing second language research*. New York: Oxford University Press.

Brown, H. (2000). Teaching by Principles. *An Interactive Approach to Language Pedagogy* (2nd ed). [PDF file]. Longman.

Brown, R., Waring, R., & Donkaewbua, S. (n. d.). Incidental vocabulary acquisition from reading, reading-while-listening, and listening to stories, 29.

Bryman, A. 2006. Integrating quantitative and qualitative research: How is it done? Qualitative Research 6: 97–113.

Burnstein, R., & Lederman, L. (2001). Using wireless keypads in lecture classes. The Physics Teacher, 39(1), 8e11.

Byrne, R. (2013). Free technology for teachers: Kahoot! - create quizzes and surveys your students can answer on any device. Retrieved from http://www.freetech4

teachers.com/2013/11/kahoot-create-quizzes-and-surveys your.html#.VLnc 78buzuU

Caldwell, J. (2007). Clickers in the large classroom: current research and best-practice tips. CBE-Life Sciences Education, 6(1), 9-20

Cheung, A., & Slavin, R. (2012). How features of educational technology programs affect student reading outcomes: a meta-analysis. Educational Research Review, 7(3), 198– 215. http://dx.doi.org/10.1016/j.bbr.2011.03.031

Chiang, Y. (2016). Effects of the Flipped Classroom Model of Elementary Students with Interactive Response System on Math Learning. Unpublished master's thesis, Chung Hua University, HsinChu, Taiwan

Chioncel, N., Veen, R. G. W. V. D., Wildemeersch, D., & Jarvis, P. (2003). The validity and reliability of focus groups as a research method in adult education. *International Journal of Lifelong Education*, *22*(5), 495–517. https://doi.org/10.1080/0260137032000102850

Cho, K. & Krashen, S. (1994). Acquisition of vocabulary from the Sweet Valley Kids series: Adult ESL acquisition. *Journal of Reading*, *37*. 662–667.

Chun, D., & Plass, J. (2000). Networked multimedia environments for second language acquisition. In M. Warshauer & R. Kern (Eds.), *Network-based*.

Clark, C., & Rumbold, K. (2006). *Reading for pleasure: A research overview*. 35.

Coca, D. & Slisko, J. (2013). Software socrative and smartphones as tools for implementation of basic processes of active physics learning in classroom: An initial feasibility study with prospective teachers. *European Journal of Physics Education*, *4*(2), 17–24.

Costa, C., Alvelos, H., & Teixeira, L. (2012). The Use of Moodle e-learning Platform: A Study in a Portuguese University. *Procedia Technology*, *5*, 334–343. https://doi.org/10.1016/j.protcy.2012.09.037

Council of Europe. (2001). *Common European framework of reference for languages: Learning, teaching, assessment*. Cambridge, UK: Cambridge University Press

Cox, K. and Guthrie, J. (2001). Motivational and cognitive contributions to students' amount of reading. Contemporary Educational Psychology, 26(1), 116-131.

Cronquist, K. & Fiszbein, A. (2017) English Language Learning in Latin America. Retrieved from https://www.thedialogue.org/wp-content/uploads/2017/09/English- Language-Learning-in-Latin-America-Final-1.pdf

Cunningham, A. E. & Stanovich (2001). *What Reading Does to the Mind*. *Journal of Direct Instruction.* [PDF file]. Retrieved from http://oregonliteracypd.uoregon.edu/sites/default/files/topic_documents/16-R1-Cunningham_0.pdf

Cutts, Q., Kennedy, G., Mitchell, C., & Draper, S. (2004). Maximizing dialogue in lectures using group response systems. CATE

Damara, G. (2016, August 10). Students' Perception on the Use of Kahoot! as an Ice Breaker in Movie Interpretation Class.

Dancer, Diane, and Patty Kamvounias. 2005. "Student Involvement in Assessment: A Project Designed to Assess Class Participation Fairly and Reliably." *Assessment & Evaluation in Higher Education* 30(4):445–54.

David, R. (2007). Living English simulation learning for non-native English speakers incorporating edutainment methodology. Statesboro, GA: Georgia Southern University.

Deci, E., Koestner, R. & Ryan, R. (1999). A meta-analytic review of experiment examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin, 125,* 627-668.

Dellos, R. (2015). Kahoot! A Digital Game resource for learning. *International Journal Of Instructional Technology And Distance Learning*, *Vol 12* (4), 49-52.

Duman, G., Orhon, G., & Gedik, N. (2014). Research trends in mobile assisted language learning from 2000 to 2012. *ReCALL*, *27*(2), 197–216. https://doi.org/10.1017/S0958344014000287

Dynarski, M., Agodini, R., Heaviside, S., Novak, T., Carey, N., Campusano, L., et al. (2007). Effectiveness of reading and mathematics software products: Findings from the first student cohort. U.S. Department of Education, Institute of Education Sciences. Retrieved from: http://ies.ed.gov/ncee/pubs/20074005/.

EF EPI (2019). EF English Proficiency Index – EF Education First. English and Society. Retrieved from: https://www.ef.com.ec/epi/regions/latin-america/ecuador/

Ellis, R.: Second Language Acquisition. Oxford University Press, Oxford (1997)

Etikan, I. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, *5*(1), 1. https://doi.org /10.11648/j.ajtas.20160501.11

Facebook. (2011). Press room, Statistics. Retrieved from http://www.facebook.com /press/info.php?factsheet

Focus Groups. (n.d.) [ebook] p.66. Available at: <http://www.sagepub.com> [Accessed 29 April 2020].

Gheitasi, P. & Lindgren, E. (2015). Broadening the understanding of the language classroom: Mixed Methods. In Lindgren, E. & Enever, J. (Eds.), *Språkdidaktik: Researching Language Teaching and Learning* (pp. 21 –30). Umeå: Umeå University.

Gilmanova, A., Nikitina, S., & Khasanova, N. (2016). *Using authentic literature to teach reading at EFL classes*. (2016), 8.

Graham, C. R., Tripp, T. R., Seawright, L., & Joeckel, G. L. (2007). Empowering or compelling reluctant participators using audience response systems. *Active Learning in Higher Education*, 8(3), 233-258.

Gunn, B., Smolkowski, K., Biglan, A., Black, C., & Blair, J. (2005). Fostering the Development of Reading Skill Through Supplemental Instruction: Results for Hispanic and Non-Hispanic Students. *The Journal of Special Education*, *39*(2), 66–85. http://doi.org/10.1177/00224669050390020301

Guthrie, J., van Meter, P., Hancock, G., Alao, S., Anderson, E. & McCann, A. (1998). Does concept-oriented reading instruction increase strategy use and conceptual learning from text? *Journal of Educational Psychology*, **90**, 261-278.

Guthrie, J., Hoa, A., Wigfield, A., Tonks, S., Humenick, N., & Littles, E. (2007). Reading motivation and reading comprehension growth in the later years. Contemporary Educational Psychology, 32, 282–313. http://dx.doi.org /10.1016/j.cedpsych.2006.05.004.

Hall, R. Thomas, M., Collier, H., & Hilgers, M. (2005). *A student response system for increasing engagement, motivation, and learning in high enrolment lectures.*

Proceedings of the 11th American Conference on Information Systems, Omaha, NE: ACIS.

Hayashi, K. (1999). Reading strategies and extensive reading in EFL classes. *RELC Journal*, *30*, 114–132.

Heaslip, G., Donovan, P., & Cullen, J. G. (2014). Student response systems and learner engagement in large classes. *Active Learning in Higher Education*, *15*(1), 11–24. https://doi.org/10.1177/1469787413514648

Henter, R. (2014). Affective factors involved in learning a foreign language. *Procedia - Social and Behavioral Sciences*, *127*, 373–378.

Heyer, S. (1996). *True Stories in the News: A Beginning Reader (2nd edition).* Addison Wesley Longman Publishing Company.

Hidi, S. (2000) An interested researcher's perspective: The effects of extrinsic and intrinsic factors on motivation. In C. Sansome and J.M Harackiewicz (Eds) *Intrinsic and Extrinsic Motivation: The Search for Optimal Motivation and Performance*. NY: Academic Press.

Hou, Y. (2018). Integration of Kahoot into EFL Classroom. In C. Stephanidis (Ed.), *HCI International 2018 – Posters' Extended Abstracts* (Vol. 852, pp. 31–37). https://doi.org/10.1007/978-3-319-92285-0_5

Huang, S. (2015). Mixed-method research on learning vocabulary through technology reveals vocabulary growth in second-grade students. *Reading Psychology*, *36*(1), 1–30.

Huang, C. (2016). A Study of IRS Integrated Instruction Design-Implemented with Minnan Dialect Course in Elementary School. Unpublished master's thesis, Hsing Wu University, New Taipei City, Taiwan

IeduNote. (2017). 7 Reading Techniques for Increasing Learning & Knowledge. Retrieved from https://iedunote.com/reading-techniques

Industry facts. (2010). Entertainment Software Association. Retrieved from http://www.theesa.com/index.asp.

Ismail, M. & Mohammad, J. (2017). Kahoot: A promising tool for formative assessment in medical education. *Education in Medicine Journal, 9*(2), 19–26.

Janopoulos, M. (1986). The relationship of pleasure reading and second language writing proficiency. *TESOL Quarterly, 20*, 763–768.

Johnson, R. B., A. J. Onwuegbuzie and L. A. Turner. 2007. Toward a definition of mixed methods research. Journal of Mixed Methods Research 1: 112–133.

Kahoot! Game-based blended learning & classroom response system. (2014). Retrieved from https://getkahoot.comhttps://getkahoot.com

Kajder, S. (2006). *Bringing the Outside In: Visual Ways to Engage Reluctant Readers*. Portland, ME: Stenhouse Publishers.Kirkpatrick, M.; Timms, L. (2007). Jejunal Hemorrhage Syndrome of Dairy Cattle, 47–59. https://doi.org/10.4324/9780203777176

Kondal, B., & Prasad, V. (2016). *Developing Language Skills Through MALL Among the Professional Students*. *4*(4), 6.

Krashen, S. (1982). Principles and practice in second language acquisition. Retrieved fromhttp://www.sdkrashen.com/Principles_and_Practice/Principles_and_Practice.pdf.

Krashen, S. (1994). The input hypothesis and its rivals. In N. Ellis, (Ed.) Implicit and explicit learning of languages (p. 45-77). London: Academic Press

Krashen, S. (2003). *Explorations in language acquisition and use*. Portsmouth: Heinemann.

Krashen, S. (2003). Explorations in language acquisition and use: The Taipei lectures. Portsmouth, NH: Heinemann.

Krashen, S. (2004). The power of reading. Portsmouth, NH: Heinemann and Westport: Libraries Unlimited.

Krashen, S. (2009). Principles and Practice in Second Language Acqusition. Oxford: Pergamon Press.

Krashen, S. (2018). The Conduit Hypothesis: How Reading Leads to Academic Language Competence Language. Retrieved from http://www.sdkrashen.com/content/articles/2018_the_conduit_hypothesis.pdf

Kulik, C., & Kulik, J. (1991). Effectiveness of computer-based instruction: an updated analysis. Computers in Human Behavior, 7(1), 75–94.

Kutner, M., Greenberg, E., Jin, Y., Boyle, B., Hsu, Y., & Dunleavy, E. (2007). Literacy in everyday life: Results from the 2003 National Assessment of Adult Literacy (NCES 2007-480). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

Lee, K. (2008) Webquests in the english classroom: how do they affect student learning? Retrieved from https://cdr.lib.unc.edu/indexablecontent/ uuid:1f08f80a-492f-44e6-b5ec-6971541ecce7

Lee, C. (2017) The Research on the Learning Effect by integrating an Online Instant Response System into Earth Science Teaching-A Case Study for the Middle School Students from the Rural Area. Unpublished master's thesis, National Taiwan Normal University, Taipei, Taiwan.

Licorish, S., Owen, H., Daniel, B., & George, J. (2018). Students' perception of Kahoot!'s influence on teaching and learning. Research and Practice in Technology Enhanced Learning, 13(1), 9–31.

Lieberman, D. What can we learn from playing interactive games? In: Vorderer, P., Bryant, J. (eds.) Playing Video Games: Motives, Responses, and Consequences, pp. 379– 397. Lawrence Erlbaum Associates, Mahwah (2006)

Lin, T. (2016). The Effect of Integrating Feedback and Signaling Design with Tablet IRS on College Students' Situational Interest and Attention. Unpublished master's thesis, National Chiao Tung University, Hsinchu, Taiwan

Lions, S. & Peña, M. (2016) Reading Comprehension in Latin America: Difficulties and Possible Interventions. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/27254828

Loucky, J. (2010). Constructing a roadmap to more systematic and successful online reading and vocabulary acquisition. *Literary & Linguistic Computing*, *25*(2), 225-241. https://doi.org/10.1093/llc/fqp039

Lysenko, L., & Abrami, P. (2014). Promoting reading comprehension with the use of technology. *Computers and Education*, *75*, 162–172. https://doi.org/10.1016/j.compedu.2014.01.010

Mackay, S. & Grass, S. (2005). *Second Language Research.* London: Lawrence Erlbaum Associates.

Mackay, S. (2010). *Researching Second Language Classrooms.* New York: Routledge.

Macmillan. (nd). Improve Advance Reading. Retrieved from https://nyelvkonyvbolt.hu/uploads/files/ImproveAdvancedReading.pdf

Mason, B., & Krashen, S. (1997). Extensive reading in English as a foreign language. *System*, *25*, 91–102. *language teaching: Concepts and practice* (151-170). New York: Cambridge University Press.

Matthews, J., Matthews, M., & Alcena, F. (2015). EDD-7914–Curriculum teaching and technology. Florida, US: Nova Southeastern University.

Medina, E., & Hurtado, C. (2017). Kahoot! A digital tool for learning vocabulary in a language classroom. *Revista Publicando, 4*(12), 441–449.

Mikhailov, S. (2001). Retrieved August, 2019, from http://www.ababasoft.com: http://www.ababasoft.com

Mohamed, N., 2006. An exploratory study of the interplay between teachers' beliefs, instructional practices and professional development. PhD Dissertation, *Department of Language Teaching and Learning. The University of Auckland*, Australia, 344 pp.

Morgan, D. (1997). *Focus groups as qualitative research* (London: Sage).

Morgan, D. (1998). *The focus groups guidebook* (London: Sage).

National Reading Panel (NRP). (2000). Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction (NIH Pub. No. 00–4754). Retrieved from. National Institute of Child Health & Human Development Website http://www.nichd.nih.gov/publications/pubs/nrp/ pages/report.aspx.

Ngoc, N. (2015). *The essential roles of Skimming and Scanning Techniques in teaching reading comprehension.* Retrieved from http://nnkt.ueh.edu.vn/wp-content/uploads/2015/07/20.pdf

OECD (2015), *Students, Computers and Learning: Making the Connection*, OECD, Paris, http://dx.doi.org/10.1787/19963777.

Papastergiou, M. (2009). Digital game-based learning in high school computer science education: Impact on educational effectiveness and student motivation. *Computers & Education*, *52*(1), 1–12.

Paperchoice. (2018) Selective Reading: What, Why and How? Retrieved from https://paperchoice.org/blog/post/selective_reading

Pede, J. (n.d.) "The Effects of the Online Game Kahoot on Science Vocabulary Acquisition." 51.

Pintrich, P. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. Journal of Educational Psychology, 95,667–686. http://dx.doi.org/10.1037/0022-0663.95.4.667

Pond, S. (2010). Learner-centered use of student response systems improves performance in large class environments. The Journal ofEffective Teaching, 10,4–17.

Qiu, M., & Bai, Z. (2013, March). http://219.142.121.14:8801/lunwen/files/ Papers/papergccce/141. pdf. Retrieved August, 28, 2019, from http://219.142.121.14:8801/.

RAND Reading and Study group (2002). Reading for Understanding. Toward an R&D Program in Reading Comprehension.

ResearchGate. (2018) What is reading skill and its significance?. Retrieved from https://www.researchgate.net/post/what_is_reading_skill_and_its significance.

Reynolds, R., Taylor, M., Steffensen, M., Shirey, L., & Anderson, R. (1982). Cultural schemata and reading comprehension. Reading Research Quarterly, 17, 353–366.

Riazi, A. Mehdi, and Christopher N. Candlin. 2014. "Mixed-Methods Research in Language Teaching and Learning: Opportunities, Issues and Challenges." *Language Teaching* 47(2):135–73.

Robb, T., & Susser, B., 1989. Extensive reading vs skills building in and EFL context. Reading in a Foreign Language 5 (2), 239–251.

Robinson, P. (2005). Aptitude and second language acquisition. *Annual Review of Applied Linguistics*, *25*, 46–73.

Rossman, G., & Wilson, B. (1985). Numbers and words: Combining quantitative and qualitative methods in a single large-scale evaluation study. *Evaluation Review, 9*, 627-643.

Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78

Shanahan, T. (2005). Learning Point Associates/North Central Regional Educational Laboratory. Chicago: University of Illinois.

Shanahan, T. (2006). Relations among oral language, reading, and writing development. In C. MacArthur, S. Graham, & J. Fitzgerald (Eds.), Handbook ofwriting research.New York: Guilford Press.

Siemens, G. (2005). Connectivism: A Learning Theory for the Digital Age . itdl , 1-9.

Slavin, R., Lake, C., Chambers, B., Cheung, A., & Davis, S. (2009). Effective reading programs for the elementary grades: a best-evidence synthesis. Review of Educational Research, 79, 1391–1465. http://dx.doi.org/10.3102/0034654309341374

Slavin, R. (2012). Instruction based on cooperative learning. In R. E. Mayer, & P. A. Alexander (Eds.), Handbook of research on learning and instruction (pp. 344e360). New York, NY: Routledge.

Snow, C. (2002). Reading for Understanding. Toward an R&D program in Reading Comprehension. RAND Reading Study Group. Science and Technology Policy Institute.

Subramaniam, K. (2012). How webquests can enhance science learning principles in the classroom. Clearing House, 85(6), 237-242. doi: 10.1080/00098655.2012.698323

Taylor, L. (1990) Teaching and learning vocabulary (Upper Saddle River, NJ, Prentice Hall).

Thornbury, S. (1998). Comments on Marianne Celce-Murcia, Zoltan Dornyei and Sarah Thurrell's "Direct approaches in L2 instruction: a turning point in communicative teaching?" TESOL Quarterly, 32(1), 109 -116.

Verhoeven, L., & van Leeuwe, J. (2008). Prediction of the development of reading comprehension: a longitudinal study. Applied Cognitive Psychology, 22, 407–423.

Wang, A. (2015). The wear out effect of a game-based student response system. *Computers and Education*, *82*, 217–227. https://doi.org/10.1016/j.compedu.2014.11.004

Wang, C. (2016). The Design and Implementation of Team-Game-Tournament with Instant Feedback System into a University Course. Unpublished master's thesis, Tamkang University, New Taipei City, Taiwan.

Wang, A., & Lieberoth, A. (2016). The effect of points and audio on concentration, engagement, enjoyment, learning, motivation, and classroom dynamics using Kahoot. In T. Connolly & L. Boyle (Eds.), *Proceedings of the 10th European conference on game-based learning, reading* (pp. 737–748). Reading, UK.

Wang, Renfeng. 2016. "Backwash Effect of Language Test on English Language Teaching." in *Proceedings of the 2016 International Conference on Arts, Design and Contemporary Education*. Moscow, Russia: Atlantis Press.

Wang, Y. (2017). The effectiveness of integrating teaching strategies into IRS activities to facilitate learning: Interactive response system interventions. *Journal of Computer Assisted Learning*, *33*(1), 35-50. https://doi.org/10.1111/jcal.12164

Wang, C. (2017) Correlations of Teaching through Interactive Response System with Teaching Interaction, Engagement, Self-Efficacy and Degree of Learning Satisfaction. Unpublished master's thesis, National Taipei University of Education, Taiwan (2017)

Wash, P. (2014). Taking advantage of mobile devices: using socrative in the classroom. J. Teach. Learn. Technol. 3(1), 99–101

Wells, J., & Lewis, L. (2006). Internet access in U.S. public schools and classrooms: 1994–2005 (NCES 2007-020). Washington, DC: U.S. Department of Education, National Center for Education Statistics. Retrieved July 20, 2019, from nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2007020

Wells, J. (2011). Motivate students to engage in word study using vocabulary games. Intervention in School and Clinic , 45-49.

Wibisono, D. (2019). The effects of Kahoot! in Teaching Reading to Tenth Grade Students. Magister Scientiae, p.pp. 86-102.

Wichadee, S., & Pattanapichet, F. (2018). Enhancement of performance and motivation through intervention of digital games in an English language class. *Teaching English with Technology, 18*(1), 77–92.

Wigfield, A., & Guthrie, J. T. (1997). Relations of children's motivation for reading to the amount and breadth of their reading. *Journal of Educational Psychology*, 89, 420-432.

Wolf-Wendel L., Ward K. and Kinzie J. (2009) A tangled web of terms: The overlap and unique contribution of involvement, engagement, and integration to understanding college student success. *Journal of College Student Development* 50(4): 407–28.

Yang, T. (2017). An Elementary Educational Study on Chinese Stroke Real-Time Response System. Unpublished master's thesis, National Taichung University of Education, Taichung, Taiwan.

Yip, F. (2006). Online vocabulary instruction in early language and literacy methods textbook. *Reading & Writing Quarterly*, 233-249.

Young, E. (2005). The Language of Science, The language of students: Bridging the gap with engaged learning vocabulary strategies. *Science Activities, 42*(2), 12-17.

Zacharias, N. (2012). *Qualitative Research Methods for Second Language Education.* Newcastle: Cambridge Scholars Publishing.

Zarzycka-Piskorz, E. (2016). Kahoot it or not? Can games be motivating in learning grammar? *Teaching English with Technology, 16*(3), 17–36.

Zimmerman, B. & Schunk, D. (2011). Self-regulated learning and performance: an introduction and overview. In B. J. Zimmerman, & D. H. Schunk (Eds.),

Handbook of self- regulation and performance (pp. 1–12). New York: Routledge.

Appendixes

Appendix A: Consent form

UNIVERSIDAD DE CUENCA

Sr. Estudiante:

Reciba un cordial saludo de parte de Adrián Narvaez, profesor de Inglés del Instituto Universitario de Lenguas. Soy también Licenciado en Lengua y Literatura Inglesa.

Durante este ciclo académico usted podría formar parte de un programa de estudio en el que estará expuesto al uso de material didáctico tecnológico para aprender inglés. Como investigador, me encargaré de diseñar y usar material tecnológico para mejorar el aspecto de la comprensión lectora en inglés. Este material tecnológico será sobre todo usando material interactivo a manera de preguntas y respuestas de múltiple opción en base a textos en inglés específicamente dirigidos a su nivel. Estas actividades serán conducidas por mi persona durante horas de clase en un día especifico de la semana.

Las páginas web que serán utilizadas tendrán el fin de practicar la comprensión lectora en base a textos apropiados de acuerdo a su nivel de inglés, mediante la lectura previa de los mismos y conjuntamente de actividades didácticas durante una clase por semana.

El propósito de este programa es que usted desarrolle mejor la destreza de la lectura comprensiva, empleando material tecnológico provisto desde Internet. He visto la necesidad de usar la tecnología para estar a la par con el mundo moderno y a la vez, usarlo como herramienta para el desarrollo óptimo de sus destrezas que espero le servirán ahora y en futuros contextos de aprendizaje del idioma inglés.

La aplicación de esta metodología se dará una vez a la semana durante el ciclo marzo – agosto 2019. Mediante esta metodología podremos profundizar en la comprensión de textos desde niveles básicos con la ayuda del proyector del aula, pero primordialmente del laboratorio de computación, en un acercamiento al aprendizaje a manera de juego colaborativo. El resto de los días de la semana tendremos clases de inglés normalmente en el aula.

Para todo esto, es un requerimiento obligatorio que usted me dé el consentimiento o no para ser parte de este programa, y de requerirlo, tomar evidencias audiovisuales del proceso de aplicación. Si usted decide no dar consentimiento, no habrá ninguna clase de represalia ni participación de su parte en el mismo y podrá seguir estudiando inglés como lo ha hecho hasta ahora sin ningún problema. En cualquier momento durante el programa, usted tiene el derecho de rechazar su participación, al igual que no afectará en sus calificaciones el hecho de no acceder a estar en el estudio. Es importante mencionar también que, de acceder a participar, garantizaré durante todo momento su anonimidad durante toda la duración del mismo.

Por favor no dude en contactarme en cualquier momento antes, durante o después del estudio por alguna inquietud que tuviere.

Gracias por su atención y colaboración.

Atentamente:

Lcdo. Adrián Narvaez
Profesor de Inglés
adrian.narvaezp@ucuenca.edu.ec
Cel: 0983852877

Yo …… estudiante del …… ciclo de Ingles doy mi consentimiento para participar en este estudio.

……

Firma

Appendix B: Validation survey for Focus group interview

Cuestionario piloto acerca de las percepciones del uso de Kahoot! como herramienta para comprensión lectora.

Nombre: _____Fecha:_____

1. ¿Las historias que se leyeron durante el estudio fueron interesantes para usted? ¿Por qué?
2. ¿Considera que el formato digital de lectura de las historias fue apropiado durante el estudio? ¿Por qué?
3. ¿Qué le pareció la metodología con el uso de *Kahoot!* para mejorar la comprensión lectora de historias en inglés?
4. ¿Qué aspecto le gusto más acerca de *Kahoot!*?
5. ¿Qué dificultades encontró durante estudio con el uso de *Kahoot!*?
6. El estudio tuvo 2 momentos: uno en el cual el docente preparó las preguntas y el segundo en donde se formaron grupos y las preguntas las elaboraron los estudiantes. ¿Cuál de los dos momentos prefirió más y por qué?
7. ¿Cree usted que *Kahoot!* le ayudó a mejorar su comprensión lectora en inglés? ¿Por qué?
8. ¿Qué sugerencias y recomendaciones daría en caso de que un estudio similar se llevara a cabo en el futuro?

1. En desacuerdo 2. Necesita mejorar 3. De acuerdo 4. Completamente de acuerdo

	Valor				**Observaciones**
	1	**2**	**3**	**4**	

Las preguntas se presentan de manera clara y fácil de entender.					
Las preguntas son concisas.					
Las preguntas no tienen errores de deletreo/puntuación.					
El lenguaje de las preguntas se presta para obtener respuestas concretas.					

Appendix C: Focus group questions for interview

1. During the study, were the presented stories interesting for you?
2. Do you consider that the digital format of the stories was suitable during the study? Why?
3. What did you think about the Kahoot! methodology to improve the reading comprehension of stories in English?
4. Which aspect did you like more about kahoot?
5. What difficulties did you find during the application of Kahoot!?
6. The study had two moments: one in which the researcher prepared the questions beforehand, and the second one where groups were formed and the questions were elaborated by themselves. Which of the two moments did you prefer and why?
7. Do you think that Kahoot! helped you improve you reading comprehension in English? Why?

8. What suggestions and recommendations would you give in case a similar study would take place in the future?

Appendix D: Reading comprehension test structure

The Structure of the Test

Sub-Test	Aim	Type of Test	Marks	Time in minutes
3 Reading Comprehension				
3.1	Reading for Gist	4 matching items	8	
3.2	Reading for Detail	4 true/false items	8	30
3.3	Selective Reading	4 matching items	8	

3 Reading Comprehension, Part 1

Read the four texts, items 31–34. Then read the headlines a)–h). Decide which headline goes best with which text. Mark your answers on the answer sheet.

a) ASTRONAUT WALKS IN SPACE AGAIN

b) Bill Clinton caught in snow in Austria

c) Eleventh space trip for astronaut

d) FOOTBALLER HAS ACCIDENT WHILE PLAYING

e) Footballer wants to help children

f) Model and Ex-President in bad weather

g) PRINCE CHARLES GIVES MONEY TO SCHOOL

h) SCHOOLCHILDREN MEET PRINCE OF WALES

31.

The Prince of Wales, Prince Charles, visited a junior school in Buckinghamshire last week to help children with a project about the Royal Family. He told the children about his life as a member of Britain's most famous family and the duties which go with his title. He then let photos be taken of him with the children and the teachers for the project work. One of the questions the children asked was "How much pocket money do your sons get?"

32.

Footballer Roman Gregory has started a UNICEF campaign to help children hurt in accidents with land mines, in countries at war and in peace. The footballer says he cannot imagine being without an arm or a leg and knows that many people do not even think about what the children who have had such injuries go through. "Many accidents with land mines happen when children are just playing happily in the fields", says Roman, who hopes to get £1 million in the campaign.

33.

Former US President Bill Clinton met model Naomi Campbell on a snow-covered mountain in Austria. Naomi's flight arrived late because of the bad weather and she nearly fell down getting through the snow. Bill Clinton helped her through the snow and they chatted for a while about the weather. Naomi Campbell was doing a photo session at the same place where Clinton was at a conference.

34.

NASA Astronaut Jerry Ross works on the so-called "City in the sky" – the international space station – and has just done a ninth space walk as part of his 11 days on the space station. Ross is the first person to walk in space so many times and still loves the experience. He will be returning to Earth later this month.

3 Reading Comprehension, Part 2

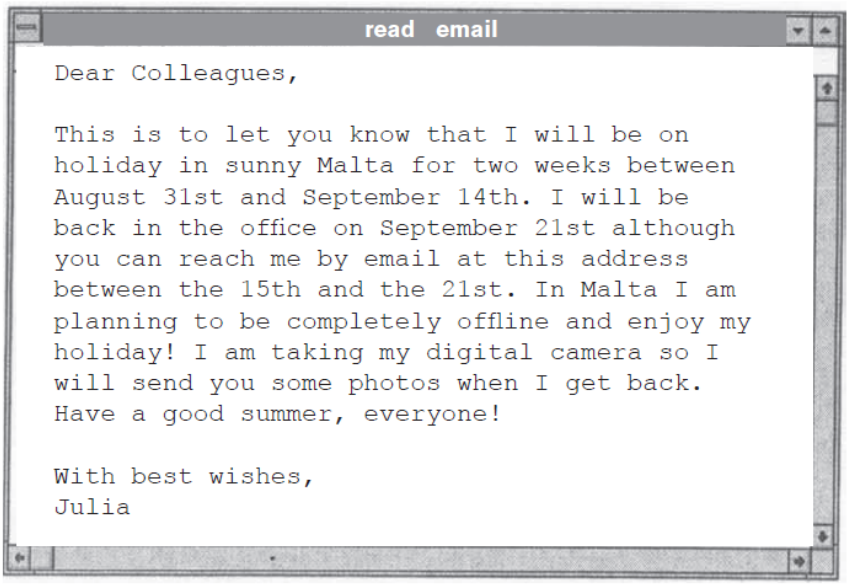
Read the following texts and then do items 35 – 38.

Text 1

You receive the following email:

Text 1

You receive the following email:



Read items 35–36. Decide if each of the statements in items 35–36 is true or not true. Mark PLUS (+) for true and MINUS (–) for not true on your answer sheet.

35. Julia will be away from the office for three weeks.

36. Julia cannot be reached by email in Malta.

Text 2

You are staying at the Hotel Eden and receive the following instructions:

Eden Hotel - Your hotel key card

To open the door of your room, put the card into the door with the key symbol facing you. When you hear the bell, remove the card and turn the handle.
You can use your key card to get into the hotel between 11 p.m. and 6 a.m. Put the card into the hotel main entrance door with the key facing away from you. The door will open automatically when the bell rings. You do not need to push the door.
We hope you enjoy your stay at the Eden Hotel.

Read items 37–38. Decide if each of the statements in items 37–38 is true or not true. Mark PLUS (+) for true and MINUS (–) for not true on your answer sheet.

37. The same key card can be used for your room and the main entrance to the hotel.

38. You must push the hotel entrance door when you hear the bell.

3 Reading Comprehension, Part 3

Read items 39–42 and then quickly look through the text. Decide which part of the text (a–f) matches each of the items 39–42 and mark your answers on the answer sheet.

39. You want to know something about the food they serve at Rudstone Walk.

40. You want to know how to get to Rudstone Walk.

41. You would like to know the price of a single room.

42. You want to know about flats to rent at Rudstone Walk.

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AA 4 Diamonds
RAC 4 Diamonds
English Tourism Council 4 Diamonds
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a **Welcome to Rudstone Walk...**
Nestled in its own secluded corner of the Yorkshire Wolds, Rudstone Walk provides a relaxing retreat with luxury accommodation for both leisure and business travellers.
Set in its own broad green acres and wooded hills with magnificent views over the Vale of York, it is no surprise that this is a place guests return to again and again.
Owned and managed by the Greenwood family, Rudstone Walk has become renowned over the years for its hospitality and highest quality standards.
For business it provides a peaceful retreat at the end of a working day - less than five minutes from the M62, and 15 minutes from Hull.

b For pleasure it is ideally located for a relaxing break within easy reach of York and the many other attractions of East Yorkshire.
There is an excellent rail service from nearby Brough to all U.K. mainline stations.
The M62 is just 2 miles from Rudstone Walk, offering a direct route to Hull (20 minutes), Leeds (45 minutes), and Manchester (90 minutes). Humberside Airport is only 25 minutes away across the Humber Bridge.

c Rudstone Walk offers something quite unique in dining and is the ideal venue for your special celebration, or just a night out with a difference! Rudstone Walk offers a wonderful atmosphere, and we do specialise in the typical farmhouse meal - all freshly prepared and cooked in the traditional way on the Farmhouse Aga.
For parties of 10 or more we offer you the exclusive use for your lunch or dinner of either the Farmhouse Dining Room or Function Room.
The same menus are offered in both rooms. To arrange your dinner party simply contact us to check on availability. We will need a small deposit to confirm your booking and will need confirmation of your menu choices 7 days in advance of your dinner.
Choose from one of our Dinner Party Menus or get in touch with us if there is something specific that you require.

d Hotel Accommodation...
Luxurious en-suite bedrooms and suites have been built around the spacious walled courtyard adjacent to the farmhouse. This accommodation provides 14 superior twin or double en-suite rooms for those requiring bed and breakfast.
Cleverly designed, there is also the option of an adjacent sitting room and kitchen to provide 7 luxury suites which meet the very demanding Highly Commended English Tourist Council 4 Diamond Guest Accommodation Standards.

e Self-catering
Self-catering cottages and flats are also available.
Built from a range of period farm buildings on a west-facing terrace where, on a clear day, the view extends to 50 miles across the Vale of York and each warm summer evening ends with a spectacular sunset.
Turn your head to the left and there is another wonderful view over the glittering Humber Estuary to the Lincolnshire Wolds.
The cottages and flats are beautifully appointed with every conceivable comfort including TV, microwave and telephone - in fact to ETB 4-Star standards.
All linen, towels and tea towels are provided and changed weekly. Electricity and heating are included and the laundry facility is free of charge.

f Prices
Bed & Breakfast (All Prices include VAT at 17.5%)
Single en suite - £46.00
Double or Twin en suite - £59.00 Executive Suite for One - £95.00
Executive Suite for Two - £105.00
Family Suite - £100.00
Resident 3-Course Evening Meal - £18.00
Weekend, Bed & Breakfast (Prices are per night for stays of two nights or more including a Friday or Sunday night)
Single en Suite - £40.00 Double or Twin en suite - £55.00

Reading Comprehension

Part 1

31	a b c d e f g h	31
32	a b c d e f g h	32
33	a b c d e f g h	33
34	a b c d e f g h	34

Part 2

35	+ −	35
36	+ −	36
37	+ −	37
38	+ −	38

Part 3

39	a b c d e f	39
40	a b c d e f	40
41	a b c d e f	41
42	a b c d e f	42

Sub-Test	Maximum Number of Points	Number of Points Awarded
Reading Comprehension	**24**	
Part 1 (31–34)	8	
Part 2 (35–38)	8	
Part 3 (39–42)	8	

For an overall pass in the examination, you must achieve at least 60 points.

Add the total number of points awarded for the written examination to the number of points awarded for the oral examination. The grade is then calculated according to the following table:

90–100 points	**Very Good**
80–89.5 points	**Good**
70–79.5 points	**Satisfactory**
60–69.5 points	**Pass**