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QUESTION-ANSWER RELATIONSHIPS IN READING COMPREHENSION

How Reading Comprehension is Affected by Means of ICT in Question-Answer Relationship

Strategy in EFL classroom

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Abstract

Reading comprehension plays a transcendent role in language learning. Previous research has highlighted the importance of reading strategies and how students must be trained in how to apply them in order to improve reading comprehension. However, little attention has been given to the use of question-answer relationships (QAR) strategy supported by ICT. The present qualitative action research study used a teacher's journal, surveys, and students' artifacts to collect data on the impact of QAR strategy applied in interactive short texts on reading comprehension of students in a Colombian public school. Data was analyzed using the grounded theory approach. Results indicated that students improved their reading comprehension skills through reading strategies, and collaborative learning while in-class; however, test scores did not change. This supports the fact that QAR supported by ICT is an effective approach to reading comprehension, however proper training should be given to students.

Keywords: ICT tools, Question-Answer Relationships, reading comprehension.

Resumen

La comprensión de lectura juega un papel trascendental en el aprendizaje de una lengua. Investigaciones anteriores han resaltado la importancia de estrategias de lectura y cómo los estudiantes deben ser entrenados en cómo aplicarlas para así mejorar su comprensión lectora. Sin embargo, se le ha dado poca atención al uso de la estrategia de relaciones pregunta-respuesta (QAR, por sus siglas en inglés) apoyada por TIC. El presente estudio cualitativo de investigación-acción utilizó diarios de profesor, encuestas y artefactos de estudiantes para recoger la información sobre el impacto de la estrategia QAR, aplicada en textos interactivos cortos, en la comprensión lectora de los estudiantes en un colegio público colombiano. La

información fue analizada a través del planteamiento de la teoría fundamentada. Los resultados indicaron que los estudiantes mejoraron sus habilidades de comprensión lectora usando estrategias de lectura y aprendizaje colaborativo durante la clase.; sin embargo, los resultados en las evaluaciones no cambiaron. Esto lleva a la conclusión de que QAR apoyadas por TIC es un método efectivo para la comprensión lectora, no obstante, los estudiantes deben ser entrenados adecuadamente en su uso.

Palabras clave: comprensión lectora, herramientas TIC, relaciones pregunta-respuesta.

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Chapter 1: Introduction

1.1 Introduction to the study

Since the 1980's, when Raphael and Wonnacott (1981) conceived the idea of the Question-Answer Relationship (QAR) strategy for the reading skill, research has been conducted in how this strategy affects different areas in either positive or negative manner (Kinniburgh & Shaw, 2009; McIntosh & Draper, 1996; Muzammil, 2017). These aforementioned studies mean that improving reading comprehension and the QAR strategy is still a relevant topic to cover in both L1 and L2. Raphael and Au (2005) have still considered the importance of QARs on a cross curricular level, because they apply to any type of reading activity; based on this view, and the fact that reading comprehension is a skill that all learners must develop, QARs can be applied in EFL learning nowadays. Furthermore, McIntosh and Draper (1996), tried to deal with meaningful questions, which were also integrated with regular content, to students of Mathematics, so they could have better understanding and performance in exercises or tests. It is convenient to bear in mind that in McIntosh and Draper's paper these participants were seventh-grade English native speakers. Based on these studies, this study seeks to combine QARs and ICT tools that could engage students with reading and increase their comprehension level rather than only applying QARs as the previously mentioned studies suggested. In that sense, a new contribution to the study of reading is expected since there have been scarce studies concerning QAR in the region.

Although many studies have been conducted on reading comprehension and QARs in the world, little has been written about it in Colombia. For instance, a small-scale study conducted during a short period of time by an EFL teacher in Envigado, Colombia showed that the use of different strategies significantly improved reading comprehension in eighth grade schoolers

(Echeverri Acosta & McNulty Ferri, 2010). However, it is to highlight that in this study not only was QAR strategy used, but also were three other types of reading strategies: mind mapping as a graphic organizer, outlining, and summarizing. At the end of this study, QAR proved to be the most effective strategy for reading comprehension among all four applied. The previous work showed the little research conducted on the use of QARs in reading comprehension at a national level.

This current study pretended to positively affect reading comprehension, and offer a possibility to deal with low levels in this skill with eleventh grade students at a public school in South-East Bogota. In order to achieve this goal, not only did printed material texts played a significant role regarding reading comprehension, but also digital short readings. Since computer mediated communication (CMC) is one of the cutting-edge tools in language learning, the current interest is in how to address it properly through reading, and make it meaningful and constant through QARs. Students' reading comprehension level was very low (see Appendix A) if results of SABER 11 test is compared to Colombian Ministry of Education's (2006). Additionally, the school where this study took place had acquired devices, (network connection, PDAs, overall technological innovations, as defined by Levy and Hubbard (2005), which were used along with QAR strategies in order to positively impact eleventh graders' reading comprehension skill.

This chapter will present the current situation of students at the public school where this study was conducted regarding reading comprehension compared to the national standard. Also, the need, not only to state students' levels, but also to discuss why this situation must change. Finally, the selection of a strategy that helped to deal with the issue was mandatory; thus, a question came up to direct the study so it could achieve the objectives proposed.

1.2 Rationale of the study

1.2.1 Needs analysis and problem statement

Public education in Colombia has a negatively significant difference with private education regarding quality. Perhaps it is due to the socio-economic profile of students and the low expenditure of the country's GDP per student as reported by the Organization for Economic and Co-operation Development [OECD] (2014). Most of public school students are part of low-income families and, by the end of their high school studies, instead of enrolling in higher ones, they start working (OCDE, 2014). With that information in mind, eleventh grade students at a public school in South-East Bogota are currently A1 level (CEFR) in overall English according to the 2015's national test that measures students' competence in different academic areas of knowledge SABER 11 test scores (see Appendix A). Added to the basic areas of knowledge (natural sciences, language, and math) assessed in SABER 11, competence in a foreign language is also assessed considering CEFR levels of performance (Instituto Colombiano para el Fomento de la Educación Superior [ICFES], 2016). In the case of the school where this study took place, English was assessed as indicated in Appendix A. Based on Colombian Basic Standards of Competence (Ministerio de Educación Nacional, 2006), eleventh grade students should have a B1 level in English when they finish their high school studies (see Appendix B). Consequently, students in this study needed to improve their proficiency in the foreign language, more precisely, in their reading comprehension skill bearing in mind the SABER 11 test since it is the section with more number of questions in the national test. Additionally, training students in having a strategy to apply in any text will help them to raise awareness of the importance of reading comprehension, since it is the key point in academic success (Hemmati & Bemani, 2013).

To improve, students must be constantly exposed to reading. Based on the results of the application of some instruments (students' questionnaire, and interview with the EFL teachers of the school), students showed low reading comprehension and that seems to be based on the fact that reading in English is mostly subjected to classes in school (see Appendix C). Moreover, even though EFL teachers at the target school know about and apply some reading strategies in order to motivate and enhance levels of comprehension, their perception is that students still struggle to deal with written texts. The reason may underlie in key factors such as lack of vocabulary and identification of grammar structures (see Appendix D). It is relevant to mention the fact that the school only hosts 10th and 11th grades since this can somehow impact the students' performance. Most of students come from different schools and that implies different English levels, differences in knowledge background, as well as learning styles and that once again may affect students' performance in the abovementioned test. Even this can reflect their low reading performance. For instance, they showed low vocabulary level; consequently, reading comprehension becomes a big challenge to tackle, which in the end causes frustration for both student and teacher. The diagnostic test indicated that most students failed at answering even basic questions about literal information because of the vocabulary used in the text. In other words, students have very limited vocabulary; therefore, they are not capable of understanding specific ideas. Despite that fact, students are supposed to be familiarized with such vocabulary, according to the Standards of Competence (Ministerio de Educación Nacional, 2006). Such Standards are Colombia's Ministry of Education's framework for institutions and teachers that set the basic competences for students during their school life. Those results urge the improvement of reading comprehension for the school to be closer to the Standards. Despite that fact, most public schools in Colombia are far from meeting such Standards (Mejía Mejía, 2016).

Moreover, one of the difficulties to overcome is the limited time to work with students. At the school, English subject is only allotted four hours a week during three semesters, not being studied in the first semester in tenth grade. Apart from that, the school emphasizes technical studies, which require much of students' attention, leaving aside other content subjects. For students, it is necessary to acquire new vocabulary in L2 and increase reading comprehension, for it is core in their further technical studies, but their current level does not permit them to have full comprehension of texts. This also implies lower quality in L2 at the school, which is harmful for the school considering the Standards of Competence.

This study intended that students improved their reading comprehension skills through elementary A1 level texts. That is, advancing from low comprehension level to a more self-aware and secure manner.

1.2.2 Justification of problem's significance

It is necessary to see reading as an active mental process which needs improvement, and training (Hemmati & Bemani, 2013). Reading entails vocabulary and construction of sentences; therefore, this study was designed to tackle reading together with vocabulary building, and identification of ideas as it will be mentioned afterwards in chapter 4. Because of the lack of studies about the use of QARs and the effect on reading comprehension in Colombia, this study intended to find the impact of such strategy combined with ICT on low levels of reading comprehension. Although the gap in reading comprehension would be reduced, the scope of this study is not to change the target school's characteristics (schedule, or hosting other grades), or to reach what the Standards of Competence suggest in a brief period.

Provided levels of reading comprehension rise, this study would be an opportunity to further implement it on a national scale, contributing on reading comprehension development in

EFL. In that sense, many of the schools in public and private sector in Colombia which go after raising levels and pursuing a higher position in Colombian school ranks (Revista Semana, 2015) would be benefitted. For that reason, training students in having a strategy to apply in any text will help them to raise awareness of in reading comprehension.

As a whole, it is a must to provide students with reading strategies they can use in their lives, and that is the ultimate goal of this study as a guide to pursue improvement in reading comprehension in students of English since QAR application combined with ICT lack more studies in the region.

1.2.3 Strategy selected to address the problem

Reading comprehension can be increased if different reading strategies are applied, such as summarization, graphic organizers, and syntactic structure identification, among others; all of them showing some positive results (Gao, 2013; Hemmati & Bemani, 2013). However, this research will use Question-Answer Relationships as the core strategy to conduct the investigation; this is owing to the significant positive results shown in comparison to other strategies for reading comprehension (Hemmati & Bemani, 2013; Raphael & Au, 2005).

Moreover, this study intended to support QAR with ICT in order to improve reading comprehension. Within ICT, there are several tools that not only help reading comprehension, but also foster students' critical thinking, and autonomy (López, 2006), and it does have more arguments in favor than against (Yunus, Nordin, Salehi, Sun, & Embi, 2013). So, the objective is to focus on interactive reading exercises: meaningful short texts for students' lives, for instance, relating to their social background, however applying Raphael's QARs (Right There, Think and Search, Author and Me, and On my Own) to the readings. Bearing this in mind, reading sessions were allotted two hours a week (that means half of students' English class time). In those

sessions, the teacher-researcher used short authentic texts in electronic resources in which students not only had to answer both closed and open questions, but also made connections between the text and their own lives. Also, some texts were given in Google Docs, an online word processor that allows the participation of real time group work. In that sense, students could participate online. Such participation was sent to another classmate through e-mail as a digital resource.

However, it is to notice that students should always keep in mind QARs: what did the texts fostered students to answer or create? By using QARs supported by ICT, the expectation was to obtain comparable results as the remarkable ones obtained in the studies mentioned previously.

1.3 Research question and objectives

After having stated the need of improving reading comprehension for students to be academically successful, the question that arises, and will direct this research is:

How does the use of question-answer relationship activities combined with ICT tools affect reading comprehension in A1 (CEFR) eleventh grade students at a public school in South-East Bogota?

Aiming towards obtaining positive results, this study sought to identify the extent, in which QARs, supported by ICT could improve reading comprehension to higher levels. In that sense, this study intended to raise awareness on the importance of the use of reading strategies, and to foster the proper use of ICT in reading comprehension.

1.4 Conclusion

Reading comprehension is an active mental process that is crucial for students' lives. The challenge that learners face is how to approach reading with full comprehension of texts. It is highly important for teachers to train students in different strategies to improve their

comprehension. In addition, not only teachers should train students to comply with governmental requirements of students' level of English, but also to empower students with lifelong strategies to be used in academic or even working context. In regard to reading, eleventh grade students at a public school in South-East Bogota have low levels of reading comprehension, which consequently results in overall poor level of English. Bearing that in mind, it is compulsory to provide students with strategies that eventually help them raise English level; from all the many strategies that exist in L2 learning, this study tackled QAR strategy, which is used to have an impact on reading comprehension, and, since the 1980s has proved to be effective. The intention of the research is to combine both the reading strategy with ICT tools given the fact that they stimulate students' attention and help them be more resourceful, and also because the school where the research was conducted has some of those technological tools. Finally, it is necessary to highlight the crucial aspect of providing students with the necessary tools and strategies to have better reading comprehension. The expectation is to obtain positive outcomes in students' reading comprehension.

Chapter 2: Literature Review

2.1 Introduction

The reading skill has been studied for long, and one of the goals for a teacher is that students achieve complete understanding of the texts given. According to Bloom's taxonomy (Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, 1956), readers should reach all levels of reading comprehension: literal comprehension, reorganization of information, inferential comprehension and analysis, and evaluation, to ultimately create their own ideas based on their appreciation and reflections upon the readings. In order to obtain higher levels, it is necessary to work all of the comprehension levels together, since reading itself goes from literal comprehension to complex connections as stated in Barrett's and Bloom's taxonomies (Barret, 1976; Bloom, et al., 1956). From another perspective, bringing reading skill down to the context of the students from the school of this study, they will have to understand what they read in English for the importance of being documented in their technical studies. In that sense, it is hard to disagree with McDonough and Shaw's assertion that reading is perhaps the most important skill for an EFL learner:

As a skill reading is clearly one of the most important, in fact in many instances around the world we may argue that reading is the most important foreign skill, particularly in cases where students have to read English material for their own specialist subject but may never actually have to speak the language; such cases are often referred to as English as a library language. (McDonough & Shaw, cited in Lopera, 2012, p. 81).

However, to broaden understanding for this work, this chapter presents a review of the literature related to the concepts relevant to the study; it is necessary to understand the main constructs that were tackled throughout this work, because they were the basis for the pedagogical design, intervention, objectives, and research question in this research study. Also, such constructs opened the possibility to offer positive results for students' performance.

Bearing in mind the focus on reading comprehension, skills, and strategies, the main concepts to undertake are reading comprehension, reading strategies, QAR language, and ICT. What these concepts are and what they imply are crucial for the development of this study.

2.2 Theoretical framework

2.2.1 Reading

As one of the four language skills, some theories and research exist around this skill (Block, 1992; Nunan, 1991; Paran, 1996); however, it is to note that all of the theories agree on a basic aspect: reading is decoding symbols written, and trying to understand those symbols. Going beyond this point, which could be considered a low-level of comprehension (Barret, 1976), reading implies different processes between the reader and the text, in order to use the reader's prior knowledge and experience to create, and to construct meaning.

Considering some of the theories about reading, the traditional or bottom-up view emerged during the 1950s with the influence of behaviorists. Bottom-up was based on the idea that reading is a linear process that goes from the lowest level of decoding words, phrases, and sentences to the highest level of understanding a complete text (Gough, cited in Treiman, 2003). The practice of reading was reading texts aloud to achieve recognition. However, its assessment is focused on literal comprehension of texts: basic decoding and low-level of comprehension.

Conversely, the cognitive or top-bottom view, which first appeared in the 1960s, suggests that there is more than understanding meaning from a text, but a complex process of connecting information provided in the text and the knowledge that the reader has (Pardede, 2006). In that sense, reading transforms from mere decoding to a silent interaction between the writer's and the reader's thoughts, whose own experience will play a significant role. This has close relationship to what "schema" theory is: connection between the text and the knowledge of the world the

reader has (Anderson, cited in An, 2013). Additionally, to the similar information between the cognitive view, schema can be divided in four kinds (Carrell, 1983): firstly, “formal schema”, which is the reader’s recognition of the different types of texts and genres. Secondly, “content schema”, which refers to the background knowledge of a content area, such as going to a restaurant, attending a conference, etc. Thirdly, “cultural schema” is the background cultural knowledge that the reader has in the moment of understanding better a text that may be based on a particular culture. Finally, “linguistic schema” that is in relation to the bottom-up view: recognition and decoding of vocabulary and grammar for more effective comprehension rather than guessing (Eskey, cited in An, 2013).

However, in this study, reading is considered through the top-bottom view. The texts presented to students were worked following the schema theory: the texts related to students’ socio-economic background thus fostering their prior knowledge.

2.2.2 Reading Strategies

To achieve a high level of comprehension, a skilled reader may be cognitively prepared, but in the long pursuit to get full comprehension of texts, several reading strategies could help the reader in this task since a word-by-word decoding is only enough to get literal meaning of sentences but not to get full understanding of texts. Consequently, a reader needs strategies for better approach and understand a text. As defined by Graesser (cited in McNamara, 2007) “a reading comprehension strategy is a cognitive or behavioral action that is enacted under particular contextual conditions, with the goal of improving some aspect of comprehension.” (p. 7). However, sometimes a reader needs to be trained in the use of those cognitive actions. Therefore, it is necessary to teach students the importance of building up strategies for improving reading comprehension, and developing higher levels of thinking. However, some researchers

believe the opposite since it is not an explicit reading objective (p. 5). But, as noticed by the National Reading Panel (cited in Stafford, 2012, p. 27) in the USA, “strategies should be included in reading instruction”.

Several reading strategies exist ranging from low to higher levels of thinking, like literal meaning (for instance looking up words in a dictionary), to higher levels of comprehension as it was considered in Barret’s taxonomy(1976): strategies for evaluation or appreciation like graphic organizers, or question-answer relationships in which the reader has to make deep connections within the text and take a stance based on the author’s intentions. According to Graesser (cited in McNamara, 2007, p. 8), letting a learner face reading by just reading a lot, and consequently internalize strategies is finally inadequate. So, it is necessary to teach reading strategies to learners. In doing so, it is also important to teach learners how to monitor themselves during a specific task. In that way, students will raise language awareness and improve their overall comprehension. Samuels (1997) stated that there are three levels in word recognition, starting from a struggling level to a final automatic stage; in other words, it is not easy for a student to internalize strategies for comprehension; it requires effort when learning how to use them until reaching a point of almost unconsciousness and immediate use.

It could be said that reading strategies are so important that can be used at any stage of the reading of a text and the more strategies are applied to the reading, the better the comprehension will be (Kamil et al., 2008). Therefore, some reading strategies were used in this study: QAR as the main reading strategy, mind-mapping as a graphic organizer, outlining, and summarization.

Reading strategies are of crucial importance for both teachers and learners: the former need to be trained to be able to offer proper training to the latter in applying strategies in order to advance from lower to higher level of thinking reading skills.

2.2.3 Question-answer relationships strategy

For the sake of monitoring reading comprehension, the common activity that teachers do is comprehension questions, and "no comprehension activity has a longer or more pervasive tradition than asking students questions about their reading, whether this occurs before, during, or after reading" (Duke & Pearson, 2002). However, these questions sometimes abide in low level of thinking, which means looking for specific and sometimes literal information within the text. QAR stands for Question-Answer Relationships, and it is a strategy first elaborated by Raphael (1982) during the 1980s based upon Pearson and Johnson's (1978) taxonomy. Although this reading strategy was conceived 30 years ago, it has current relevance since the strategy provides a rather simple taxonomy and structure to guide readers in how to approach distinct types of comprehension questions, thus achieving better understanding of texts.

QAR strategy consists in identifying specific types of questions in relation to any given text and the diverse ways to answer those questions. Many students are unaware of the different thinking levels questions may elicit (Buehl, 2001); so, QARs are crucial for their learning. Raphael (1986) poses two general categories for questions "In the Book" and "In my head", which are equally subdivided into two subcategories each.

Firstly, "In the Book" type of questions, these ones are explicit within the text and therefore needs the use of strategies like skimming and scanning to answer these types of questions. However, not only are those sub skills used with "In the Book" type of questions; this category subdivides in "Right There" and "Think and Search" questions. The former requires

local comprehension of the text; that is, looking for specific information in a specific part of the text; that is, when the teacher plans the question exact words are used from a specific sentence of the text and the same applies at the moment of answering. In contrast, the latter demands a more global comprehension of the text, that means that it will be necessary to make connections across the text, summarize and even make simple inferences so as to put together pieces of information in order to get the most adequate answer.

Secondly, the “In my Head” types of questions are also subdivided in two categories: “Author and me”, which require interrelations between what the text says and what the reader previously knows, it also demands to make inferences along the text of what the author’s stance is according to the techniques he uses throughout the text, and even predict future events in the reading. Additionally, the second subcategory is “On my Own” which are questions that although do not require a full reading of the text, they need the use of background knowledge to refer to the topic of the text and connect with firsthand experiences; in other words, a situation model of reading as it was described previously. Also, “on my own” type of questions will require thinking about other texts the reader has tackled that relate to the topic of the main text and how all this interrelated knowledge can fit together. This strategy, although question-answer based, is not easy to apply, for it involves many distinct levels of thinking and skills that perhaps students are not familiarized with. But, because the aim is to foster higher levels of thinking, QAR is used in this study. Nevertheless, it is necessary for teachers to carefully train students in this specific strategy within a 10-minute to four-day period of time depending on the reading skills of the students (these periods are based on studies conducted by Raphael, (Raphael, 1982; Raphael & Wonnacott, 1981). QAR strategy does not only apply to EFL reading, but also to

other content areas when institutions agree on applying it on a cross-curricular level (Cortese, 2003; McIntosh & Draper, 1996; Raphael & Au, 2005).

QAR is a demanding strategy that rejects carefree reading because it deals with basic explicit questions, to more complex inferential ones that require high level of comprehension skills. Even though QARs seem to go bottom up in Bloom's taxonomy (1956), they are not required to be posed like that in a given activity; the requirement is to involve students in the identification of questions so they can approach them in the most suitable way to finally get full comprehension of texts.

2.2.4 ICT for reading comprehension

The term is a general concept for the way people communicate around the world nowadays; ICT (Information and Communication Technologies) have become highly popular, and more than a trend or fashion, it has become a need. If we consider technology throughout history, it has always been present in different forms; in language teaching, for instance, there has been an evolution in materials used, like tape recorders or VHS players. However, with the rise of digital information and devices, the connection between technology and computers is almost immediate. In regards to the reading skill, Nunberg (1996) said that "information does not change its nature according either to the medium it is stored in or the way it is presented" (p. 117) meaning that whether the text is printed or electronic, the content itself is still the same. So, if printed materials are scarce, but ICT tools are available, they will be handy.

CALL (Computer Assisted Language Learning) materials have been so rapidly developed that sometimes it is hard for teachers to keep the pace. Technology has evolved in such a rapid way that within a ten-year period, the new term "TELL" (Technology Enhanced Language Learning) appeared; that is, moving from the mere use of computer-based materials to the vast

use of internet and web-based resources (Dudeny & Hockly, 2007). Although CALL materials (involving ICT tools) offer many possibilities for teachers to approach language teaching in a more interactive way, many of them still keep distance from these technological materials despite the fact that most students at schools are digital natives: people for whom technology is not difficult at all because they have been raised along with it (Dudeny & Hockly, 2007), or even technology enthusiast (p. 9). For that reason, it is very important to let students use what they know and feel comfortable with in order to learn effectively. That is why ICT tools were included in this study. In that sense, many classrooms and institutions are now equipped with ICT that help students and teachers to use resources in a more meaningful way.

Concerning the relation between ICT and reading strategies and literacy in general, Hobbs (cited in Leino, 2014) categorized media literacy as similar to reading levels of understanding: accessing, analyzing, evaluating, and communicating. Those four categories might be understood as cognitive levels of comprehension. Moreover, Schmar-Dobler (cited in Leino, 2014) compared reading strategies for books and the internet, and the final outcomes showed that strategies are similar for both. Based on this information, ICT can be as helpful for reading practice as printed materials since the strategies used to tackle texts are very much alike. In that sense, even QAR strategy can be embedded in ICT and further applied to electronic texts because the final objective is to teach students to go beyond literal meaning to interpret between the lines of texts.

As stated by Hubbard (2009), the question of CALL and ICT is not whether to use computers or technology in general in the classroom, but how to use it so as to lead students to learning in a comfortable, interactive, and meaningful way for them. As it will be discussed in

chapter 4, some ICT tools were implemented in this study that were meant to foster students' reading comprehension and autonomy: mind map design, and online dictionaries, among others.

2.2.5 Reading comprehension

As previously stated, overall comprehension of texts is one of the teachers' objectives for students since it is crucial for academic success. As defined by Snow (2002), reading comprehension is the process of simultaneous extraction and construction of meaning from a piece of written language; in other words, it is a continuous conversation between the text and the reader, the latter sustaining the conversation based on different skills in order to get full understanding. But Pardo (cited in Stafford, 2012) expanded the idea of reading comprehension by stating that it is "a process in which readers construct meaning by interacting with text through the combination of prior knowledge and previous experience, information in the text, and the stance the reader takes in relationship to the text" (p. 21). Based on that definition, reading comprehension implies the use of different sub skills and factors to consider, and which have major effect in understanding, moving freely around all cognitive levels of thinking.

On the one hand, a shallow reader may just try to read a text and get meaning from each word and sentence without going beyond; this may be described as a shallow level of analysis (Otero & Kintsch McNamara, 2007). On the other hand, a skilled reader is able to make inferences, connect ideas with full sense, revise the rationality of claims with a critical stance, and also understand the motives of authors. If compared, a skilled reader is a person who ultimately recognizes the intentions of the author and takes a stance that goes along or confronts the text read (Pardo, cited in Stafford, 2012). To do this, a reader should be able to apply higher levels of thinking. For that, it is necessary to have a global understanding of the text rather than momentary (meaning the word, sentence or idea being read at the moment). In order to grasp this

global understanding, it is necessary that a reader activates his/her prior knowledge so as to go from basic understanding of lexis to complex interconnections of ideas through flexible, and dynamic representations of the text in a coherent, literal and inferential manner; that is, reaching a situation model of reading (Kintsch, cited in Woolley, 2011).

Nevertheless, the desire of a learner to become a skilled reader may be undermined by some internal and external difficulties. Internal difficulties are specific to the person; in other words, every person has different cognitive skills or even physical conditions to develop certain tasks. Addressing the difference between a shallow and a skilled reader from another point of view, it can be said that a person is as skilled reader because he or she has acquired abilities needed for reading: a considerable large amount of vocabulary and the capacity to make interconnections throughout the whole text; whereas a shallow reader is not able to do so, at least not automatically, thus investing most of the time in decoding texts so as to grasp main ideas (Samuels, 1997). Also, about this time-consuming decoding process, Pressley (cited in Woolley, 2011) said that this is mostly due to the reader's background knowledge since the recognition of previously known vocabulary and even some grammar will determine whether the reading will take long; also because:

The ability to derive meaning is normally enhanced when there is a reduction in the cognitive load of a reader's working memory, and the reader can decode the words and phrases fluently and bring meaning to the unfamiliar vocabulary encountered. (Pressley, cited in Woolley, 2011, p. 17).

In regards to external difficulties, Snow (cited in Woolley, 2011) identified five factors that influence comprehension: Socio-cultural context, text, activity, reader, and purpose. Starting from purpose, it is highly relevant to say that not everyone is attracted to reading, and that is even more remarkable if we consider high school teenagers: even though they mentioned that they like to read, some of their readings are not deep, neither constant (see Appendix C).

Moreover, if students are not clear in what to do with the text they are reading, there will not be any reason to do so. Therefore, teachers usually set goals or purposes for students to engage with readings (Pearson & Raphael, 1990).

Another external difficulty that undermines reading comprehension is, in fact, the reader. As it has been previously mentioned, not a single person is equal to another in terms of cognitive skills at least. One person could be keen on summarizing paragraphs, but may not be good at decoding abstract concepts or even at memorizing. Robinson (2002) highlighted the importance of parents exposing their children to reading from very early age so as to develop comprehension skills and build up background knowledge for future use. If what Robinson says is contextualized in this study, many of the students lack this early age exposure to formal reading, and much more to English reading. So, in the moment of facing a text they lack vocabulary, and that fact leads them to invest more time in word recognition than in comprehension of the whole text.

Furthermore, considering what Snow (2002) asserted about the text and activity is that the way the text is written and organized determines also the difficulty that the reader will face to understand (considering punctuation, discourse markers, and style, for instance), but also the content of the text is important: if the topic is not of the reader's interest, it will only produce boredom; also, if the vocabulary is too complex, the reader might soon get bored of the text and put it aside. Therefore, Krashen's (1985) input hypothesis is valid in this point: meaningful input that goes a little beyond learner's level so as to challenge him without overload of new information which eventually causes frustration. Additionally, if activities set by the teacher are not meaningful, or have no applicability in students' lives, it will only be another task to do to comply with curriculum. In that sense, it is necessary to bring down the readings to the focus of

students' context so they are able to interact with the text (Vaughn & Bos, 2012), to “manipulate” or adapt what they read to their lives.

The last difficulty, which could be the most determining, is the socio-cultural context, which has much to do with the students of this study as it was previously stated. The socio-cultural factor plays a highly important role because it has to do with readers' knowledge of the world, beliefs and values which are “shaped and nurtured by social interaction and by the language used in the social contexts in which children are situated” (Woolley, 2011). Snow's perception of this external factor is accurate if we consider how a student has been raised, in terms of mirroring what they see at home: large amount of reading or little of it, what type of texts the student has read or has seen his family reading, also what kind of language the student has listened to at home, etc. Moreover, social factors that also influence from the surroundings could affect the adequate development of learning skills, for instance living conditions, influencing acquaintances and friends, surrounding areas of drug consumption, forced displacement conditions, etc.

In brief, reading comprehension is so vast and complex that involves different skills in order for a reader to get full understanding of texts. Although there are some internal and external factors that influence comprehension, the major goal for a teacher regarding reading skill is that learners overcome those difficulties mentioned before and reach overall deep comprehension of texts.

2.3 State of the art

Reading is a highly important language skill, it involves active and complex analysis and connections that require strategies to improve comprehension of texts and further production based on them; moreover, if students are trained in using reading strategies properly, they could

find them useful in a cross curricular level (Raphael & Au, 2005). If we focus on school readers, only a few of them would know about and use reading strategies (even the participants of this study, see Appendix C), which results in poor comprehension, not only in EFL, but also in other content areas. QAR, among other strategies, offers viable solutions to poor reading comprehension in children and teenagers.

As stated previously, confronting a text without any kind of support is rather impractical, and ultimately frustrating for the student. Therefore, reading strategies should be provided to students in order to improve their understanding. Consequently, previous studies have been conducted in respect of training of reading strategies and QAR. Such studies showed that students highly improve their comprehension and overall skills in reading (Green, 2016; Hemmati & Bemani, 2013; Izquierdo Castillo & Jiménez Bonilla, 2014; Kamil et al., 2008; Muzammil, 2017) even in young learners (Cortese, 2003; Gutierrez & Salmerón, 2012; Kinniburgh & Prew, 2010; Ouzts, 1998) because QAR fosters foundations for reading comprehension. That implies that it should be mandatory for a teacher to provide students with enough strategies for them to use for better comprehension of texts. Moreover, not only has QAR proved to be effective in basic reading comprehension, but also promotes scientific thought in specific content areas, such as math, chemistry, and social sciences (Benito, Foley, Craig, & Prescott, 1993; Cummins, Streiff, & Ceprano, 2012; Kinniburgh & Shaw, 2009; Pappa & Tsaparlis, 2011) based on the studies referred to previously, it can be inferred that QAR strategy is an effective way to reinforce comprehension by the use of questions from simple to complex levels of analysis in language learning.

However, the use of QAR has been recorded as being ineffective since students did not show any significant improvement (Lizcano, 2015; Stafford, 2012). Students need proper

training on what the strategy entails so they can internalize the taxonomy and skills underlying the strategy. On this regard, in her dissertation, Stafford (2012) concluded that it is necessary to apply QAR strategy (and that implies all reading strategies) within a longer period of time in towards correct application and positive results. That is why, despite Stafford's pedagogical intervention using the QAR strategy, students did not show any improvement.

Considering ICT in education, it is necessary to bear in mind that technology is a means to an end; therefore, the sole training of ICT tools in language learning is not enough. For that reason, ICT tools have been considered as an aid for reading comprehension (Coiro & Dobler, 2007; Mária et al., 2016; Rinji & Ohiare, 2017; Sarrab, Al-Shihi, & Hussain Rehman, 2013).

Taking into account Colombian context, although several studies have been conducted about reading comprehension and the impact of reading strategies including the use of technology in class (Izquierdo Castillo & Jiménez Bonilla, 2014; Jimenez Pulido, 2009; Lizcano, 2015; Poole, 2009; Roa Pinzón, 2014), little has been researched in respect to QARs and reading comprehension in either ELT or another content area. In fact, in Colombia, there is only specific literature about the use of the strategy in a small group during relatively short time (Echeverri Acosta & McNulty Ferri, 2010), and compared with the application of other reading strategies during the same period of time and amount of students per group, QAR strategy had better results. Based on this research, it can be said that the adequate period of time to apply QAR strategy and show positive results in high school students in Colombia should range from 3 to 4 months, that is, more than a complete academic term for high schoolers. Nevertheless, more studies about the effect of QAR in reading comprehension must be conducted in Colombia.

Based on the aforementioned studies, it seems that QAR has had better results in students when facing texts in different school grades; however, this complex strategy has to be properly

trained so as to get more efficient results as discussed previously. Also, studies on QAR are almost non-existent in Colombia's context and that means that it is necessary to conduct more studies within the country to test the effect of the strategy on Colombian EFL students. Thus, this study intended to provide more lights with respect to reading comprehension skills, QAR, and ICT tools for reading comprehension.

2.4 Conclusion

Reading is one of the four essential language skills, and based on the reasons portrayed throughout this work, it could be said that people better develop this skill when tackled from an early age (Kinniburgh & Prew, 2010; Ouzts, 1998). However, letting students face reading by themselves is not enough if overall comprehension of texts is needed. Skills and strategies are also needed in order to motivate students by making reading meaningful for them.

Reading strategies are crucial in getting higher level of thinking to ultimately get full comprehension of texts, and among them, as shown in the abovementioned studies, it seems that QAR has had better results in students when properly trained in children or teenagers. When compared with other strategies, positive results have arisen in a more effective way regardless the age of student. Furthermore, technology has played a key role in the last 15 years, and in the vast digital universe of ICT, interactive readings and online tools can be used to support students' reading comprehension by using skills and strategies that help them decode text meaning and ideas.

On the whole, reading comprehension is important for academic success, but it is necessary that teachers help students comprehend texts properly. To do so, reading strategies should be taught to students, and the use of technology (with its similar strategies for

comprehension) may influence students' motivation and interests toward reading and reading comprehension.

Chapter 3: Research Design

3.1 Introduction

Taking into account that reading is perhaps the most important skill for an EFL student (McDonough & Shaw, cited in Lopera, 2012), it is compulsory to improve students' performance in this skill through the use of different strategies. As stated in the previous chapter, the main purpose is to take students from low-levels towards higher-levels of reading comprehension skills, and to do so, it is necessary that students adopt reading strategies. In that sense, this research was conducted based on the QAR strategy (Raphael, 1982), which involves the recognition of questions and their relation within the text and the reader so as to go from basic reading decoding and comprehension to a more complex interaction between author and reader.

In order to better understand how this study was conducted, it is necessary to firstly discuss about the type of study this one is in order to clarify its nature. This chapter will provide a thorough picture of the participants of this study: what characteristics made them unique for this research; also, the role that the researcher played in data collection to analyze, bearing in mind ethical issues that may arise during the study. Finally, to have a clear view on this study, this chapter will discuss about the instruments that will be used to collect data, and their importance for this specific study.

3.2 Type of study

Towards the main objective of improving reading comprehension through analysis and assessment of QAR strategy, it is necessary to conduct the present study as a qualitative action research. As such, this type of study entails several characteristics to bear in mind: as a qualitative research, the researcher will look at variables, and collect data in the natural setting in which they are found, while attempting to interpret issues or questions based on the points of

view of the researcher and the participants (Denzin & Lincoln, 2011). That means that more than statistics, this study will consider the process that participants go through and describe them for better analysis.

Additionally, as implied in the research question discussed previously, there is a “problematic” situation that arises after some reflective practice that needs to be critically questioned so as to cause changes and achieve improvements in practice (Burns, 2010). However, in order to bring about changes, action research is presented as an open and continuous cycle of plan, action, observation, and reflection. Taking those characteristics into consideration, this study will be as practical, reflective, analytical, and descriptive as a qualitative action research denotes.

3.3 Context

3.3.1 Participants

This research was conducted in a public school located in South-East Bogota. This school has created its syllabus for English as a subject of study together with a state university that guided teachers on what should be taught weekly. However, that was over 8 years ago, there was a substantial change in the syllabus design and curriculum to follow, and this one was based upon the idea of training students firstly for the national test SABER 11, and then, preparing them for communicative purposes. Based on that information, students are mainly trained in grammar aspects with little emphasis on reading.

The participants of this study are a group of 31 students in their last school year. Students’ age ranged from 15 to 19 years old, and the group is heterogeneous in terms of English level. The principal reason underlying the mixed-level situation is because students arrive at this

school from different institutions. Those institutions had only 2 hours as specific time allotted in a week for English as a subject to study; this, therefore, affected the learning process of students.

Moreover, some of the participants come to the target school under some unique features: while few of them can afford an EFL education in private institutions, most of them cannot. Their SES is a unique feature that affects the learning process: most of the participants come from low-income families and even escaping from rural areas because of the internal firearm conflict of the country.

As discussed previously, participants were in lower levels of proficiency, based on the CEFR (A1, see Appendix A) compared to what the government expect them to be (B1, CEFR Ministerio de Educación Nacional, 2006). Consequently, students need to improve their proficiency in the L2, more precisely, in their reading comprehension skill since it is essential for improving scores in the national test.

3.3.2 Researcher's role

Given the nature itself of the type of the study, the researcher will play the role of “participant-as-observer”. This role implies that not only did the researcher stay still observing around the participants and every move they did, but also participated as a teacher in the institution, throughout the pedagogical intervention. Such role was based on the fact that the researcher was already a regular teacher at the institution. Also, students needed training on the strategy selected and had to be guided throughout in-class activities during the normal course of the academic year. However, as Hallowell et al. (cited in Blaxter, Hughes, & Tight, 2010) suggested, researcher's participation as a teacher may compromise the role itself as a researcher. Bearing that in mind, the researcher proceeded cautiously throughout the study lest his interventions hindered it.

3.3.3 Ethical considerations

Research ethics is more common in qualitative research because of the relationship established between researcher and research subjects in regard to the use of information collected and its dissemination (Blaxter et al., 2010). Given that, three types of permission were considered: firstly, permission from the school principal; secondly, consent from students to participate; and thirdly, consent from their parents since most of students are still minors. Therefore, three consent letters were designed (see Appendix E) to have written consent from each party involved.

3.4 Data collection instruments

3.4.1 Description and justification

The data collection instruments were designed to collect information on the participants' perceptions regarding the application of QAR to foster their reading skill in a critical way, to allow participants to perceive its practical use for any type of reading; and, to collect information on the researcher's perceptions about the value of the strategy and tool selected towards improvement in reading comprehension.

3.4.1.1 Surveys

They are used to gain participants' views on different aspects of language learning (Burns, 2010). Considering the three types of information that surveys can gather according to Dörnyei (cited in Burns, 2010), surveys played a key role in this study because of the possible attitudinal information to collect. For the sake of this study, short surveys were applied after every lesson planned (one per week) to two different students every time in order to see their perceptions of the methodology used. Such surveys contained Likert scales to guide students, and open-ended questions to let students write their thoughts (see Appendix F).

3.4.1.2 Teacher's journal

As stated by the British Council (2009), a teacher's journal is an instrument in which, after a lesson, "the teacher makes notes in her diary about what happened, what she thought the causes were, ideas about how to change them and a short action plan."

Similar in some aspects to field notes, the teacher's journal was designed to record reflective information based on descriptive observations during the implementation (Emerson, Fretz, & Shaw, 2011). This is because field notes also include reflective information, which refers to insights, questions, and concerns while the researcher observes. This kind of field notes is taken more to further analyze why certain situation happened (Emerson et al., 2011). Along with such type of field notes, the teacher's journal keeps record on classroom experiences that occurred during observation to do after class reflections (Lysaker & Thompson, 2013). Therefore, the teacher's journal had reflections on specific information gathered during the implementation and after implementation sessions. Such information was related to students' reactions towards the different activities proposed.

For this study, this instrument (see Appendix G) became as vital as field notes, because of the nature itself of this qualitative action research. Additionally, it proved to be an effective tool for reflection on perceptions and concerns after the implementation of strategies and materials regarding students' performance.

3.4.1.3 Artifacts: Multiple-choice Test

This instrument relates to the items related to the setting or situational context of the research (Craig, 2009). That means, items used by the participants that are directly related to the environment in which the observation is taking place. For this study, such artifacts were the multiple-choice tests provided by the researcher. This research instrument portrays reading

comprehension progress through efficient scoring (Bensoussan & Ramraz, 1984; Hammerly & Colhoun, 1984). This study used a multiple-choice test (see Appendix H) which was used with permission of K12 reading placement tests. The participants did the test before the pedagogical implementation as a pre-test of the reading comprehension level of the participants. Additionally, there was a post-test implementation using the same artifact as the pre-test to ultimately compare whether there has been any notable change in reading comprehension levels before and after the implementation.

3.4.2 Validation and piloting

The data collection instruments discussed in the previous section were designed and then presented to the five teachers of the Spanish and English department at the target school, provided they were experts in the English subject. In that sense, the researcher received feedback that led to adjustments in the instruments so as to adapt them to the context, and make them more meaningful, and participant-related. The final versions of the data collection instruments prior to implementation were, thus validated by not only the researcher, but also by the target school's teachers of Spanish and English, the researcher's MA program instructor, and students' first reactions and performance in order to guarantee their efficiency.

Moreover, given the fact that the target school holds only the two high school grades, but 10 groups for each, there were several opportunities in which both the instruments and the strategy selected could be tested. Similar groups to the one targeted in this study were available for trial so the data collection instruments could be effectively piloted to identify the possible shortcomings that the research instruments may have during the actual research process.

Considering the information previously given, a pilot session was conducted in a 31-student group with similar characteristics of that of the participants' group. The pilot session

consisted in an online short story presented to students: “The Red Room” by H.G. Wells (Wells, n.d.). The purpose was to work in pairs to grasp overall comprehension of the text to answer questions that go from giving specific details to sharing personal experience in direct connection to the text. In other words, questions according to QAR taxonomy (Raphael & Wonnacott, 1981). As the students worked on the text and the questions, the researcher used field notes to document what happened during the activity. After piloting, the researcher decided to use field notes and teacher’s journal into a single adjusted instrument because of the similarities presented and for the size of the group: field noting was time-consuming. Moreover, the reading rubric was confusing for students, so it was deleted and in replacement, small surveys were added as a participant-giving information.

3.5 Conclusion

Every research conducted is designed under particular parameters depending on the type of study. In that sense, this type of research implied the study of the participants’ actions, and reactions in their natural setting. It also entailed a relationship between the researcher and the participants based on formal written agreements previously set among all sides involved. For this type of study, consequently, the researcher is seen as participant-as-observer, for his involvement in the training and lesson giving to the participants.

In order to conduct this study, several data collection instruments were designed in order to document as much information as possible from different angles: during lessons, post-lesson, through participants’ and researcher’s points of view. Finally, as a test of those instruments to improve and ultimately validate them for this study, a pilot session was conducted to assess the data collection instruments adequate.

Nevertheless, it is necessary to further discuss about the actual implementation of the instruments and the data collected throughout the application of the strategy selected, and the observation held.

Chapter 4: Pedagogical Intervention and Implementation

4.1 Introduction

Aiming towards improving reading comprehension through ICT, this action research study used several data collection instruments that helped the researcher, as a participant-as-observer, to gather the necessary information to further analyze and discuss regarding the research question proposed at the beginning of this study. This chapter portrays the visions through which this study was guided; that is: vision of language, vision of learning, and vision of curriculum. Moreover, this chapter depicts how the study was designed in terms of: lesson plans, timeline for the intervention, and materials used. Additionally, this chapter provides a deeper explanation of the ICT applied to foster reading strategies for better reading comprehension.

4.2 Visions of language, learning, and curriculum

4.2.1 Vision of language

It is not easy to define what language is because it has multiple views: from dictionary definitions to deep studies and theoretical appreciations. However, language will not have a purpose if there is no interaction (Halliday & Matthiessen, 2013); therefore, language needs participants who build up meaning (Vygotsky, 1978). As mentioned in section 2.2.1, reading is a silent interaction between the writer of a text and the reader, producing opinions in favor or against the text by the background knowledge of the reader (Pardo, cited in Stafford, 2012). Such interaction is subjected, however, to a cultural-schema (Carrell, 1983). In other words, interactions and the building of meaning depend on both the socio-cultural background of the participants, and the current setting where interaction is taking place because it functions in a speech community or culture (Brown, 2007; Hymes, cited in Kumaravadivelu, 2006; Snow, 2002).

For this study, language is “essentially cultural and interactive” (Brown, 2007, p. 7); therefore, it is the means through which readers build meaning in written text by activating socio-cultural background experiences. Language is the means that the readers use to comprehend texts, confront them and set a stance according to the message obtained.

4.2.2 Vision of learning

Learning is the acquisition of information through the active and conscious action and/or participation of individuals upon certain events (Brown, 2007). Learning depends on the situation presented: the more similar to real-life events, the more likely the learner will learn (Cey, cited in Karagiorgi & Symeou, 2005). Hence, learning needs to be meaningful: brought down to students’ reality, so as to promote higher order thinking skills through group interaction and problem-solving situations, similar to Vygotsky’s zone of proximal development (1978) or, as Squires (1999) stated, contextual authenticity. For that reason, the reading texts and the activities in this study were based on students’ socio-economic background.

However, meaningful learning occurs in different environments provided it is real-life contextualized. With that in mind, technology offers multiple tools that foster meaningful learning through the ample possibility to access real information. Therefore, technology is a knowledge construction tool which offers “phenomenaria” (Perkins, 1992).

In this study, learning is conceived as the result of the constant interaction of learners with written texts and the abundant resources in the technological world aiming towards solving real-life situations with “Activate” activities, (Harmer, 2007); that is, “giving students the chance to try out real language use with little or no restriction” (p.53).

4.2.3 Vision of curriculum

Curriculum is understood as an ideological selection among a wide range of knowledge that organizes attainable educational experiences towards specific purposes (Tyler, cited in Cohen, L; Manion, L. & Morrison, 2007). With such definition in mind, the school where this study took place is focused on meaningful learning and complex thinking (CED-ARP, 2015). That focus opens the door for students to experience the relationship between institution and life. That means that students are encouraged to interrelate what they are studying with their reality outside school, fostering critical and creative thinking, and collaborative learning. Among the skills that students need within the school's curriculum lie: reading comprehension, theory into practice (competences), logic, and motivation. Therefore, the school's curriculum is viewed as the possibility to develop higher thinking skills by facing real-life problematic situations with the inclusion of technology (CED-ARP, 2015), supported by the three institutional principles of self-esteem, autonomy, and project of life (CED-ARP, 2013).

Considering the previous information, this study was planned with the main objective of being aligned with the school's curriculum so that it fosters reading comprehension with higher thinking skills through meaningful and authentic learning (Karagiorgi & Symeou, 2005). Therefore, the pedagogical intervention, readings, activities, and final products were designed aiming at following the school's focus of complex thinking; which in fact, leads to higher reading comprehension skills (Barret, 1976).

4.3 Instructional design

The pedagogical intervention was applied in over 20 hours of practical implementation in the following way: ten sessions of 120 minutes each along a five-week term. The lessons were planned in such a way that they were completed in two sessions, except for the first two lessons

which meant to be a training for both QAR and ICT tools (one lesson each). In more detailed words, there were six individual lessons: the first part of the lesson (one session) was dedicated to training on reading strategies and skills; that is, preparing participants to tackle readings. Meanwhile, the second part of the lesson (one session) included sessions supported by ICT throughout the implementation (see Appendix I) aiming towards gathering evidence that could solve the research question proposed for this study.

It is worth to mention that some potential difficulties were at sight: one week off lessons, end of term, and family fest. In that sense, the researcher had to consider the use of additional study hours in the afternoon after regular-schedule lessons or Saturdays given the extreme case of running out of time.

4.3.1 Lesson planning

The pedagogical intervention was developed throughout six lessons divided along ten sessions. The lessons were planned in four phases: a training phase, an “In the Book” phase, an “In my Head” phase, and an autonomy phase.

The implementation was planned through adapting the In-service Certificate of English Language Teaching (ICELT) lesson plan form in a simpler way (see Appendix J). Such lesson plans were the main guide to intertwine sessions, topics, strategies, and tools used throughout the intervention. The lesson plan also contained the main objective in each lesson for students to know the step-by-step advance towards the goals proposed.

One week prior the implementation, the participants presented a pre-implementation multiple choice test which confirmed the level stated in section 1.2.1. The first two lessons (first week of implementation) were planned for training. The first lesson was the basic training on the terminology and everything related to QARs plus a reading practice for students to relate

comprehension questions to QARs. The second lesson was the basic training on the inclusion of ICT for academic purposes. The main objective was to raise students' awareness of the use of technology to share information for the completion of a task.

The rest of the lessons were set into two sessions per lesson planned. Therefore, each lesson plan included descriptions of the activities for both sessions (see Appendix J): the first session included activities to practice reading strategies and foster reading comprehension skills; the second session was especially guided towards a final digital product that was related to the content of the reading worked throughout the two sessions. To design the final product, the participants had to have previous comprehension of the texts worked during the lesson (two sessions) in order to cope with the requirements. The lessons were planned to follow a scaffolding process that started in guided literal comprehension questions to students' autonomy on discriminating and using reading strategies and ICT to improve reading comprehension. There was a final multiple-choice test in the last session to compare students' results to the same test implemented before the implementation.

4.3.2 Implementation

The implementation of this study took place from mid-September to late October throughout a 5-week period of 20 face-to-face sessions with the participants. Such participants were 11th grade students from a public school in the South-East of Bogota. A two-session training was provided to familiarize participants with the QAR strategy. During this session, participants were exposed to the QAR taxonomy and the terminology used within it in order to identify literal comprehension and inferential questions. The participants were presented an interpretation of Barret's taxonomy of reading comprehension skills (see Appendix K) which showed the objectives of the intervention:

- To raise levels of reading comprehension through QARs together with ICT.
- To foster the use of reading strategies embedded within QARs to tackle reading comprehension questions.
- To include ICT to share information in problem-solving tasks that lead to better reading comprehension.

Every QAR-focused session (first session in each lesson) started with pre-reading stages that helped activate the participants' previous knowledge. In that sense, they would know what the text was going to be about. Strategies like pre-teaching vocabulary, prediction of content by showing the title of the text, and recalling previous information were useful to activate students' schemata.

Additionally, the participants faced the texts bearing in mind several reading comprehension questions that advanced in comprehension skills according to QAR. The first was a lesson fully dedicated to "In the Book" type of questions. Such types of questions refer to literal comprehension of texts. Hence, it involved the participants into developing several reading skills, such as re-reading the text presented, skimming, and scanning to get literal answers from a specific or several parts of the text. The second lesson focused on "In my Head" types of questions. The participants had to infer what the questions meant, the possible answers that the author portrayed plus the participants' prior knowledge. Then, the last two lessons were designed for students to create their own questions based on readings. Those questions could be both "In the Book" or "In my Head" type. Then, they were handed out to other classmates for them to use different strategies to analyze and answer those questions effectively.

In the case of ICT-focused sessions, recalling information and the inclusion of real-life situation topics were the common aspect. The participants recalled information from the previous

session and linked those ideas with the problematic issue that was put in front of them. The topic of the text used in the first session of the lesson was used to foster discussions among students by designing digital prevention campaigns. In that sense, the participants move toward higher-order thinking skills by judging, evaluating, and commenting on the author's ideas (Barret, 1976). Such comments and opinions were posted on websites designed by the participants in blog form. Participants wrote reflections in those blogs about the issues presented, and they finally asked a question that would raise discussion among classmates.

Collaborative work and autonomy were fundamental throughout the implementation since the participants had to act in different learning situations (Holec & Council of Europe, 1981), and they were fully responsible for their products in and out of the classroom as suggested by Chan (2000).

4.4 Conclusion

The pedagogical intervention in this study was designed to integrate reading skills and subskills with ICT for the participants to be aware of the diverse ways to tackle a text and move towards higher reading comprehension skills. That is why it was important to follow a scaffolded process: from basic to more complex thinking skills. The participants' background knowledge, their socio-cultural background, and the constant interaction fostered critical thinking to further confront real-life situations that would help in comprehension and build up meaning. Throughout the implementation, the data collection instruments were useful in terms of gathering information that was later analyzed to compare the results before and after the intervention. Such analysis is described more thoroughly in the subsequent chapters.

Chapter 5. Results and Data Analysis

5.1 Introduction

Based on the school's vision of language, learning, and curriculum, a 5-week pedagogical intervention was designed aiming at training students on the proposed strategy of this study to impact their reading comprehension level and move towards higher order thinking skills. The pedagogical intervention consisted in 9 lessons; each one was covered in two sessions: the first session dedicated to QAR strategy and reading comprehension skills, and the second session focusing on the use of ICT tools to foster reading comprehension skills, and demonstrate such comprehension through a final digital product based on a reading text.

This chapter describes the procedures employed to analyze the data gathered. The purpose of the analysis was to provide an answer to the research question proposed at the beginning of this study. After proper analysis of the data, two categories emerged which guided the supporting information that acted in response to the research question.

5.2 Data management procedures

The data collected in the teachers' journal, and students' short surveys were originally hand-written. For that reason, such data were digitized in individual word processing files (one for teachers' journals, and one for each students' survey) for better visualization of the information written. The multiple-choice tests were physically assessed in the first place, and stored in a folder. Then, the data were organized in a matrix created through MS Excel sheets to make the analysis of each one of them, compare the results, and design the category mapping.

5.2.1 Validation

To confirm data validity, two techniques were applied: triangulation, and peer-revision. Based on the three instruments used to collect data, I ensured that data was not collected from a

single point of view or perception lest it biased information (Creswell, 2009). For that reason, data collection instruments were designed to provide information from different perspectives: teacher-researcher, students, and test scores. Subsequently, the data collected was treated constantly to ensure that there was necessary information to answer the research question (Morse, Barrett, Mayan, Olson, & Spiers, 2002). Moreover, the data analysis was presented three times during an action research seminar, which was part of a Master's program, to an experienced instructor and researcher, and peers who provided feedback that ensured reliability of the information.

5.2.2 Data analysis methodology

The analysis of the data collected in this study was carried out bearing in mind the principles of grounded theory which is focused on developing new theories by a process of constant comparison and analysis of different types of data (Corbin & Strauss, 2015). The nature and purpose of this study also required grounded theory since there is not a specific theory that addresses the research question. Creswell (2009) mentioned that when we want to analyze the transformation process of students, like the reading comprehension skills in this study, grounded theory is ideal because it makes use of process approach. Additionally, Corbin and Strauss (2015) mentioned how manageable data can be by being analyzed from small chunks and then grouped with similar concepts to form categories.

Following those procedures, the data in this study was analyzed to build up a theory that gave account to the research question proposed.

5.3 Categories

Grounded theory consists on constant analysis of the data gathered which generate the researcher's own concepts (Glaser, 2002); Corbin and Strauss (2015) named the process of

analyzing such concepts as “coding”. Codification of concepts goes through three systematic steps which permit the organization of information from raw data to at least a core category that solves the research question: open coding, axial coding, and selective coding (Creswell, 2009; Glaser, 2002).

5.3.1 Overall category mapping

The ideal development of grounded theory is to analyze data as soon as it is gathered to generate ‘theoretical samplings’ (Corbin & Strauss, 2015). However, the coding process in this study started after all data was collected. Having the data visually accessible, open coding initiated by separating data into smaller manageable analytical pieces in a matrix on excel sheets. Then, with data separated in a matrix, color coding procedures helped to highlight and differentiate pieces of information that had relation among them. The initial codes that emerged during open coding process are displayed in the table below.

Table 1.

Open-Coding: Initial Codes

Research Question	Initial Codes
How does the use of question-answer relationship activities combined with ICT tools affect reading comprehension skills in A1 (CEFR) eleventh grade students at a public school in South-East Bogota?	Implementation of QAR Reading strategies most used Effective aspects in reading comprehension Effectiveness of collaborative learning Students' participation in class Students' interactions Students' attitude in class Teacher's monitor students' performance Teacher-student relation ICT tools most used Implementation of ICT tools Students' comprehension through ICT LT1 interference Difficulties and suggestions

After initial codes appeared, I started the second stage in the analysis which is doing comparative analysis to determine categories in broader concepts. (Corbin & Strauss, 2015;

Creswell, 2009). That means, compare and contrast the codes that emerged among the instruments to see commonalities; hence, the possibility to group codes together in broader concepts. In that sense, initial codes were grouped as indicated in table 2. It is to note that the two emergent codes “*L1 interference*” and “*difficulties and suggestions*” were finally integrated in both categories based on what the analysis showed. As Corbin and Strauss (2015) assured, integration of codes was perhaps the most difficult part in this analysis using grounded theory. The multiple concepts recorded in teachers’ journals, students’ surveys, and tests had to be constantly analyzed in order to see common characteristics that could be integrated under a singular broader concept or category. That step entailed lengthy periods of time due to analysis of characteristics of each code.

Table 2.

Comparative Analysis: Axial Coding

Emergent categories	Codes
Influencing aspects in reading comprehension skills	Implementation of QAR Reading strategies most used Effective aspects in reading comprehension Effectiveness of collaborative learning Students’ participation in class Students’ interactions Students’ attitude in class Teachers’ monitor on students’ performance
Students' reading comprehension and ICT relationship	ICT tools most used Implementation of ICT tools Students’ comprehension through ICT ICT use drawback

Finally, as part of the axial coding process, and for better visualization, a diagram or category mapping was designed which held the possible theory to come based on the emergent coding from data analysis, as it is shown in Figure 1.

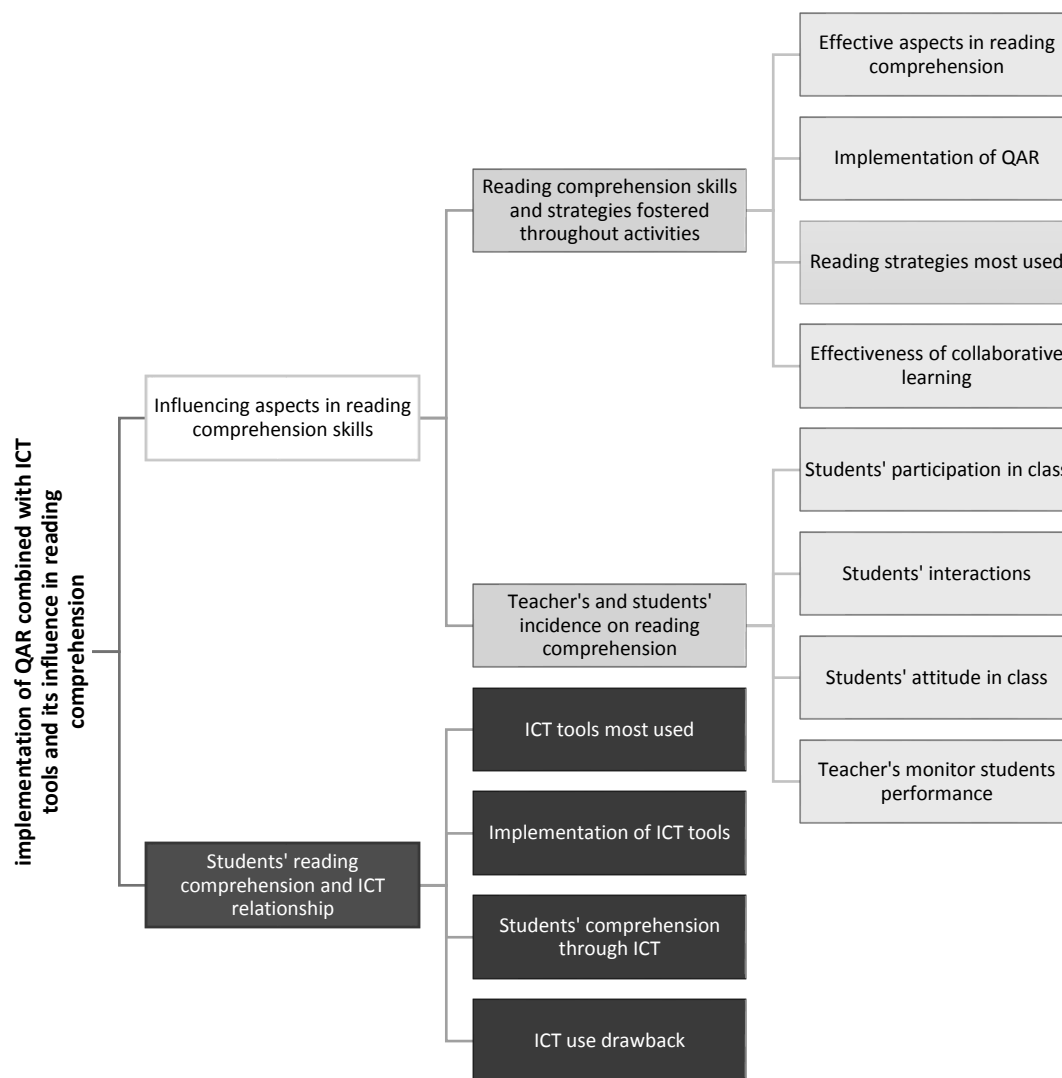


Figure 1. Data analysis mapping

5.3.2 Discussion of categories

After the diagram or map was ready, it clearly helped as the ‘skeleton’ to build grounded theory and answer the research question (Kelle, 2005). Based on the mapping, two prominent categories emerged: *influencing aspects in reading comprehension skills*, and *students’ reading comprehension and ICT relationship*. Additionally, within the first category, two subcategories emerged. Those categories emerged after analyzing carefully the data in order to provide an adequate response to the research question.

5.3.2.1 *Influencing aspects in reading comprehension skills*

After analyzing data in the three instruments, students reported to have improved in reading comprehension because of several aspects. One of them was that the readings provided during the implementation stages were selected based on their socio-cultural background. In that way, students felt familiarized with the topics of the readings, thus facilitating their understanding for direct connections between the text and students' lives were made. That assertion was based on my own perception and students'. Excerpts 1 from the teacher's journal and the short surveys support this claim. When asked about positive or negative aspects about the activities done, students highlighted that the teacher gives texts about daily life, in other words, the teacher gives topics that have to do with things that involve students somehow, and that fosters reading such texts (Appendix L. Short surveys.). And also, that the readings are about known topics which facilitates comprehension (Appendix L. Short surveys).

Meanwhile, during post-implementation reflections, I noticed that:

Post-reading stage was effective: critical thinking towards environment: it seems easy and more interesting for them to bring down the topic of the reading to their reality.

The reading topic was useful for students: familiar topic = more understandable reading.

Figure 2. Excerpt 1. Appendix M. Teacher's Journals 1 and 3

Moreover, students pointed out the importance of getting familiar with the vocabulary of the texts either before or after they tackled them. Among the students who answered the short surveys, only one student (*S17*) did not make any reference to vocabulary whatsoever. The rest of them mentioned, at least once, the fact that they had learnt new vocabulary and how important it was to understand a text.

Table 3.

Answers provided by students highlighting vocabulary.

Question: Based on this week's lessons, how would you grade your experience with reading in the English class?	Answers
S1	A little better because we have more vocabulary and special terms.
S2	When the teacher makes us read daily-life texts, I realized that my vocabulary has improved even though this subject is hard for me.
S10	Very much useful. I have learnt words I hadn't heard and also learnt to analyze a text.
S11	The moments when the teacher gives us new vocabulary and pronunciation.
S17	Does not register.
S19	When we learn vocabulary that helps us with the readings and what we can do with the topics of the readings.

Furthermore, during the implementation students were trained in reading skills and reading strategies within the activities they were asked to do. The salient strategy used in this study was question-answer relationship. In that regard, “*implementation of QAR*” was a preconceived idea since it was the initial proposal, although Glaser and Strauss (1967) suggested having no preconceptions before approaching analysis. Therefore, I could identify easily QAR strategy during analysis. The multiple-choice test, for instance, was based on the relation that some specific reading skills had with the QAR taxonomy (Figure 2). In such test, students had no significant improvement in identification of questions and answers, neither in reading skills involved, nor in higher-order thinking skills as shown below.

	Reading skills and QAR category	# correct
Q1	summarizing / making inferences (think and search)	11
Q2	making inferences (think and search)	0
Q3	scanning / looking for key words (right there)	17
Q4	looking for important information (think and search)	7
Q5	Making inferences / think about main idea (author and me)	8
Q6	Summarizing / making inferences about related details (think and search - author and me)	8
Q7	Predicting (author and me)	11
Q8	scanning / looking for key words (right there)	8

Figure 3. Reading Skills-QAR Category Relation, and Correct Answers for Each Question

Despite the test results, students regarded question identification as being of good use, and throughout the pedagogical intervention, they recalled QAR taxonomy straightforwardly that having at hand the type of answer that the question requires helped to find the answer quicker (Appendix L. Short surveys).

Apart from QARs, students made use of other reading strategies such as visual aids, and mind maps that helped them as metacognitive strategies to activate their reading skills for better comprehension (Praveen & Rajan, 2013). In that sense, students could summarize content, identify main and secondary ideas, and sometimes make inferences and provide peer-feedback (judgment) through the mind maps (Figure 3). Table 4 shows teacher's and students' perception.

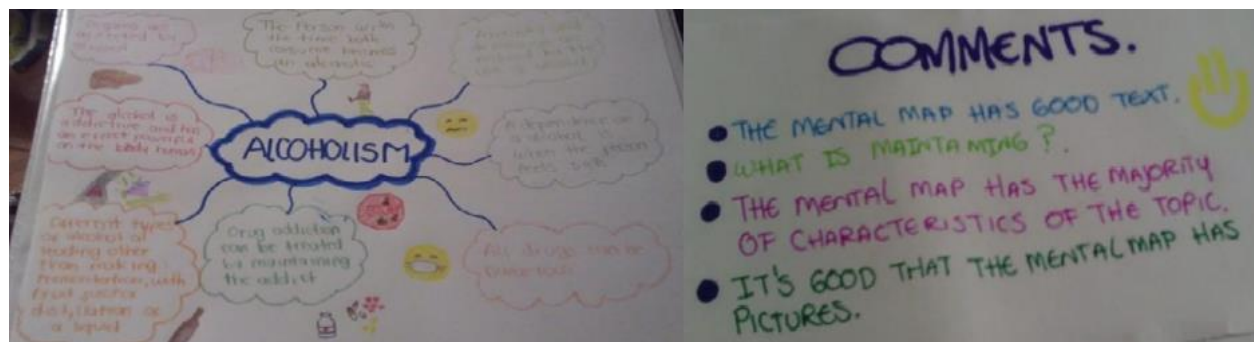


Figure 4. Sample of mind mapping and peer-feedback

Table 4.

Comparison between teacher's and students' perception regarding reading strategies used.

Teacher's journal	Short surveys
The vocabulary taught was crucial to help students save time in the reading. Images used helped as metacognitive strategy (journal 3).	We have visual aids and a brief introduction to the topic before being exposed. This help us to understand certain points better (S10).
Sum up the text with free strategy. Pair groups used mind maps with very concrete information. Specific details were omitted, but the general information was grasped and showed understanding of the text (journal 7).	...the lessons have been fruitful because of the topics tackled and the Dynamic used to develop the lessons because we use mind maps, blogs, and we read texts (S1).

Finally, during data analysis traces of collaborative learning emerged as remarkable support for students in their reading comprehension. Owing to vocabulary sharing, reading topics that led to discussions, and mind map design, students had the opportunity to have pair work, group work, and student-teacher interactions to build understanding and knowledge among them. In that sense, S10 noted that the lessons are grouped and this fosters group work and broadens vocabulary (two heads are better than one) (Appendix L. Short surveys).

Data analysis also displayed the incidence that students' attitude, interactions, participation, and the teacher's monitoring had in reading comprehension. During pre-reading stages, students' attitude and participation was accounted as little or scarce because of the lack of

knowledge of a reading topic. However, as noted in the journals (Figure 4), students' participation considerably raised as they were more familiar with the topics.

Students' Interaction	While answering individually to the teacher, only few of them participated.
	Seating in pairs made them share information; participation towards answering questions were mostly forced.
	Students get distracted easily, they have to be monitored at all times.

most of the students discussed about changing the way they receive classes.
They were so engaged that the teacher had to stop the activity because of the time.

Figure 5. Comparing students' participation between journal 1 and 9

Students' interaction was also a major aspect that helped in their reading comprehension. Most of the activities opened with pair work and closed with group work or socialization since "group work provides L2 learners with more opportunities to use the target language and for a greater range of functions in low-anxiety contexts" (Storch, 2001, p. 30). For instance, in session 7, students shared a common list of vocabulary words which they had to use as a group for the reading. Excerpt 2 shows the final perception:

Warm-up activity was engaging. Students are more open to share ideas and talk to other classmates than their friends. However, the use of Spanish is still recurrent.
Students had to discuss with their partners to write at least five vocabulary word on the common list that helped them go over the reading.

Figure 6. Excerpt 2. Teacher's perception of effective students' interaction

Moreover, not only did participation incite comprehension of topics, but also teacher's monitoring. As indicated in Figure 4, at the beginning students got easily distracted because of their lack of practice in reading in a foreign language. However, Figure 4 also shows that by the end of the intervention, activities were semi-controlled, not because of students' distraction, but because of their engagement. S11 and S19 even recommended to continue with current-trend topics to foster discussion; and read them with delight (Appendix L. Short surveys).

Despite the positive aspects, there were several difficulties, and suggestions made by students that may have hindered positive results in this study. The most salient difficulty was time constraints. There were occasions when students struggled with reading, or invested more time than the appointed in a single activity which resulted in reducing the amount of time in other activities. S19 mentioned that even though the activities were entertaining, they had to do them very fast due to time (Appendix L. Short surveys). Another negative aspect that students identified was the length of readings, and activities. Although engaging, the recurrent suggestion was to have shorter readings and activities because there was not enough time to go through them thoroughly.

Table 5.

Students' answer in short surveys about negative aspects of pedagogical intervention

S2	With respect to suggestions, it is funny that the teacher is varied in his classes. However, sometimes I am too lazy to do the activities set by the teacher. It is not because they are boring, but because they demand a lot of time and in the technical subject I am in this moment, I feel that I do not even have time to sleep.
S10	Most of texts are a bit long and this leads to spend part of the class trying to understand so, there is not much time left to solve or finish the corresponding activity (in my case).
S11	Maybe activities need much time and some of us take too much time to solve them.
S17	Maybe time was not enough or sometimes we had a lot of tasks to do for the technical subject and we arrived tired to class.
S19	Although the activities were entertaining, sometimes we had to do them very fast due to time.

Based on those findings, I could infer that the negative results in the post-implementation test (Appendix N) was due to the length of the reading, and the focus on individual work rather than collaborative. Hence, reading comprehension test design should give account on what has been done throughout in-class activities. That is, if students are used to collaborative work, or ICT tools, tests should also include them.

5.3.2.2 *Students' reading comprehension and ICT relationship*

Data analysis also showed the relevant role of ICT tools in students' reading comprehension. It is important to note that technological tools encourage students to rely on themselves as builders of their own knowledge, foster critical thinking through selection of information, and promote autonomy (López, 2006).

Findings suggested that the ICT tools used during the intervention engaged students in the activities, especially in the final products that they had to present after every lesson. On that regard, S19 mentioned that the way in which they had used the reading topics to design poster campaigns or make us think, such as ministries of education, or the cigarette campaign (Appendix L. Short surveys). Additionally, excerpt 3 from teacher's journal 2 describes students' desire to use technological tools.

When Padlet was introduced and pair-work started, there was an extraordinarily active participation while exploring the tool. They went beyond and added images and gif attachments to the task. Students already managed google docs

Padlet: Students were encouraged to explore the tool. They showed ease to deal with it and posted their opinions with pictures and videogifs.

Figure 7. Excerpt 3. Teacher's description of students' reaction towards ICT tools.

Students found useful the use of technology to learn vocabulary (table 6). This activity was done during pre-reading stages through Google docs, and the aid of online dictionaries. It is relevant to note that sometimes students had to look up words on their own, and sometimes it was building up a common list that would serve as aid for all the class.

Table 6.
Students' perception about ICT tools to understand vocabulary

S2	With respect to the English class, I think it is interesting because it is dynamic. The teacher uses many resources like games, interesting texts, the use of internet to learn vocabulary and make the class fruitful.
S11	The activities to learn vocabulary and the use of computer to find new ways to solve the activities.

S19	I like the way in which we grasp the necessary vocabulary among all of us with the computers. In that way, we understand the readings better.
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Additionally, findings suggest that ICT tools not only helped with vocabulary, but also fostered students' participation in class, collaborative work, and overall reading comprehension (Marzban, 2011). During post-reading stages, students had to design a specific product that had relation with a text they had previously worked. That is why seating in pairs and doing collaborative work helped to develop reading skills such as making relations, inferences, and critics through poster, and blog design (Figure 8). The previous excerpt from S19 showed how poster design, and other digital campaigns helped to understand the topics of the readings. That means, students had to understand the texts if they wanted to participate in the digital campaigns, and blog design. Finally, S17 mentioned that using different computer programs helped a lot in comprehension (Appendix L. Short surveys).

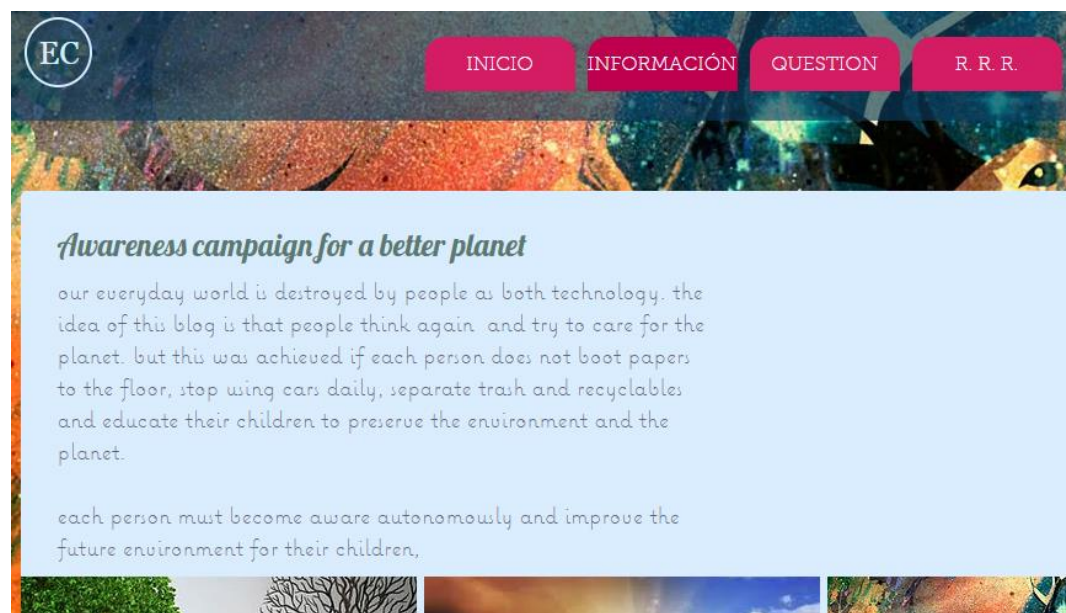


Figure 8. Student's blog post about environment

However, as there were many positive aspects while using ICT tools, data analysis displayed negative aspects too. L1 interference was one of those drawbacks. Students wanted to

participate online, but they looked up information in L1 first, and then they tried to translate such information. That caused both words out of context within content of texts, and time loss during activities.

The warm-up was done with some discussion. Although students knew what to do, they invested some time because they looked for news in Spanish and then they tried to find it in English, or simply translated the title. The guessing time was fruitful, though.

Figure 9. Excerpt 4. Teacher's journal 6: L1 interference.

Similar to the previous category, students expressed time constraints for activity development. They claimed to have finished digital campaigns or blog post at home because there was insufficient time to cope with those activities in class. This implied that there was limited time to socialize and discuss students' ideas and opinions posted on their blogs. Therefore, the final stage of the scaffolded process could not be properly evaluated.

S2	S10
Me agrada la manera en que el profesor maneja los temas, pero debería hacer actividades que requieran menor cantidad de tiempo.	Hay actividades que toca terminar en la casa porque la clase no alcanza, y esto hace que me atrase porque cuando llego a casa me pongo a hacer planos.

Figure 10. Students' perception on the length of activities

Finally, as a major drawback, students did not have the chance to use any kind of ICT tool to tackle the reading for the multiple-choice test. That fact resulted into negative results especially in question 2, and 8 of the test, which required identification of vocabulary. That means that, students had gotten used to having at hand technological tools that would help them go through readings.

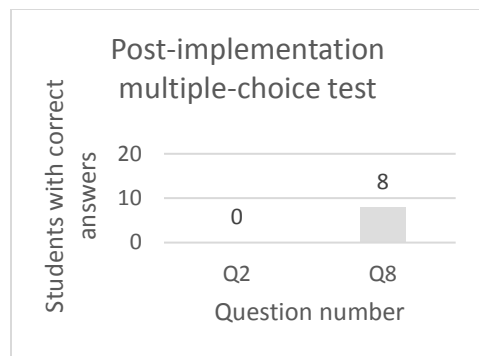


Figure 11. Correct answers got in questions 2 (Q2) and 8 (Q8) in the test

5.3.3 Core Category

After analyzing data in open and axial coding, the final step suggested by Creswell (2009) was selective coding. That is, integrating all categories into a determining category that delimits theory (Hallberg, 2006); it narrates in few sentences what the analysis finally demonstrated. As Corbin and Strauss (2015) stated, it was perhaps the most difficult part since I had to join all the coding process into few words. Therefore, I followed their suggestion of diagramming (p.300) and ended up with the final mapping displayed in Figure 1. For this study, the core category is: *the implementation of QAR combined with ICT tools and its impact in reading comprehension*. Based on the findings of data analysis, QAR strategy plus ICT tools proved to have positive and negative impact in students' reading comprehension. In-class activities were the most adequate moments for students in this study to use the strategy; however, when dealing with a multiple-choice test, students were not able to use the strategy proposed because of the impossibility to use ICT tools.

5.4 Conclusion

This chapter described the procedures employed to analyze the data gathered. Grounded theory was followed in its three main steps: open, axial, and selective coding to analyze all data collected from its "raw" state to ultimately reach a theory that acted in response to the research

question. Findings showed that although students were more engaged with reading skill, and improved in their vocabulary and overall comprehension, the length of texts, and dependence on ICT tools impeded higher scores in multiple-choice texts.

Final conclusions of this study such as pedagogical implications, possible impact, and limitations of this study will be discussed in the next chapter.

Chapter 6. Conclusions and Pedagogical Implications

6.1 Introduction

This study has analyzed the impact of question-answer relationship strategy combined with ICT tools in reading comprehension in eleventh grade students with A1 (CEFR) English level. For this sake, a ten-session pedagogical intervention was designed as well as three data collection instruments that helped gather data from the teacher's and students', perspectives, and test scores. After analyzing data, two main categories emerged that gave account on the positive and negative aspects of the strategy proposed and its impact on reading comprehension. Based on the findings, QAR strategy plus ICT tools proved to have direct impact in students' reading comprehension. Since many students are not aware of the reading skills they require while tackling a text (Buehl, 2001), the strategy proposed in this study showed its effectiveness to develop higher-order thinking skills through real-life topics in readings, and foster their critical thinking and autonomy. However, it was not effective for reading tests. The reason underlay on the facts that the test did not allow students to use ICT tools, neither to do collaborative work. In other words, the test design opposed to the way in which lessons were designed throughout the pedagogical implementation. Therefore, it is necessary to align the design of both lessons and tests.

6.2 Comparison of results with previous studies' results

Since there are no previous studies that had merged both QAR and ICT, each component in this study was compared separately with previous studies' results. As for reading strategies, regardless the size of the class, it is an important aspect to foster in students. This study has referred to the implementation of QAR and ICT; and, teachers must train students in different reading strategies for efficient reading (Rojas, 2001).

In regard to QAR strategy, findings in this study confirmed its positive incidence in students' reading comprehension as it had been demonstrated in previous studies (Echeverri Acosta & McNulty Ferri, 2010; Green, 2016; Hemmati & Bemani, 2013; Izquierdo Castillo & Jiménez Bonilla, 2014; Muzammil, 2017). Students were more engaged in the reading topics and regarded as useful the fact that they could classify and address questions more effectively. In that sense, as Raphael (1986) suggested, this strategy fostered students' lower and higher order reading comprehension skills. Students had to read texts that were close to their socio-cultural background, which made reading more meaningful (Ríos Olaya & Valcárcel Goyeneche, 2005).

Moreover, considering ICT tools, this study has also confirmed the effectiveness of including technological tools as support to improve reading comprehension, similar to what studies in Colombia have shown (Izquierdo Castillo & Jiménez Bonilla, 2014; Jimenez Pulido, 2009; Poole, 2009; Roa Pinzón, 2014). Collaborative work appeared as an emergent key aspect in developing reading comprehension while implementing ICT, as mentioned by Marzban (2011), and Vargas and Abouchaar (2001).

It is key to say that one of the objectives of this study was to raise reading comprehension levels. Nevertheless, such objective was not completely reached. Findings demonstrated that the strategy was useful with in-class activities. However, when students tackled the reading test, the overall result was below passing scores, as Lizcano (2015) and Stafford (2012) had also formerly discovered in their studies. That goes in contrast with the studies aforementioned which regarded the strategy as really useful. As previously mentioned, tests should be re-designed bearing in mind the characteristics that made in-class activities effective. Additionally, more time should be devoted to train students in solving reading comprehension tests as a way to assess reading comprehension.

6.3 Significance of the results

This study provided evidence of the importance of training students in different reading strategies that enhance reading skills. The fact that QAR strategy did not transcend to higher test scores was outshined by the impact that it had during the pedagogical intervention. Findings suggest that QAR should be implemented in reading lessons because of the underlying subskills that it fosters. Ranging from lower to higher order of thinking, according to Barret's taxonomy (1976), QAR taxonomy considers the "literal comprehension" level, and moves towards "appreciation" (Appendix K). With those levels in mind, findings showed that students recurred to reading skills such as scanning for specific information, or predicting what was to happen based on reading part of a text. Moreover, findings in this study demonstrated that as long as students find reading meaningful for them, they can make valuable judgments about the topics involved, which is the highest level of thinking.

Additionally, due to the context of this study several learning strategies were fostered. Team work skills, for instance, was useful for the pedagogical intervention occurred in a large class (Rojas, 2001). In that sense, students worked in pairs thus promoting students' participation, discussion, making agreements, and direct impact on their social skills when they had to present their answers to the whole class.

Also, the implementation of ICT tools fostered additional reading strategies such as using scanning for specific information like in the vocabulary list in Google Docs, for instance. Findings suggest that students found useful the fact that they shared information in common accessible locations. Furthermore, mind mapping also fostered students' critical thinking and team work skills so as to organize information, summarize it, and then make use of that information in poster or blog design. This study also demonstrated that technological tools

cannot be reduced to online dictionaries or online activities. For instance, when readings had direct connection with their socio-cultural background, awareness, and prevention campaigns helped to raise students' participation, triggered their creativity, fostered collaborative work, increased discipline since they had to concentrate in a double task: answering comprehension questions, and the design of a digital product about certain reading topics. Furthermore, the aforementioned aspects resulted in promoting autonomous learning because students had independent answers to "On my Own" types of questions which were shown through blog posts.

Finally, it is worth to say that further training in-class is required so that students are better equipped with the necessary tools to face reading comprehension tests, provided lessons and tests are aligned.

6.4 Pedagogical challenges and recommendations

This study has shown the relevance of QAR combined with ICT to impact students' reading comprehension. However, findings in the reading comprehension test demonstrated that the content of the reading that students should face must be meaningful for them. In other words, students must have background knowledge about the topic in order to be familiarized and tackle comprehension questions efficiently. Even when students know the type of question they face, reading comprehension tests must be carefully designed lest students feel frustrated by the lack of knowledge of a topic, or vocabulary. Additionally, findings showed that QAR strategy requires the development of several reading subskills. In that sense, students must be aware of such skills needed to answer certain questions and, however beneficial to go beyond lower levels of thinking, training those skills entails time.

Moreover, although the combination of ICT tools with question-answer identification proved to be effective, students' dependence on them must be controlled. There must be a

balance between reading, comprehension check, and technology use. Students were eager to use technology, but the focus on vocabulary acquisition and reading comprehension should not blur because ICT tools are meant for acquiring or building knowledge, rather than entertain (López, 2006). Otherwise, when there is no technology available, students will have little knowledge of what to do.

6.5 Research limitations on the present study

During the pedagogical intervention, several issues appeared that had an impact on the research. Firstly, the lack of research studies on QAR in Latin America had direct incidence in the instructional design. There were few ideas about what types of activities to design to the participants of this particular study to apply QAR properly. In the end, I guided myself through the most common ICT tools, and significant studies from the research literature.

Another major aspect was time. A lot of time was devoted to instructional design, and data collection instruments. When the moment of pedagogical intervention arrived, there was little time to cope with the school's calendar, activities planned, and application of the QAR strategy. Similar to Stafford (2012) limitation, time is essential for the proper training and implementation of QAR. Also, the ideal grounded theory based on theoretical sampling (Corbin & Strauss, 2015) could not be done. Data was collected first, and then analyzed.

Another aspect that had direct incidence was the fact that the participants were part of academic studies as well as technical ones with a higher studies institution. They had to present blueprints as their project to graduate as technicians; consequently, sometimes they got to my lessons tired and some of them felt reluctant to participate, as stated in the short surveys (Appendix L).

Finally, this study was based upon ICT tools and the use of computers was obvious. However, the number of laptops available were insufficient for each participant. That is why I decided to set one laptop per pair of students. In the end, it is remarkable to see that the seating arrangement and continuous pair work had positive influence in the findings.

6.6 Further research

This study focused on the impact that QAR strategy combined with ICT tools had on reading comprehension. As stated before, time constraints and the lack of previous studies in the region had negative impact on the design and proper application of the strategy. Therefore, further research should be based on the strategy proposed in this study in a longer period of time. Since QAR involves developing several reading subskills, it is advisable that further research is focused on training students on reading skills first, and then on the whole strategy with controlled use of ICT tools to avoid dependence. For this, not only should students be trained, but also teacher training should occur. Research on teacher training regarding developing and reinforcing reading skills and strategies is necessary in order to ultimately help students in this matter. Incidence on reading test scores should be evaluated too.

Also, because of students' devotion to their technical studies, I found useful to conduct further research on this study's strategy in content and language integrated (CLIL). When it came to meaningful readings, students were engaged in the topics and activities. If the reading content is completely related to students' technical studies, findings may be of high importance, not only for Colombia's context, but for the Latin America too.

6.7 Conclusion

Reading skill is key for academic success (Hemmati & Bemani, 2013). For that reason, students must be trained in making use of reading strategies that help them in total

comprehension of texts. This study analyzed the impact of QAR strategy combined with ICT in reading comprehension. After the pedagogical intervention, findings demonstrated that the strategy was effective for in-class activities. It raised students' overall comprehension, increased their participation in class, fostered their social and team work skills, and promoted their critical thinking as well as their autonomy. In spite of that, the strategy proposed was not effective on students' test scores. Reasons lay mainly on test design and lack of time to further train students in reading comprehension test. This suggests that further research could be conducted provided that the previous suggestions have been considered. Lack of research about QAR in Latin America urge the need to analyze more on this topic aiming at affecting reading comprehension levels.

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Appendix A

Comparative results of students' English level

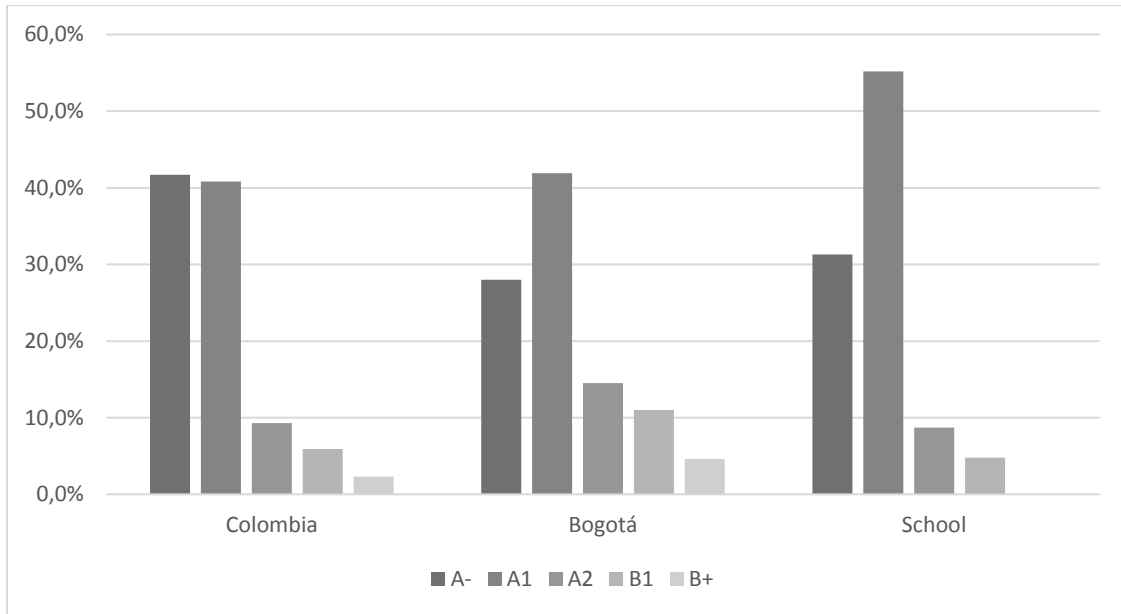


Figure 12. ap.

Appendix B**Colombian expectations of students' English level***Table 7. CEFR equivalence for each school year in Colombia (taken from MEN, 2006).*

Levels according to CEFR	Common level's name in Colombia	Expected educational level to develop language level	Goals for education in 2019
A1	Principiante (beginner)	1 st to 3 rd grades	
A2	Básico (elementary)	4 th to 7 th grades	
B1	Pre intermedio (pre intermediate)	8 th to 11 th grades	Minimum level for 100% of graduate students in high school.
B2	Intermedio (intermediate)	Universitary studies	Minimum level for English teachers. Minimum level for other professionals.
C1	Pre avanzado (pre advanced)		Minimum level for recently graduated language teachers.
C2	Avanzado (advanced)		

Appendix C

Student's questionnaire

Q1. En general, ¿qué tan interesado está en la lectura?

Nada interesado	Muy poco interesado	Medianamente interesado	Muy interesado	Completamente interesado	Total	Promedio Ponderado
0.00%	11.11%	50.00%	33.33%	5.56%	36	3.33
0	4	18	12	2		

Q4. En general, ¿qué tan frecuente lee en idioma inglés?

Una vez cada dos meses	Una vez al mes	Dos veces al mes	Una vez a la semana	Más de una vez a la semana	Total	Promedio Ponderado
22.22%	16.67%	16.67%	19.44%	25.00%	36	3.08
8	6	6	7	9		

Q7: En general, ¿qué tanto comprende los textos de lectura en las clases de inglés?

Muy poco	Poco	Medianamente	La mayor parte	Casi todo	Total	Promedio Ponderado
5.56%	30.56%	36.11%	22.22%	5.56%	36	2.92
2	11	13	8	2		

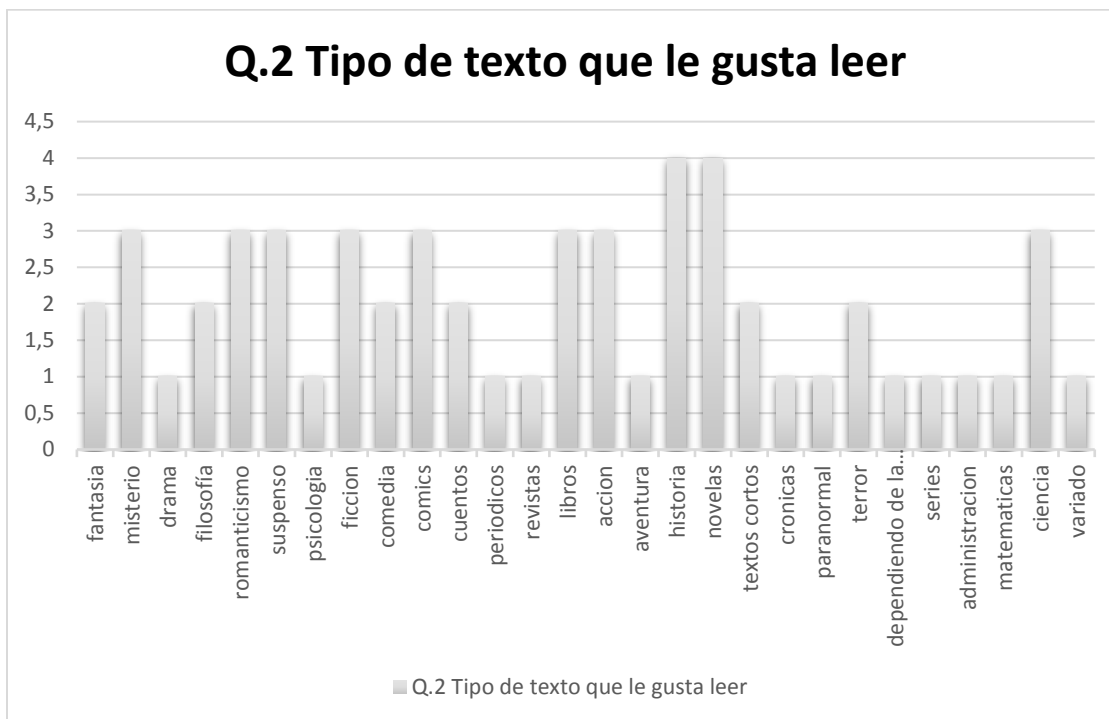
Q9: Con relación a los textos de lectura, qué tan difícil es para usted comprender:

	Muy complicado	Medianamente complicado	Poco complicado	No es complicado	Total	Promedio Ponderado
Vocabulario	2.78%	47.22%	47.22%	2.78%	36	2.50
	1	17	17	1		
Tema general de las lecturas	2.78%	52.78%	33.33%	11.11%	36	2.53
	1	19	12	4		
Contenido detallado de las lecturas	16.67%	58.33%	19.44%	5.56%	36	2.14
	6	21	7	2		
Preguntas de comprensión de lectura	13.89%	47.22%	25.00%	13.89%	36	2.39
	5	17	9	5		

Q1: ¿Conoce estrategias de lectura en idioma inglés?

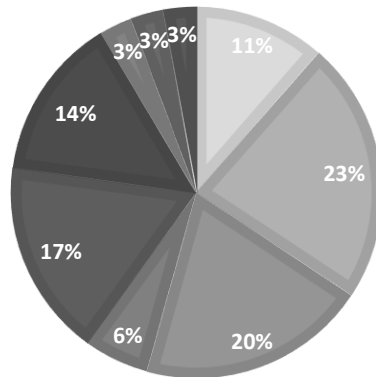
No	Medianamente	Sí	Total	Promedio Ponderado
36.11% 13	50.00% 18	13.89% 5	36	1.78

Q2: ¿Qué tipo de textos le gusta leer?



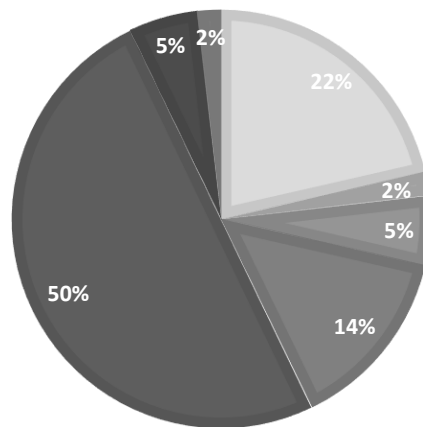
Q3. ¿CUÁNDO FUE LA ÚLTIMA VEZ QUE LEYÓ EN INGLÉS?

- Hoy
- Hace unos días
- Hace una semana
- Hace dos semanas
- Hace un mes
- Hace dos meses
- Hace un año
- Hace mucho
- Nunca leo en inglés



Q5. NORMALMENTE, ¿DÓNDE LEE EN INGLÉS?

- internet
- canciones
- textos escritos
- casa
- colegio
- videojuegos
- no leo



Appendix D**Survey for EFL teachers****Teacher 1**

1. How long have you taught English at the school?

I have taught English for seven years

2. Do you teach English somewhere else?

In this moment? ... No I don't

3. What levels have you ever taught?

Tenth and eleventh grade

4. Could you give us a brief description of the groups you have ever taught? (big/small groups, young learners/adults, etc.)

I have been working with big groups, the students are from fourteen and nineteen years old. They are secondary level in school. They are from a low social status. They are with a very low level of English knowledge and their main difficult is remember vocabulary and grammar rules but in general the students in class are very heterogeneous about thinks, ideas, economic situation, skills and goals.

5. What about this year's groups?

They are teenager students, they are very heterogeneous about thinks, ideas, economic situation, skills and goals because they are from different schools but they want to know about the music, culture and language. They are very active but there are a very passive students too.

6. What do you consider are the most common difficulties students face in English?

The grammar rules and pronunciation and remember vocabulary.

7. What's your opinion about reading comprehension of students?

They can read and take general ideas, but they don't like use the dictionary, so they have big difficulties to understand the real situation. According to this the students reading comprehension is very limited.

8. What makes it difficult for students to understand written texts?

The lack of vocabulary because a young student doesn't like to use the dictionary.

9. How much do you expose students to readings?

In each class there is at least a paragraph to read.

10. What strategies do you use to make students have better understanding in reading?

Predictions, puzzles, words activities according to the text. Silent reading, individual work of reading, questionnaires. Pictures about the reading.

Teacher 2

1. How long have you taught English at the school?

I have taught English for 5 years at A.R.P School

2. Do you teach English somewhere else?

Yes, I do. I teach English at Personal Teaching institute

3. What levels have you ever taught?

I have taught English to preschool children, first and second grades in elementary school and sixth, seventh, tenth and eleventh grades

4. Could you give us a brief description of the groups you have ever taught? (Big/small groups, young learners/adults, etc.)

Most of the times, I have taught to teenagers and I have worked with big groups, however when I worked with children the groups were smaller.

5. What about this year's groups?

This year I taught to 10 graders, the population was very heterogeneous, some of them were very smart, they liked English and they had learnt a lot in the former grades, but other students demonstrate difficulties to comprehend basic structures or topics.

6. What do you consider are the most common difficulties students face in English?

Students' difficulties deal with reading comprehension and writing texts.

7. What's your opinion about reading comprehension of students?

Students' reading comprehension is very low because they feel uncomfortable and afraid of facing unknown vocabulary. Also, they have difficulties to find grammar structures inside the text.

8. What makes it difficult for students to understand written texts?

As I said before, students 'block' their minds when they find an unknown word, so they stop their reading and don't make any effort to comprehend the text.

9. How much do you expose students to readings?

I expose my students to readings frequently; a 70% of the class is focused in reading skill development.

10. What strategies do you use to make students have better understanding in reading?

I apply strategies such as: asking for inferences, skimming, scanning, using dictionary, paraphrasing, answering questions. These are presented in pre-reading, during and post reading activities.

Teacher 3

1. How long have you taught English at the school?

Well I almost have six years working as an English teacher at the school.

2. Do you teach English somewhere else?

Not in the moment. I worked at a private institute while working here during four years, but I quit about a year ago.

3. What levels have you ever taught?

Yeah, well, talking about school teaching, I have taught English to first graders, sixth, seventh, eighth, and in this moment tenth and eleventh graders. Now, talking about the other places where I have taught, that will be all levels, from elementary to advanced levels.

4. Could you give us a brief description of the groups you have ever taught? (Big/small groups, young learners/adults, etc.)

Ok, er...I have given classes to very small groups (from one up to four people), and that was in the private institute. These people have been teenagers and also adults. But, in my current situation, I teach big groups (about 30 to 35 people in classroom) and all of them are teenagers.

5. What about this year's groups?

This year I only eleventh-grade students. Most of them have a very low level of English, and I could say that it is because of the many different schools they come from, and very few actually have rather good knowledge.

6. What do you consider are the most common difficulties students face in English?

Students' difficulties are mainly grammar, and vocabulary. When you try to do a reading exercise or writing, they do not know many common words.

7. What's your opinion about reading comprehension of students?

Their reading comprehension is very low because they do not know vocabulary. They constantly ask you: "teacher how do you say...?" and that has huge effect on the exercise.

8. What makes it difficult for students to understand written texts?

I could say that principally the vocabulary. It is difficult for them to look up the words in dictionaries constantly and maintain the correct translation and idea of the text in their minds. They lose track!

9. How much do you expose students to readings?

Well, we have four hours a week; that is two classes. During that moment, I could say that I use one hour per week for reading. Of course not formal reading of a long text all the time, but I intend to make them read a short paragraph and make them do an exercise about it.

10. What strategies do you use to make students have better understanding in reading?

Well, normally I let them try to identify and understand first the verbs and then one sentence at a time. If it is about answering questions, I tell them to look for similar words from the text, but of course, they have to know what they mean and their synonyms.

Appendix E

Consent letter 1

Bogotá, D. C. 27 de Marzo de 2016

Señores:

Estudiantes Inglés 3

Ciudad

Apreciados estudiantes:

Actualmente llevo a cabo una investigación titulada “How is Reading Comprehension Affected by Means of ICT in Question-Answer Relationships Strategy in EFL Classroom” dirigida a los estudiantes que cursan Inglés 3 en el colegio. Esta indagación intenta enriquecer los procesos de aprendizaje de la lengua extranjera y mejorar las prácticas docentes. Asimismo, se busca contribuir al mejoramiento del desempeño académico y técnico y al desarrollo integral del estudiante.

El objetivo de este estudio es identificar hasta qué punto se ve afectada (para bien o para mal) la comprensión lectora en los estudiantes cuando se usan estrategias y recursos como las TICs en preguntas de comprensión. Cabe anotar que dicha investigación hace parte de mi trabajo de grado de la Maestría en Didáctica del Inglés con Énfasis en Ambientes Autónomos de la Universidad de la Sabana.

Por lo anterior, comedidamente solicito su consentimiento y colaboración para realizar mi propuesta de investigación, que se llevará a cabo durante el primer semestre académico del año 2016. Esto implica recolectar datos por medio de cuestionarios, diario académico y memorias del docente así como emplear y publicar apartes que ustedes los estudiantes escribieron tanto en los cuestionarios como en las bitácoras para analizar los resultados. Por este motivo, debo tener acceso a sus bitácoras y a sus cuestionarios.

Igualmente, a los participantes se les garantizará el uso de nombres ficticios para mantener su identidad en el anonimato, así como estricta confidencialidad con la información que se recolecte. La participación en esta investigación es voluntaria por lo cual usted podrá retirarse en cualquier momento si así lo desea. El proyecto no tendrá incidencia alguna en las evaluaciones y notas parciales y/o finales del curso.

Agradezco de antemano su valioso aporte para llevar a buen término mi investigación.

Atentamente,

Alexander Miranda E.

Docente de inglés

Acepto participar

Nombre del participante: _____ Número de cédula: _____

Firma del participante: _____

Consent letter 2

Bogotá, D. C. 27 de Marzo de 2016

Rector:

GUILLERMO LEÓN MONTENEGRO P.

Ciudad

Apreciada rector:

Actualmente llevo a cabo una investigación titulada “How is Reading Comprehension Affected by Means of ICT in Question-Answer Relationships Strategy in EFL Classroom” dirigida a los estudiantes que cursen Inglés 3 en el colegio. Esta indagación intenta enriquecer los procesos de aprendizaje de la lengua extranjera y mejorar las prácticas docentes. Asimismo, se busca contribuir al mejoramiento del desempeño académico y técnico y al desarrollo integral del estudiante.

El objetivo de este estudio es identificar hasta qué punto se ve afectada (para bien o para mal) la comprensión lectora en los estudiantes cuando se usan estrategias y recursos como las TICs en preguntas de comprensión. Cabe anotar que dicha investigación hace parte de mi trabajo de grado de la Maestría en Didáctica del Inglés con Énfasis en Ambientes Autónomos de la Universidad de la Sabana.

Por lo anterior, comedidamente solicito su consentimiento y colaboración para realizar mi propuesta de investigación, que se llevará a cabo durante el primer semestre académico del año 2016. Esto implica recolectar datos y analizar los resultados, por lo cual debo tener acceso a los proyectos escritos de los estudiantes en bitácoras con el fin de conocer y analizar el proceso de lectura académica y técnica.

Igualmente, a los participantes se les garantizará el uso de nombres ficticios para mantener su identidad en el anonimato, así como estricta confidencialidad con la información que se recolecte. El proyecto no tendrá incidencia alguna en las evaluaciones y notas parciales y/o finales del curso.

Agradezco de antemano su valioso aporte para llevar a buen término mi investigación.

Atentamente,

Alexander Miranda E.

Docente de Inglés

Consent letter 3

Bogotá,D.C. 27 de Marzo, 2016

Señores

Padres de familia

Ciudad

Respetados Padres de Familia:

Teniendo en cuenta el perfil integracional de la institución y la implementación del pensamiento lógico-deductivo y autónomo como estrategia pedagógica en el aula de clase, se pretende llevar a cabo un proyecto educativo llamado “How is reading comprehension affected by means of ICT in Question-Answer Relationships strategy in EFL classroom” dirigido a estudiantes de undécimo grado, con el propósito de implementar estrategias de comprensión lectora que faciliten el proceso de lectura no sólo en la lengua extranjera, sino de una manera intercurricular Durante la implementación de este proyecto, los estudiantes desarrollarán algunas actividades y talleres guiados por el profesor. Igualmente, se entrevistarán a los jóvenes durante las clases. Cabe mencionar que la ejecución de este proyecto no entorpecerá ni atrasará la planeación de clases o actividades inherentes al currículo del área y tampoco tendrá incidencia alguna en las notas correspondientes al curso.

A los participantes se les garantiza estricta confidencialidad con la información que se obtenga y completa anonimidad.

Para que quede constancia de que conocen esta información y aprueban la participación de su hijo (a), por favor firmar el presente consentimiento.

Nombre Estudiante:

Firma padre

Firma madre

SI

NO

Appendix F

Students' short survey

Teacher:	Alexander Miranda E.
Date:	
Observation number:	
Main objective:	

Research Question

How does the use of question-answer relationship activities integrated in interactive readings affect reading comprehension in A1 (CEFR) eleventh grade students at a public school in South-East Bogota?

To identify the extent in which ICT and QARs could improve reading comprehension in order to foster the use of reading strategies in students.

Basado en la lección de hoy ¿cómo calificarías tu experiencia de lectura?

Para nada agradable	Muy poco agradable	Igual que antes	Agradable	Muy agradable

¿Qué tan útil ha sido la lección de hoy para tu comprensión lectora en inglés?

Para nada útil	No tan útil	Igual que antes	Muy útil

¿Qué partes de la lección te han dado esa impresión?

¿Qué sugerencias tienes para mejorar tu comprensión lectora en inglés para las próximas sesiones?

Appendix G
Teacher's journal

Teacher:	Alexander Miranda E.
Date:	
Observation number:	
Main objective:	

Research Question

How does the use of question-answer relationship activities integrated in interactive readings affect reading comprehension in A1 (CEFR) eleventh grade students at a public school in South-East Bogota?

To identify the extent in which ICT and QARs could improve reading comprehension in order to foster the use of reading strategies in students.

Data collection instrument question

How does the reflection upon the aspects observed in class help to improve the subsequent interventions?

Students' interaction	Development of activities	Use of QAR language	Use of ICT	Further questions

Appendix H

Artifacts: Multiple-choice test

Name _____

Date _____

Read the story and answer the questions that follow.

There once was a king whose name was Dionysius. He was so unjust and cruel that he won for himself the name of a tyrant. He knew that almost everybody hated him, and so he was always in dread lest someone should take his life.

But he was very rich, and he lived in a fine palace where there were many beautiful and costly things. And he was waited upon by a host of servants who were always ready to do his bidding.

One day, a friend of his, whose name was Damocles, said to him, "How happy you must be! You have here everything that any man could wish."

"Perhaps you would like to change places with me," said the tyrant.

"No, not that, O king!" said Damocles. "But I think that if I could only have your riches and your pleasures for one day, I should not want any greater happiness."

"Very well," said the tyrant. "You shall have them."

And so, the next day, Damocles was led into the palace, and all the servants were bidden to treat him as their master. He sat down at a table in the banquet hall, and rich foods were placed before him. He lacked nothing that could give him pleasure. There were costly wines, and beautiful flowers, and rare perfumes, and delightful music. He rested among soft cushions and felt that he was the happiest man in the world.

Then he chanced to raise his eyes toward the ceiling. What was it dangling above him, with its point almost touching his head? It was a sharp sword, and it was hung by only a single horsehair. What if the hair should break? There was danger every moment that it would do so.

The smile faded from the lips of Damocles. His face became ashy pale. His hands trembled. He wanted no more food; he could drink no more wine; he took no more delight in the music. He longed to be out of the palace, far away; he cared not where.

"What is the matter?" said the tyrant.

"That sword! That sword!" cried Damocles. He was so badly frightened that he dared not move.

"Yes," said Dionysius. "I know there is a sword above your head, and it may fall at any moment. But why should that trouble you? I have a sword over my head all the time. I am every moment in dread lest something may cost me to lose my life."

"The Sword of Damocles"

Assessment

1. Which statement best describes how Damocles views the life of Dionysius at the beginning of the story?

- A. easy and carefree, because he is so cruel
- B. dangerous, because his subjects may kill him
- C. wonderful, because he has riches and fine things
- D. lonely, because his subjects don't like him

2. Which word best describes Damocles at the beginning of the story?

- A. happy

- B. jealous
- C. frightened
- D. adventurous

3. Why is Dionysius referred to as “the tyrant”?
- A. to remind us that he is very rich
 - B. to remind us that he is a good friend to Damocles
 - C. to remind us that he doesn’t want to be king anymore
 - D. to remind us that he is a very cruel and unfair king
4. Dionysius rules his kingdom like a tyrant, so his subjects
- A. want to kill him.
 - B. would prefer Damocles be king.
 - C. are happy for him.
 - D. refuse to eat and drink with him.

“Let me go,” said Damocles. “I now see that I am mistaken and that the rich and powerful are not so happy as they seem. Let me go back to my cottage among the mountains.”
And as long as he lived, he never wanted to change places with the king.

Assessment

5. When Damocles chooses to live like the king, what does he learn?
- A. He realizes that having riches only brings problems.
 - B. He learns that being the king is hard work.
 - C. He understands that the king’s life is not as easy as he thought.
 - D. He has an argument with Dionysius.
6. What problem does Damocles have at the start of the story and how does he solve it?
- A. He is very hungry, and he is able to have his fill of food and drink at the palace.
 - B. His life is in danger, but he is able to gain protection from the king by becoming his friend.
 - C. He envies the king’s riches, but he realizes that his own life is happier.
 - D. He is upset that the king is a tyrant, and he convinces the king to be kinder.
7. Which of the following statements might Damocles make at the end of the story?
- A. “I will do my best to protect the king from danger.”
 - B. “I don’t want to be king, but I still want to be wealthy and strong.”
 - C. “I will try to find a stronger rope to hold the sword.”
 - D. “I don’t want to be rich and powerful because it might not make me happy.”
8. Which is an example of figurative language from the story?
- A. He was so badly frightened that he dared not move.
 - B. He lacked nothing that could give him pleasure.
 - C. When Dionysius tells Damocles, “I have a sword over my head all the time.”
 - D. When Damocles tells Dionysius, “I should not want any greater happiness.”

Appendix I

Instructional Design

WEEK	STAGE	OBJECTIVE	ACTIVITY	TIME	Data Collection Instrument
1 (September 20 th -21 st)	Session One: Training on QAR.	Students will be able to identify and answer different types of reading comprehension questions through the Question-Answer Relationship taxonomy.	Students will be trained on QAR taxonomy and terminology. Through on a text, they will check their QAR understanding.	2 hours	Teacher's Journal Survey
	Session Two: Training on ICT	Students will be able to use some ICT tools to approach reading texts to improve their comprehension in academic contexts.	Students will be trained on google docs and Padlet as tools to foster collaborative work online.	2 hours	
2 (September 27 th – 28 th)	Session One: Practicing “In the Book” types of questions.	Students will be able to discriminate main and secondary ideas by classifying them through ICT tools in order to promote an event through digital campaign.	Students will discriminate main and secondary ideas of a text. They will create a possible ending to the text and provide peer-feedback for such task.	2 hours	Teacher's Journal Survey
	Session Two: Using ICT to ideas of a text for a digital campaign.		Students will be trained in poster design and they will make a digital poster campaign based on the second part of the text.	2 hours	
3 (October 4 th – 5 th)	Session One: Practicing “In my Head” types of questions.	Students will be able to synthesize information through mind maps and promote peace through websites.	Students will classify vocabulary and answer inferential questions based on real-life situations.	2 hours	Teacher's Journal Survey
	Session Two: Using ICT for higher order thinking skills.		Students will make a mind map about an online text and post it on their own wix.com website.	2 hours	
4 (October 18 th – 19 th)	Session One: Applying all types of QAR questions.	To foster autonomy by providing tools for students to freely select which ones to use in reading	Students will share information through online docs, summarize a text and based on the information	2 hours	Teacher's Journal Survey

		comprehension exercises and digital campaigns.	propose questions and answers online.		
	Session Two: Students' autonomy in ICT tools to improve reading comprehension.		Students will design their own QAR-type questions and then elaborate a non-smoking digital campaign.	2 hours	
5 (October 25th – 26th)	Session One: Students' autonomy in QAR and reading comprehension skills	Students will be able to make predictions and propose new ideas about a specific topic by reading a text and using ICT tools.	Students will synthesize information and post it on their websites with a question on their blog based on their real-life situation.	2 hours	Teacher's Journal Survey Multiple-choice Test
	Session Two: Students' autonomous display of reading comprehension.		Diagnostic Test	2 hours	

Appendix J

Sample lesson plan

Second Week Sessions (Second Phase: QARs and ICTs)

Teacher: Alexander Miranda Escobar

Date: September 27th – 28th

Course: 403 (11^o)

Number of students: 30

Class time: 10:30am – 12:30pm / 1:00pm – 3:00pm

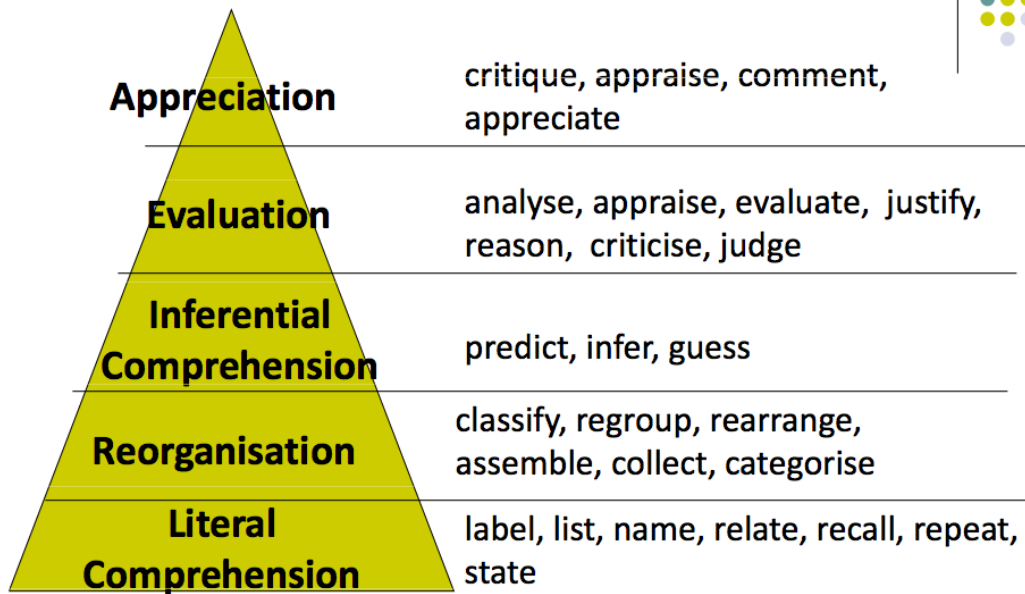
Main objective: Students will be able to discriminate main and secondary ideas by classifying them through ICT tools in order to promote something through digital campaign.

STAGE	AIM	PROCEDURE		TIME
		Teacher and student activity		
Warm-up	To engage students with English language.	First Session	Second Session	
		Students will be presented vocabulary about dogs (Appendix A). They will be asked to relate the definition with the corresponding image. After that, they will be shown the title of the reading and they will be asked to predict what they will find in the text. Students will post their predictions on a Padlet, and they will briefly discuss about such predictions.	Students will be asked to share information about the online resources they were asked to search in previous session.	
Presentation	To engage students in reading comprehension and the use of QAR strategy.	Students will receive in their emails part of a text (Appendix B) which they will work on. After students read the text, they will be presented several comprehension questions (Appendix C) to relate to the QAR taxonomy. In groups of four, students will be asked to answer the	Students will be presented the second part of the text and they will be introduced to a website for students to create digital posters.	

		questions by indicating specific parts of the text as clues for the answer. They will post their answers in a google doc in order to socialize them.		
Procedure	To foster students' autonomy by applying QAR strategy and ICTs.	After answering the questions, students will summarize the text and classify it in MAIN IDEAS and SECONDARY IDEAS. Based on such classification, students will predict a possible ending to the text and they will be asked to make 4 questions based on the QAR taxonomy. Students will be asked to send through their email their possible ending and questions to another group.	Students will design a poster that contains some of the main ideas of the text and a campaign to take care of dogs. Such poster will be posted on their social network.	
Closure	To provide feedback based on information worked throughout.	As a task for next session, students will have to reply to their classmates' email by providing constructive feedback on the text, and questions received (whether they fit into the QAR category).		

Appendix K

Barret's Taxonomy

BARRETT'S TAXONOMY of Comprehension Skills

Taken from: <http://learninglanguagespld.wikispaces.com/NCEA+Standards+Alignment>

Appendix L

Students' answers to short surveys

	S1	S2	S10	S11	S17	S19
Basado en las lecciones de esta semana ¿cómo calificarías tu experiencia con la lectura en la clase de inglés?	Un poco mejor. Si porque tenemos más vocabulario, términos especiales.	Un poco mejor que antes	Mucho mejor que antes. Ahora se me facilita comprender los textos.	Mucho mejor que antes	Un poco mejor que antes	mucho mejor que antes
¿Qué tan útil han sido las lecciones de esta semana para tu comprensión lectora en inglés?	Bastante útiles. Porque hablamos de diferentes temas y no solo nos limitamos a escribir sino que también tratamos de comprender textos.	Bastante útiles	Bastante útiles. He aprendido palabras que no había escuchado y también he aprendido a analizar un texto.	Bastante útiles	Bastante útiles. Clasificar las preguntas me facilita responderlas	bastante útiles
¿Qué momentos de las lecciones te han dado la impresión marcada en la pregunta anterior?	En los momentos en los cuales traducimos palabras de cualquier tema, redactamos oraciones para exponerlas, cuando escribimos frases sin traductor, las clases han sido fructuosas por los temas abarcados y la dinámica que se usa para desarrollar las clases	Cuando el profesor nos pone a leer textos cotidianos, me he dado cuenta que mi vocabulario ha mejorado y que a pesar de lo difícil que a veces se torna esta materia para mí.	La actividad de los alcoholos me pareció un buen método en donde se me facilito más la comprensión en inglés, al momento de realizar el mapa mental.	los momentos donde el nos aporta nuevo vocabulario y pronunciación	Cuando el profesor nos enseñó los tipos de preguntas que nos podemos encontrar y cuando habían preguntas sobre las lecturas, él nos preguntaba que tipo de preguntas eran	cuando aprendemos vocabulario que nos ayuda con las lecturas y lo que podemos hacer con los temas de las lecturas.

	porque realizamos mapas conceptuales , blogs, leemos textos.					
¿Qué aspectos (positivos y negativos) sobre las actividades realizadas con relación a la comprensión de lectura podría resaltar?	<p>Me pareció una buena forma de aprendizaje ya que ningún profesor hoy en día enseña con métodos nuevos, si no siempre es frente a un tablero.</p> <p>Las actividades fueron apropiadas para nuestra edad.</p>	<p>Con respecto a la clase de inglés me parece interesante porque es dinámica, el profesor utiliza muchos recursos como juegos, textos de interés, el uso de internet; para aprender vocabulario y que la clase sea fructuosa. Me parece que explica bien los temas para abordar textos y que también con el uso de internet podemos encontrar muchas cosas que no aburren la clase; y pues que también nos hace aprender sobre las ventajas y cualidades del internet. Aunque las clases</p>	<p>Empezare con las partes positivas. El profesor nos enseña nuevas maneras de desarrollar un trabajo. No solo nos ha ayudado a nuestra comprensión lectora, sino que también ha mejorado otros aspectos. El profesor pone textos del diario vivir, es decir, el profesor pone temas que tenga que ver con cosas que nos involucren de alguna manera y esto ínsita a la lectura de dicho texto. Las lecciones son grupales y esto ayuda a el trabajo en grupo y el ampliamiento del vocabulario. (Dos cabezas piensan mejor que una). Tenemos ayudas visuales y una breve introducción al tema antes de ser expuesto, esto nos ayuda a entender</p>	<p>Las actividades para aprender vocabulario y el uso del computador para encontrar otras formas de resolver las actividades. Las lecturas son de temas conocidos, lo que se nos hace más fáciles de entender. De pronto las actividades necesitan mucho tiempo y pues algunos de nosotros nos demoramos mucho en resolverlas.</p>	<p>Usar diferentes programas en los computadores nos ayudó mucho en la comprensión. Tener a la mano el tipo de respuesta que quiere la pregunta también me ayudó a buscar la respuesta más rápido. De pronto el tiempo no era suficiente o a veces teníamos muchos trabajos de la técnica y llegábamos cansados a clase.</p>	<p>Me gusta la forma en que sacamos el vocabulario necesario entre todos con los computadores . Así entendemos mejor las lecturas. Las formas como hemos utilizado los temas de las lecturas para hacer campañas con poster o hacernos pensar, como el de los ministros de educación o la campaña del cigarrillo. Los medios digitales nos permitían participar más que en el salón. Aunque las actividades eran muy entretenidas, a veces las teníamos que hacer muy rápido por el tiempo.</p>

		<p>tradicional s también son buenas, porque el profesor sabe explicar bien y también se dirige bien hacia los alumnos. pero más interesantes son en las que se hace uso del internet porque cada estudiante no solo se limita a ver redes sociales sino a indagar sobre otros programas que nos ofrece el internet.</p>	<p>mejor ciertos puntos. Puntos malos. La mayoría de textos son un poco largos y esto conlleva a que pasemos parte de la clase intentando entender, y casi no queda tiempo para solucionar o terminar la actividad correspondient e (en mi caso). Hay actividades que toca terminar en la casa porque la clase no alcanza, y esto hace que me atrase porque cuando llego a casa me pongo a hacer planos.</p>			
<p>¿Qué expectativas y/o sugerencias tienes para las próximas lecciones con miras a mejorar tu comprensión lectora?</p>	<p>Que por medio de imágenes redactemos textos. Seguir con la lectura de textos con diferentes temas, en especial temas que a los estudiantes les llame la atención como la parte de sexualidad, drogas, modas, para que ellos se interesen y aprendan mejor</p>	<p>Con respecto a las sugerencias, es divertido que el profesor sea variado en sus clases. sin embargo, a veces me da pereza hacer las actividades que pone el profesor, pero no porque sean aburridas sino porque requieren bastante tiempo y pues en la</p>	<p>Para mejorar mi comprensión lectora en ingles debo poner en práctica más textos para así poder tener mejor fluidez a la hora de hablar en ingles</p>	<p>Temas de actualidad que nos permitan discutir más. Sin embargo, que los textos sean un poco más cortos.</p>	<p>espero que el profesor nos enseñe otras formas de entender mejor la lectura. que sigamos utilizando los computadore s para ayudarnos.</p>	<p>Espero que los temas sigan siendo interesantes para leerlos con agrado.</p>

	usando los tiempos y los requisitos para que el inglés sea más dominado pero también usando diferentes actividades para que la clase sea activa	técnica en la que me encuentro en este momento, siento que no tengo tiempo ni para dormir. Me agrada la manera en que el profesor maneja los temas, pero debería hacer actividades que requieran menor cantidad de tiempo.				
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Appendix M

Teacher's journals 1 and 3

Teacher's Journal	
	Name: Alexander Miranda
	Date: September 20th, 2016 Session 1
	<i>Students will be able to identify and answer different types of reading comprehension questions through the Question-Answer Relationship taxonomy.</i>
Students' Interaction	While answering individually to the teacher, only few of them participated.
	Seating in pairs made them share information; participation towards answering questions were mostly forced.
	Students get distracted easily, they have to be monitored at all times.
Development of activities	Participation is constant, but there is too much L1 use while sharing information.
	Students depend too much on the teacher and dictionaries
	Post-reading stage was effective: critical thinking towards environment: it seems easy and more interesting for them to bring down the topic of the reading to their reality.
Use of QAR language	The training session was productive. Students easily related questions to QAR classification.
	They focused their attention to the first part of the question to identify what type of question it was. Satisfactory session.
Further questions	How to keep students involved in activities, especially in the reading stage, and foster their participation?

	Teacher's Journal Name: Alexander Miranda Date: September 27th, 2016 Session 3 <i>Students will be able to discriminate main and secondary ideas by classifying them through ICT tools in order to promote something through digital campaign.</i>
Students' interaction	Individual work was OK. Short but engaging exercise.
	Students seemed to get the importance of using emails to share and work on academic information.
	Groups of 4 was necessary for number of computers, but not all of them were focused on the task.
Reading stages	The vocabulary taught was crucial to help students save time in the reading. Images used helped as metacognitive strategy.
	The reading topic was useful for students: familiar topic = understandable reading.
	Comprehension questions helped to check that most of students understood the text (good thing because they are 32!)
	Questions proposed by students were mostly tricky: they intended to confuse their classmates.
Use of QAR language	Students seem keener to identify types of questions for both: answering and creating their own. However, "Think and Search" is still difficult to figure out when designing.
Use of ICTs	Use of Padlet, online dictionaries and google docs became "normal" tools for students.
	They already ask if they will post on Padlet.
	The use of emails has to be refined.
Further Questions	How can I make students focus on group work when required?
	Are emails that useful for this study?

Appendix N

Post-implementation test scores

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
S1		X			X	X	X	
S2	X	X	X	X		X	X	
S3		X		X		X		X
S4	X	X		X	X	X		X
S5	X	X		X				
S6	X	X		X	X	X		X
S7	X	X			X		X	
S8		X		X	X		X	X
S9		X	X	X	X	X		
S10		X				X		X
S11		X			X	X		
S12		X		X	X	X		X
S13	X	X			X		X	X
S14	X	X		X		X		X
S15	X	X		X		X	X	X
S16		X			X			X
S17	X	X	X	X		X	X	X
S18		X	X	X	X	X		X
S19	X	X		X	X		X	X
S20		X	X	X	X	X	X	
S21	X	X	X	X	X		X	X
S22		X		X		X	X	X
S23	X	X			X		X	

Rows stand for students; columns stand for questions; green color stands for correct answer; red color stands for incorrect answer