

**Universidad de Cuenca**



**Facultad de Filosofía, Letras y Ciencias de la Educación**

**Centro de Posgrado**

**Maestría en Lingüística aplicada a la Enseñanza del Inglés como Lengua Extranjera**

**Online Readtheory Program Impact on the Development of EFL Students' Reading Skills**

Trabajo de Titulación previo a la obtención del título de Magister en Lingüística aplicada a la Enseñanza del Inglés como Lengua Extranjera

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2018



## RESUMEN

Este estudio quasi-experimental aborda el impacto que el programa en línea Readtheory.org tiene en las habilidades de comprensión lectora de estudiantes de segundo nivel de la Universidad Politécnica Salesiana. Éste está basado en la hipótesis de Krashen acerca de Comprehensible Input, la Taxonomía de Bloom y la Lectura Crítica de Kurland. Una muestra de 50 estudiantes fue seleccionada y dividida en dos grupos (control y experimental). Los estudiantes del grupo experimental trabajaron con la plataforma ReadTheory, mientras que el grupo de control trabajó con actividades de lectura tomadas de diferentes fuentes. Un diseño de prueba preliminar y una posterior fueron aplicados con la intención de confirmar la hipótesis de Krashen la cual indica que Comprehensible Input podría influir en el progreso de lectura y comprensión de los estudiantes; en este sentido, los estudiantes trabajaron con material de un nivel superior al demostrado (Krashen S. , 1985, p. 2). Se aplicó una entrevista al grupo experimental para conocer las opiniones de los estudiantes acerca del uso de la plataforma. En el grupo experimental, los resultados revelaron que el uso de la plataforma influyó de manera favorable en las habilidades de lectura y comprensión de los estudiantes. Sin embargo, una comparación entre ambos grupos no reveló diferencias significativas. A pesar de que se concluye que no hay un impacto significativo del uso de este programa en la destreza lectora de los estudiantes, para próximos estudios es importante tener en cuenta algunas variables que influyeron en esta investigación.

**Palabras clave:** lectura, programa, comprehensible input, Readtheory, website



## ABSTRACT

This quasi-experimental study addressed the impact that the Online Readtheory.org website has on Politécnica Salesiana University students' reading comprehension skills. It is based on Krashen's hypothesis about comprehensible input, Bloom's Taxonomy and Kurland's theory about Critical Reading. The sample was selected and divided into two groups (control and experimental) of 25 participants each. Students in the experimental group worked with the ReadTheory website, while the control group worked with reading activities taken from different sources. A pretest and posttest design were applied with the intention to test the hypothesis of Krashen (1985) that indicates that Comprehensible Input would positively influence learners' progress by receiving input that was one step higher on his/her actual stage (p. 2). A survey after the intervention was applied to the experimental group to know students' opinions on the use of the program. In the experimental group, findings revealed that the program influenced students' reading – comprehension skills; however, a comparison between both groups (experimental and control) did not reveal significant differences. Although the main conclusion, which answers the Research Question of this study, is that there is no significant impact of this ReadTheory.org program on second level students' reading skills, there are some essential variables that played an important role in this study which must be taken into account for further studies.

**Keywords:** reading, program, comprehensible input, Readtheory.org, website



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## **ACKNOWLEDGEMENT**

I am grateful to the Master's program administrative personnel and teachers for having provided me this opportunity to learn and share knowledge with great professionals. Also, I would like to express my sincere gratitude to Mst. Sandra Cabrera for her guidance, wisdom, and encouragement she has had throughout this time. Thanks for doing all you have done!



## DEDICATION

*“I’ve learned... That it is not what I have in my life but who I have in my life that counts” (Author Unknown).* I dedicate this work to my family, the most important people in my life, who have been my support and motivation to accomplish this project.



## INTRODUCTION

Nowadays, English has acquired an important role not only for English speaking countries, but the entire world. It has turned to be a lingua franca since it is used in different environments and fields such as education, medicine, engineering, and businesses. Therefore, the importance of learning English as a foreign language in non-English speaking countries is essential for students to be able to be part of this global world.

Nevertheless, to teach and learn a foreign language is not an easy task to do, and that is why different methods, techniques, strategies as well as tools have been the object of study to improve their use in the classrooms according to students' age, interests, and needs.

According to Vygotsky (1978), thanks to language, functions such as thinking, reasoning, reading, and writing can be developed. Corder (1967) stated, "the learning of the mother-tongue is inevitable, whereas, alas, we all know that there is no such inevitability about the learning of a second language" (p. 163). This is why the primary purpose of this study is to analyze an online reading website called ReadTheory to facilitate the acquisition and development of reading skills and consequently foreign language learning.

To sum up this introductory part, this study has been divided into five chapters: introduction, theoretical framework, methodology, results, and analysis of the study and conclusions. Each chapter describes theories, case studies, the process conducted to accomplish this study, the results and discussion.

In the first chapter, the statement of the problem, context, participants, the general and specific objectives, and the research question of the study are explained. Secondly, in



the following chapter, the theoretical framework which consists of different theories, but mainly authors such as Krashen's hypothesis about comprehensible input, Bloom's Taxonomy and Kurland's hypothesis about Critical Reading.

In the third chapter, the methodology applied in this study is explained. It has the research question, context, participants, instruments and materials, and the research procedure.

The following chapter describes the data analysis and results. First, an analysis of the experimental group's results is done. Second, in the same way, there is an analysis of the control group's results. Finally, a study of both the experimental and control group is conducted by comparing results from these two groups. Additionally, an analysis of the students' perceptions of the program is described.

Finally, in the last chapter, a brief discussion, conclusions, and suggestions for further research are stated. Also, it contains recommendations and some limitations of this study.



## CHAPTER 1

### THE PROBLEM

#### 1.1 Background of the study

The teaching and learning process of the English language has different areas to develop such as vocabulary, grammar, reading, listening, writing and speaking. Even though all of these aspects are equally important, this study is focused on the reading skill since it has been observed as a weakness of EFL students by teachers at Politécnica Salesiana University in Cuenca city. As it was mentioned before, English is an international language. Therefore, academic books, articles, papers, and magazines are usually first published in English, which generates the necessity for readers to be able not only to read for fun but to read critically. Students need to comprehend not only what is explicitly written on paper, but also to analyze the purpose of the author, the period or epoch it was written, and its intrinsic meaning.

Additionally, as university students, they need to read up-to-date information to apply their knowledge in the fields of their majors. For them, it is not optional but mandatory to know about the last tendencies and everyday advances in the different areas of their interest to be part of this competitive world.

An essential aspect of this study is technology since its use has increased in time, especially in education. Years ago, the use of technology within the classrooms was seen just as a novelty since only a few devices and not many programs or apps were introduced in the classrooms. Besides, in the past most teachers were reluctant to use technology; however, within today classes it is a necessity since it has already turned to be part of students' daily lives.



Students use different devices, websites and programs to perform various tasks; they enjoy and feel that technology facilitates and makes possible the accomplishment of what they want to achieve. WordReference.com dictionary, for instance, is an app frequently used by students. They have mentioned how useful it is since it provides different entries with examples for one word, so they can decide which translation fits better in the context they need. Besides this, it provides pronunciation from different English speaking countries.

Taking advantage of technology, teachers can encourage students with challenging activities; thanks to the use of this tool, students are more engaged and motivated to perform, to collaborate and participate. Niki L. Gordon (2011) makes emphasis on the importance of students' motivation and engagement to reach academic success; therefore, the activities planned by teachers are fundamental specifically with students who have a poor performance (p. 3). However, whether there is or there is no low academic performance, it is essential to consider how to reach students' interest and engagement. Students at Politécnica Salesiana University, for instance, need to learn and acquire English language skills in short periods of time to approve the levels required to be able to take credits in their majors; therefore, it is important to search for new tools that can reinforce their learning experience.

Consequently, this study is focused on the impact a virtual reading program has on students' reading comprehension skills. To accomplish this goal, it was important the support of different reading theories, the analysis of the program itself as well as the opinion of the participants of the study.



## 1.2 Statement of the problem

At the Politécnica Salesiana University, most students come from public schools, and according to what they usually mention and the researcher's experience as an English teacher at that institution for three years, they have usually had little exposure to English in both elementary and high schools; as a consequence, they face difficulties in their English performance due to the lack of vocabulary, structures, and low development of their communicative skills. All these problems have led them to consider the English language as an obstacle rather than a tool.

This situation does not only occur in this context but in other places in which English is studied as a foreign language. For example, in a study conducted in China, it was determined, "when Chinese college students are busy reading piles of material to prepare for all kinds of tests, they read very fast only to get information to deal with the questions, with no further understanding at all." (Yu, 2015, p. 134). Also, this problem may be connected to readings habits in the students' native language. For instance, Yamashita (2004) cites in his report Day and Bamford's (1998) model who point out that an essential element that influences target language reading is the reading habit students have in their mother tongue.

Both teachers and students at UPS (Universidad Politécnica Salesiana) recognize the difficulties students face when they are exposed to written texts. One of the most challenging aspects considered by learners and teachers is when students are asked for information that is not drafted in the text, for instance. This fact is reflected in reading activities when students answer questions that include explicit data correctly, but the issues that ask for implicit information are answered incorrectly.



Another example of the lack of reading skills is found in Kadir et al. (2014), who reported a case study where there is a students' tendency to look up new words in a dictionary, rather than to infer them from context. Looking up new words in a dictionary is a useful strategy in the reading process. However, since readers do not analyze context, they may only get to the first entry they find that does not always refer to the idea of the text. It is habitual for students to read what is explicitly written in a passage, but not to infer implicit ideas.

Then to help and improve the students' reading skill, an online program called ReadTheory has been considered as a tool to motivate and encourage them to read, learn and practice. Thus, students may be able to evidence that they can learn English if they practice and especially if they read because they expand their knowledge related to vocabulary and acquire critical thinking skills. Consequently, the research question to be answered through this study is the following.

**Research Question:**

- To what extent can second-level students' reading skills be enhanced by the use of the ReadTheory program?

**1.3 Purpose of the Study**

It is EFL teachers' responsibility to provide students with tools and strategies that can open their minds to see beyond what is explicitly written in a text. Daniel J. Kurland (2000) defines critical reading as a method to comprehend a text taking into account the author's purpose and context. Then to find out implicit information in a text, readers must



have critical reading skills which will lead them to explore and study what they read (Kadir, Ahmad, & Ismail, 2014).

Then as Richard R. Day & Jeong-suk Park (2005) acknowledge in their journal *Developing reading comprehension questions*, it is vital that teachers ask different types of issues to enhance students to analyze texts deeply. Students express they are familiar with literal comprehension questions that they can quickly answer by looking up specific data in the text. A beginning reading strategy is literal comprehension questions, but the task for more advanced students may be asking challenging questions, so they develop critical reading skills.

Thus, the objective of this study is to provide students with a tool called -online ReadTheory program- and analyze the impact it has on students' reading skills. This program has been chosen because it offers reading comprehension exercises with multiple choice questions, which may prompt them to think and analyze what they have read. By using this program, students can work at their own pace, and they are exposed to readings according to their levels. Feedback is also provided to them through bar charts, so they can additionally observe their weaknesses and strengths, and in that way, improve through the next exercises; as Reima Al-Jarf (2013) indicates, technology can take a significant role in providing students with valuable language experiences. Facilitators can use technology to make language learning faster, more comfortable, less frustrating and more engaging for students (p. 524).

Despite the broad exploration in different academic databases such as ProQuest, SciELO, and others, it has been hard to find studies registered on the use of ReadTheory program; but there is one from 2016, which demonstrates positive results in the utilization



of this reading program. Also, some studies have been conducted on the use of ESL ReadingSmart program, which reflects a positive impact on students' communicative skills. These studies will be analyzed deeply in the next chapter. Benefits of this website are the ones mentioned below.

First, each student is provided with passages according to his or her own level. It is worth pointing out that in regular classes, teachers usually give the same text to all students taking into account the average group level. However, it might be a disadvantage for certain students because, for some of them reading such a passage may not be challenging at all, while for some others, it may be complicated. Another advantage of the program is that teachers can know how each student performed during the process, (whether or not they read and developed the exercises) and analyze what particular difficulties students had. Thus, it becomes a personalized class that supports students' needs.

### **General Objective**

- To demonstrate the impact of the online ReadTheory program on students' reading skills.

### **Specific Objectives:**

- To analyze the program impact on students' reading-comprehension skills from the Politécnica Salesiana University.
- To evaluate students' opinions about the use of the program.



## 1.4 Significance of the Study

This study is focused on the reading skill to give students a tool to learn English. According to students' opinions, a high number of them do not like English and do not devote enough time to it. However, they do need English in their daily academic and professional lives; then, to provide them with tools to develop the reading comprehension skill, it is necessary for them to be able to read and comprehend quickly up-to-date texts and books of their interests.

The purpose of this study is to find out if this ReadTheory program fits students' needs and how much their reading comprehension skills improve if there were any improvement at all. Therefore, it is essential to apply this study since this information is necessary, because this online software may be used shortly not only as extra material but also as a tool for reading skill development employed in all courses at UPS University.

Consequently, to conduct this study two groups of 25 students each were asked to participate. Both of them were at the second level (out of 6 levels); one group was the control group, and the other one was the experimental group. In the experimental group there were 15 male and 10 female students, and in the control group, there were 13 male and 12 female participants. The intervention process began on October 27, 2016, and finished on January 27, 2017; that is, three months where students devoted 4 hours per week to the development of 3 or 4 readings. Therefore, students were asked to complete at least 40 readings at least during the whole intervention.

In this study, it was evidenced that not all students began on the same grade level, so it was positive for them to work at their own pace with the program. This fact supports



Krashen's hypothesis about comprehensible input and also Bloom's taxonomy which categorizes the learning process to make people comprehend that learning is a step by step process. Since the ReadTheory program offers the opportunity for students to be immerse in a step by step individual procedure, it can be said that this three-month intervention was the beginning of a new reading skill development for English learning students at UPS.



## CHAPTER 2

### THEORETICAL FRAMEWORK AND LITERATURE REVIEW

A language is a complex system which implies the mastering of different skills such as listening, reading, writing and speaking. All of them are equally important, but different strategies, techniques, and tools are needed to reinforce them. Such skills have been divided into two categories according to the direction of communication, input (reception) and output (production). Also, theories posted by authors such as Stephen Krashen, Bloom's Taxonomy, Daniel Kurland, and some others.

These theories have been taken as the basis of this study because these describe the process of second language acquisition and provide facilitators with precise points of the kind of material and activities that would work in their classes according to their students' level. For instance, Krashen's Input Hypothesis plays a significant role since this explains the quality and level of material students should be exposed to during their learning process to reach comprehension and learning. Likewise, Benjamin Bloom provides facilitators with a taxonomy of educational objectives which categorizes the functions of the learning process from simple to complex.

Daniel Kurland is another relevant author in this study since he has developed theories about critical thinking and critical reading and provides clear concepts about what these terms are. A theory that is relevant to this research study is metacognition since with the use of the ReadTheory website students are aware of their reading process. They can observe their performance after each reading taking into account some aspects that will be explained in detail below.



At the end of this chapters, some studies conducted on the use of different programs are described to emphasize the use of technology to increase students' motivation and engagement in academic environments.

## 2.1 Input Hypothesis

To develop this hypothesis, it is essential to state a clear concept of what it refers to in a language learning environment. "Input is the language data which the learner is exposed to" (Zhang, 2009, p. 91). Nevertheless, this hypothesis has been defined from different perspectives such as behaviorist, mentalist, and interactionist. The author above explains these three perspectives. From the first point of view, behaviorism, the environment or the stimuli and reinforcement a person receives are the most critical aspects of language acquisition. Meanwhile, from a mentalist point of view, it is said that the humans' brain needs to be exposed to the language since their brain is already prepared to acquire language. The last theory, interactionism, emphasizes the relevance of both sides, input, and language processing (Zhang, 2009, p. 92).

Nonetheless, the one that has influenced and has been applied to the SLA field is Krashen's hypothesis, and that is why this study is based on his philosophy. It is relevant to mention Krashen's (1982) input hypothesis since he states second language development is a matter of acquisition instead of learning, and that "acquisition comes from comprehensible input" (p. 92). A clear explanation states Ponniah (2011) in his article *The Effectiveness of The Comprehension Hypothesis* pointing out, "if the current level of a learner is (i), then the input should be (i+1)" (p. 1). In other words, the input has to be presented according to the student's level, and it should include challenging factors such as new vocabulary or higher level questions that lead the student to analyze and go one step



higher from the level he/she currently is. Thus, one example of this can be to provide readers with texts according to their proficiency level, but then start their ascent to reach a higher level.

Even though there have been a significant number of arguments and critiques to Krashen's hypothesis, no one has refuted the fact that the input's quantity and quality play a fundamental role on Second Language Acquisition (SLA). Additionally, Latifi, Ketabi & Mohammadi (2013) posted an interview with Stephen Krashen where they stated what some authors had argued about how to determine each student's level to know what comprehensible input would be best for them. Krashen's answer was "I argued that we don't have to know precisely where each student is, what his or her  $i$  and  $i+1$  is: Optimal input, I have hypothesized, automatically contains  $i+1$  if there is enough of it and if it is comprehensible" (Latifi, 2013, p. 226).

This hypothesis is closely related to this study since in the ReadTheory program students are exposed to comprehensible input. The first task students have to do when they are registered on this website is to complete a diagnostic test. This test consists of 10 different passages; each passage has one multiple choice question. After they have completed this diagnostic test, the program places them in 1 level out of 12; therefore, when they start using the program they receive exercises according to their level and depending on their performance they go up or down.

## **2.2 Bloom's Taxonomy**

Since the purpose of this study is to demonstrate the impact of the online ReadTheory program on students' reading skills, which follows a step by step language



learning process, it is important to mention this model because it is narrowly connected to this research work.

To begin with the discussion of this theory, it is necessary to know what a taxonomy is. Bloom, Engelhart, Hill, Furst & Krathwohl (1956) in their book *Taxonomy of Educational Objectives* describe a taxonomy as “a set of standard classifications” (p. 1). Bloom’s (1956) main purpose of having a taxonomy of educational objectives was to organize the educational system’s goals and communication to reach lifelong learning.

“This taxonomy is designed to be a classification of the students’ behaviors which represent the intended outcomes of the educational process” (Bloom et al., 1956, p. 12). To understand the behaviors analyzed by Bloom, et al. (1956) it is worth observing the example they provide to support this domain -two boys who are apparently solving the same algebra problem. The problem given to both of them is the same, but the process each student takes to solve is different; one boy has previously seen it, and he remembers its answer while the other boy has this problem for the first time and has to analyze and think to solve it (p. 15).

After analyzing this example, Bloom’s taxonomy could be better understood. The cognitive domain was arranged hierarchically, from bottom to top as knowledge, comprehension, application, analysis, synthesis, and evaluation. Years later, the revised Bloom’s taxonomy appeared, and it was arranged from bottom to top as remembering, understanding, applying, analyzing, evaluating, and creating (Krathwohl, 2002). Bloom et al. (1956) mentioned they aimed to have “learning experiences to change the student’s behavior from a simpler type to another more complex one which in some ways at least will include the first type” (p. 16).



Both this taxonomy and the ReadTheory program are categorized in levels from simple to complex. In this way, the difficulty level of the passages released by the program depends on the results of the previous reading exercise done. Therefore, in this program, there is an organized sequence according to level, which fits Bloom's taxonomy.

### **2.3 EFL Reading**

Both the Input Hypothesis and Bloom's Taxonomy are related to this study since the Input Hypothesis establishes the importance of comprehensible input as well as Bloom's Taxonomy which states a beginning level (remembering). That is, both theories consider each student's competence level and look forward to developing it to increase and improve students' literacy competence.

Thus, reading, which falls into the input category, is the skill that has been considered for this study since EFL learners, but especially students at UPS University have noticed how important is for them to be able to comprehend texts in English faster and efficiently. Frequently, they are exposed to papers and articles which are in English, and comprehending these texts has turned into a hindrance for them. Besides the academic necessity already exposed, there is a cultural necessity. "Reading a book changes us forever as we return from the worlds we inhabit during our reading journeys with new insights about our surroundings and ourselves" (Leu, Kinzer, Coiro, & W., 2004, p. 1570).

"Reading is something many of us take for granted" (Grabe, 2009, p. 14) without considering it as a "cognitive skill which involves many subskills, processes, and knowledge sources ranging from basic lower level visual processes [...] to higher level



skills [...], and even to skills of text representation and integration of ideas with the reader's global knowledge" (Nassaji, 2011, p. 173).

The reading task is part of people's daily activities; if someone thinks and counts the times he/she reads in a day, this person would quickly find that he/she reads consciously and unconsciously different pieces of writing when shopping, at home, at the bank, at work, and in the street. According to Kurland (2000), reading is a complicated process that involves active, reflective and problem-solving subskills since readers do not only read words explicitly written in a text, but also, authors' ideas, thoughts, intentions, and assertions. That is why, reading demands abilities from readers such as skimming, scanning, understanding, and inferring. Grabe (2009) states in his book *Reading in a Second Language* some of the purposes for reading in academic environments.

1. Reading to search for information (scanning and skimming);
2. Reading for quick understanding (skimming);
3. Reading to learn;
4. Reading to integrate information;
5. Reading to evaluate, critique, and use information;
6. Reading for general comprehension (in many cases, reading for interest or reading to entertain) (p. 8).

Studies demonstrate that readers read for different purposes and that they adopt different processing goals to accomplish their reading purposes (Grabe, 2009, p. 12). This process happens in both L1 and L2 reading; however, as Bernhardt & Kamil (1995) noticed, "L2 reading is not merely an impoverished version of L1 [first language] reading" (Nassaji, 2011, p. 173). Moreover, Nassaji (1974) emphasizes reading competence and linguistic knowledge as necessary for L2 reading (p. 174). This is why "a critical point of departure addresses how to make use of reading opportunities for both comprehension and



language acquisition” (Nassaji, 2011, p. 174). Goodman (2010) has named the act of reading as a ‘psycholinguistic guessing game’ since this skill “involves an interaction between thought and language.

According to Grabe (1991), in academic environments reading competence plays an essential role in English language learning acquisition. Likewise, Barnett (1989) states reading is the first form of language acquisition (p. 19) and it makes sense since through reading, a person learns vocabulary and observes the use of different grammar structures. That is why, reading has been seen from a different perspective as a cognitive process where reader’s participation is active rather than passive, due to the fact of making meaning from what is read (Barnett, 1989).

#### **2.4 Metacognition and EFL Reading**

“Researchers agree that awareness and monitoring of one’s comprehension processes are critically important aspects of skilled reading” (Mokhtari & Reichard, 2002, p. 249). These two aspects are most known as metacognition, which is defined as the “awareness or analysis of one's learning or thinking processes” (Merriam Webster , 2017). Flavell (1979) also defined this term as “thinking about thinking” (p. 906). Another concept stated by Karbalaei (2011), an EFL teacher and a Ph.D. Graduate in ELT, defines metacognition as “the knowledge and control that we have over our cognitive processes” (p. 6). Additionally, Oxford (1990) considers that this cognitive process “provides a way for learners to coordinate their own learning process” (p. 136).

“With regard to reading, it is common to talk about metacognitive awareness (what we know) and metacognitive regulation or control (knowing when, where, and how to use



strategies, that is, what we can do)” (Karbalaeei, 2011, p. 6). As could be seen, metacognition leads students to read consciously and in a critical manner. This leads students to an effective and significant reading comprehension process. Israel, Block, Bauserman, & Kinnuucan-Welsh (2005) consider these strategies as “tools to develop thinking processes and include control over reading” (as cited in Israel, 2007, p. 4). Among these strategies, Israel (2007) mentions three key moments which are the before (planning), during (monitoring) and after (evaluating) reading (p. 4). It is worth pointing out that all these strategies may be taught by a teacher, to have students following these steps by themselves when reading; that is, to have them as self-monitors. Then Carrell, Gajdusek & Wise (1998) established specific strategies that complement the three reading moments previously mentioned.

- a) establishing objectives in reading, b) evaluating reading materials,
- c) repairing miscomprehension, d) evaluating the ongoing understanding of the text, e) analyzing the text and paragraph structure to clarify the author’s intention, f) adjusting reading speed and selective cognitive strategies accordingly, and g) engaging in self-questioning to determine if the objectives have been reached. (as cited in Karbalaeei, 2011, p. 8)

A study on Integrated Metacognitive Online Reading Strategy Use by Korean EFL University Students conducted by Kim (2011) in Korea with 173 university students reflected that “high proficiency readers tended to engage in a greater use of planning, monitoring and evaluating during their online reading processes” (p. vii). Additionally, the author argued that “EFL reading strategy instruction should focus not on individual



strategies, but on metacognitive awareness-building and the use of reading strategies, raising students' abilities to employ and orchestrate multiple reading strategies [...] towards a reading purpose" (p. viii).

When using the online ReadTheory program, students are aware of their reading progress since it provides them with results and feedback of the exercises done. These results are shown in graphic charts, which make easier to observe and analyze their weaknesses and strengthens. In this way, students can monitor their reading learning process by reinforcing new vocabulary or by doing more reading exercises.

## **2.5 Critical Reading and Critical Thinking**

Currently, every person is exposed to different situations, problems, and debates at home or at work, which demands efficient and sometimes fast responses; then it is highly relevant to provide students with activities or lessons where they face similar experiences that lead them to develop critical thinking. As Taglieber (2003) states, "In everyday life, people frequently need to deal with the complicated public and political issues, make decisions, and solve problems. To do it efficiently and effectively, citizens must be able to evaluate critically what they see, hear, and read" (p. 141). Paul & Elder (2006) define critical thinking as "the art of analyzing and evaluating thinking with a view to improving it" (p. 4).

Something people is aware of is the fact that "everyone thinks; it is our nature to do so. However, much of our thinking left to itself is biased, distorted, partial, uninformed or down-right prejudiced" (Richard, P. & Linda, E., 2006, p. 4). This lack of coherence or impartiality is what generates the necessity of developing critical skills. People should not



accept as truth what they read, but they should question themselves and the text to analyze and be able to know how reliable it is, taking into account the period it was written, the author's intention, and the place it was written (Kurland, 2000). To have readers capable of discerning or distinguishing what to accept or refuse, providing reasons, initiating discussions should be the purpose of a reading learning process.

Due to the implications that critical thinking entails, the term critical language awareness, originally language awareness, appeared in the United Kingdom in the 80's.

Language awareness is a mental and internal capacity which a learner gradually develops by giving motivated and conscious attention to language in use to discover its patterns. It is also a pedagogic approach which helps learners to learn how languages work. A key feature of the language awareness approach is that learners "discover language for themselves" (Dar, Rahimi & Shams, 2010, p. 459).

Dar, Rahimi & Shams (2010) state that critical language awareness (CLA) "is both a pedagogical approach and an explicit knowledge about language, and conscious perception and sensitivity in language learning" (p. 460). As a consequence of CLA, critical discourse awareness was developed; "the purpose of an education which uses CDA is developing the learners' capacities to examine and judge the world carefully and, if necessary, to change it" (Dar, Z. et al., 2010, p. 458).

Therefore, to reach critical discourse awareness, it is necessary to look for techniques, strategies, and tools which lead students to develop critical thinking. Critical Reading or better known Critical Literacy is defined by Shor (1999) as "language use that questions the social construction of the self. When we are critically literate, we examine our



ongoing development, to reveal the subjective positions from which we make sense of the world and act in it” (p. 2). Analyzing this term deeply, Gillet’s (2017) description states the following.

Critical reading requires you to evaluate the arguments in the text. You need to distinguish fact from opinion, and look at arguments given for and against the various claims. This also means being aware of your opinions and assumptions (positive and negative) of the text you are reading so you can evaluate it honestly. It is also important to be aware of the writer's background, assumptions and purposes. All writers have a reason for writing and will emphasize details which support their reason for writing and ignore details that do not (para. 1.).

Subsequently, students who work on the ReadTheory program are exposed to different types of questions that lead them to think and analyze passages to find out right answers. These moments of analysis and thinking make students reflect on different possible answers; in this way, students adopt critical strategies, which will lead them to develop critical thinking. Nevertheless, it is worth mention, critical reading and critical thinking are skills that are developed with time, effort, and constant practice.

## **2.6 Technology in the classroom**

In this section, the importance of using adequate technology for teaching and learning will be discussed. To answer the question of why a technological change integration is necessary, it is worth stating Prensky’s (2001) thought “Our students have



changed radically. Today's students are no longer the people our educational system was designed to teach" (p. 1). This is why, the same author has named "Digital Natives" to this new students' generation and he adds: "Our students today are all "native speakers" of the digital language of computers, video games and the Internet" (p. 1). While "Digital Immigrants" is the name he has assigned to the ones who were not born in this era, but are fascinated with it and use technology in their everyday lives.

Even though adults, teachers, professionals, and parents are conscious about this technological advance that has taken place in every single field, there are some places such as schools where technology has not been appropriately exploited yet. This deficiency of use of technology may be due to many reasons such as the cost of technology, lack of knowledge and people's (in this case teachers') reluctance to change. However, it is not appropriate to have students in a classroom learning in a way that is completely different to the way they live outside the classrooms; that would be a sample that schools and teachers are not reaching or taking into account students' interests and form of learning.

Nonetheless, the change does not only depend on students' willingness, but also on institutions' and teachers' desire to change, to try, to improve, to reach students' interests and learning styles. "Educational change depends on what teachers do and think—it's as simple and complex as that" (Fullan, 1982, p. 107).

Another reason to integrate technology in the classroom according to Russell and Sorge (1999) is that it provides students "more control over their own learning" (p. 1). This means that by integrating the use of the ReadTheory program students would be able to be more conscious about their learning progress; indeed, they would have more control over it



because they would know exactly and immediately if what they did was correct or incorrect and why.

According to Costley (2014), motivation is another highly important factor that is intimately connected to the use of technology; since according to some studies, the use of technology in the classroom increases students' motivation and engagement, which results in meaningful learning.

To wrap up this section, it can be said that technology is not a matter of fashion, but a necessity. Through the appropriate use of it and adequately software, both teachers and students can reach their goals easier, faster and in a more exciting way since it motivates and engages students in the class. Therefore, it turns learning spaces and time to meaningful opportunities.

### **2.6.1 Online Reading Programs and Critical Thinking**

Brookfield (2007) argues there are three primary skills that build up Critical Thinking. "1. Discovering the assumptions that guide our decisions, actions, and choices 2. Checking the accuracy of these assumptions by exploring as many different perspectives, viewpoints and sources as possible 3. Taking informed decisions that are based on these researched assumptions" (p. 11). To reach this point, though, it is necessary to provide people with materials that make them exercise, think and reflect on different aspects. That is why, academic environments should be the first ones to provide students with opportunities, tools, and strategies to develop these skills. Thus, it is crucial to have facilitators who research, study and try new strategies or methods and work collaboratively with others to share knowledge. It permits teachers to be up-to-date with new tools and



strategies that fit students' interests and needs. In this way, the learning process turns meaningful to students allowing them to become lifelong learners.

## **2.7 Literature Review**

The main tool chosen for the development of this research work was an online program to reinforce reading skills. The lack of a large number of studies concerning online reading programs has been a hindrance and a necessity at the same time - an obstacle because it would have been interesting to compare results with other programs in similar environments and a necessity because if the impact of this tool is positive on students' reading comprehension skills. Both teachers and students will take significant advantage by using them within educational contexts to develop critical reading. In spite of this, some specific research works were found about the use of virtual environments to reinforce reading skills.

Albeckay (2014), for instance, conducted a mix methods research study entitled *Developing Reading Skills through Critical Reading Programme amongst Undergraduate EFL Students in Libya*, with a control and a research group. This study was focused on "the development and evaluation of the critical reading programme" (p. 176). The results revealed a connection between the development of critical reading strategies and the number of practices students had with the Critical Reading (CR) program; another finding was the improvement seen in reading sub-skills on students with a low reading competence level.

In addition, De La Colina, Leavell, Cuellar, Hollier, & Episcopo (2009) conducted a study to evaluate the effectiveness of an intensive ESL reading online intervention for



Hispanic ELL students at the secondary level in a public school in Central Texas. For this study, researchers counted with approximately 66 students that were asked to use the *ESLreadingsmart.com* program 45 minutes each day, three days per week for eight months. Participants were divided into two groups; one group worked with the program during eight months and the other group 4 months. It is worth pointing out, this program not only offers reading activities but listening, writing and speaking activities. However, this study was focused only on reading. After the intervention, researchers concluded, “that implementing the intensive on-line technology intervention for ELL Hispanic students in middle and secondary classrooms is feasible and valuable”.

Another researcher, Ciampa (2012) conducted 6 case studies on the impact of online electronic storybooks on the reading motivation and listening comprehension of six grade 1 students (aged seven years) from Ontario, Canada. The website she used was I Can Read! The researcher had 12 e-book reading sessions during three months. Among the findings, the participants reported enjoyment of the e-books; also, students showed interest towards the feedback they received.

Similarly, Casey (2010) conducted a study to evaluate the influence of the interactive reading program known as Read 180, on approximately 160 struggling adolescent readers in three middle schools. Students were divided into two groups; one group participated during one year and the other group 2 years. In the conclusions of the study, the researcher stated that the Read 180 program had a positive impact on students’ reading scores.

Other studies that sustained this research were conducted on the use of technology within educational environments. These studies were focused on different aspects such as



motivation, self-confidence, and students' attitudes towards the use of technology which held students' opinions.

One of these studies was conducted by Genc Ilter (2009) in the Akdeniz University Preparatory Classes with 350 students. The purpose of this study was "to be of help for those who lack motivation and introduce the effect of technology for a fruitful foreign language teaching process" (p. 139). Among the results, it was observed that "70.4 % of the male students and 78.0 % of the female students think that technology in their language classrooms increases their motivation" (p. 140).

Additionally, a study conducted in Costa Rica in 2006 called Cyberl@b: A program for learning English in Costa Rican Public High Schools with approximately 450 students from urban and rural areas demonstrated the high degree of affinity from students with the program created to reinforce the four skills. Among the findings, Quesada (2006) stated the following.

The results of this qualitative study also tell us that students do not want traditional methodologies anymore. They, as individuals, are seeking for the latest trends, in technology, as a means that could motivate them to want to learn English. With this survey, the researchers have tried to hear students' voices and provide them with an answer that suits their needs: promote communication through Web-based CALL and the integration of the four skills (p. 23).

As regards with reading programs, a study published about the use of ESL READINGSMART program in Furr High School indicates "that of the 23 ESL



ReadingSmart students, 30% or (n=7) increased seven Lexile levels, and 22% or (n=5) increased five Lexile levels” (Gavito, Rojas, & Simmons, 2009, p. 2). To understand better, “The Lexile Framework for Reading is an approach to reading and text measurement. Therefore, two Lexile measures exist the Lexile text measure and the Lexile reader measure” (Anonymous, 2014). The higher the measure, the higher the difficulty in reading.

Finally, another highly significant study was conducted by Romeo, Hock & Plante-Kropp (2016) “to investigate ReadTheory.org’s impact on student grades, standardized test scores, and overall reading confidence and ability” (p. 1), with 1100 professional educators. The results revealed this program had had a positive impact on these three measures. According to this research study, more than the 80% of educators reported a significant change in students’ grades; likewise, a high number of teachers (70%) concluded that students’ confidence in reading comprehension tests improved (pp. 3-4).

Likewise, Kalanzadeh, Soleimani & Bakhtiarvand (2014) conducted a study on the relationship between the use of technology in Iranian EFL university classes and the participants’ motivation to learn English. The results of the research demonstrate there is the influence of technology on Iranian EFL university students, and it also shows foreign language learning is influenced by the use of different technological devices.

Kitchaharn (2015) conducted another study to explore the impact of the use of computers on undergraduate students in a private university (p. 1). Results of this study exposed there is no doubt on the convenience of computers usage in language learning environments.



A mix method research study conducted with 340 high school students in Iran to investigate EFL learners' perception of technology use. "Students showed their strong and moderate agreement (motivation, 64.4%; self-confidence, 67.6%) with gaining motivation and self-confidence using computer technology" (Izadpanah, S. & Alavi, M., 2016, p. 150).

After having analyzed the previous study by Romeo, Hock & Plante-Kropp, it was considered that it is worth conducting this research work to analyze the impact Readtheory.org program has on UPS students' reading competence. As could be seen, the use of this program is sustained by different theories such as comprehensible input hypothesis, Bloom's taxonomy, metacognition theory, critical reading, critical thinking and the use of technology to enhance students' engagement to reading by motivating them through its use.

That is why, the purpose of this study is to focus on the use of this online reading program, ReadTheory, which was founded by Tanner Hock, University of North Carolina at Chapel Hill. Hock realized how beneficial it could be to enhance students' critical thinking ability not only for classroom environments but also for real-life situations (ReadTheory, 2014).

Our program offers 1300 reading comprehension exercises [...] designed to teach students to think critically, draw inferences, understand scope and global concepts, find or recall details, and infer the meaning of useful vocabulary words. Using cutting edge software and carefully crafted and tested content, we provide students with a dynamic reading experience that adapts to their individual ability levels and presents them with a seemingly endless



array of skill building exercises. What is more, as students continue to use the site and see their scores gradually improve, our program adapts to match their progress. (ReadTheory, 2014).

The ReadTheory website is a free online program available for developing reading skills. With this reading program, students can observe in charts how their progress is, receive feedback, and observe what kind of questions they do better or fail and why. That is, it makes possible to have students taking an active role rather than a passive one.

Then the use of the Readtheory program may be beneficial for students since it provides students with different types of questions -from literal and inferential to author's intention of writing questions- which will guide students' self-monitoring processes. Another advantage students obtain from this program is individual reading competence development; they begin by completing a placement test, and they advance at their own pace, receiving feedback and being able to analyze their reading performance.

To sum up, this website offers comprehensible input since it is based on a diagnostic test previously taken by the participants, which will provide them with readings according to their reading level competence. Once students have answered a certain percentage of a reading correctly, the website will randomly provide them with another reading from the next level to challenge them. Likewise, students get feedback for the incorrect answers; this will allow them to think and process the new information they obtain. As it was mentioned before, this study is based on Bloom's taxonomy since students begin using the program by completing a placement test, which will allow both the student and teacher to know the starting point of each student. Consequently, students have



the opportunity to move from one level to a higher one which demands more criteria from them according to their performance on the reading comprehension assessments.

As a conclusion of this chapter, critical thinking and reading and the use of technology have been considered as the basis of this research study conducted on UPS students who have expressed how much they need and how important is for them to increase their reading skills and to improve their reading competence.



## CHAPTER 3

### METHODOLOGY

In this quasi-experimental study, two different treatments are compared to know the impact of the use the ReadTheory program on UPS students' reading skills. Nonetheless, participants were selected according to their class schedules; they are not assigned randomly. Therefore, this is a quasi-experimental study (Fraenkel & Wallen, 2009, p. 271). Quantitative data were collected, tabulated and analyzed. In this study, a pretest and posttest design were used to analyze the impact ReadTheory has on students' reading skills by providing them with Comprehensible Input. As Krashen (1985) stated, it would positively influence learners' progress by receiving input that was one step higher from his/her actual stage (p. 2). Concurrent with this quantitative data, a survey after the intervention was applied to explore the students' opinions on the use of the program to improve reading skills. Thus, quantitative data were collected from the first and last reading practice done with the program by the experimental group which allowed the researcher to know the grade, Lexile -an approach to reading and text measurement (Anonymous, 2014)- and measure the results from the different types of questions. Also, results from the pre and posttest applied to the control group were compared between them and compared with the ones from the experimental group. Quantitative data were collected through a survey focused on students' opinions about the use of the program; however, this information was also analyzed in a quantitative form.

#### 3.1 Research Question

- To what extent can second-level students' reading skills be enhanced by the use of the ReadTheory program?



### **3.2 Context**

This research study was conducted at the Language Institute of the Politécnica Salesiana University located in Cuenca, Ecuador. This institute offers six levels of English, which are only available for the students of the university. Students of all majors are supposed to demonstrate they have reach a B1 level from the Common European Framework of Reference for Languages (CEFR) after they pass these six levels of English to be able to graduate from their majors. Students have 4 hours of class per week; they choose between two schedules: 2 hours, two days per week or a four-hour class each Saturday. There is no difference between these two groups concerning the contents of the course. Students can choose either schedule depending on their availability of time. The primary focus of the Institute is to facilitate students' learning and development of the four skills (reading, listening, writing, and speaking). Even though teachers and students use a textbook, *Interchange Fourth Edition*, extra material is part of daily classes to perform additional activities. The book is based on the Communicative Approach; then it presents activities for each skill. However, about reading, there is only one exercise per unit. Therefore, teachers are permanently looking for new and useful material and tools (authentic and non-authentic) to provide students with different reading activities. Since this research study intends to demonstrate the impact of an online reading program, authorities from the Institute allowed its conduction.

### **3.3 Participants**

A class with fifty EFL second-level (out of 6 levels) students from the Language Department of Politécnica Salesiana University was selected for this study; the reason for their participation was because they were beginner students whose class schedule allowed a



32-hour intervention and was the class assigned by the director of the Institution to the teacher researcher. Therefore, the class was divided into two groups - an experimental and a control group. In the experimental group, there were 15 male and 10 female students, while in the control group there were 13 male and 12 female participants. The participants' age ranged between 20 and 28 years old, and their majors differed since in the Institute, there are students from all the schools of the university, and they are registered in the English classes according to their English proficiency level rather than their major. However, as there are more technical majors, it can be said that most of them belonged to engineering schools.

### **3.4 Instruments and Materials**

The main instrument used for this study was the Readtheory.org online program. It is a free interactive website designed by Tanner Hock; it is focused on the development of critical reading and thinking. It offers 12 levels and provides users with a diagnostic test, feedback, and graphic charts to observe progress. Teachers can register their students and keep track of their students' performance. The second instrument used was a pretest. This pretest was the placement test delivered by the website, which students from the experimental group took when they logged in to the website for the first time. This test consisted of ten short readings with one multiple choice question each. The results from this test were provided by the same program through numbers and charts.

The pretest done by the experimental group and the control group were different since the pretest completed by the experimental group was the placement test provided by the program, while the pretest completed by the control group was a third level test taken from the same program. Nevertheless, the aim was to have both groups in level 3 by the



end of the intervention. Most students from the experimental group were placed in level 1 and 2 at the beginning of the intervention; therefore, the pretest for the control group was a third level test taken from the same program.

The readings done each week by the experimental group were randomly provided by the website to each participant according to their reading competence level; likewise, results of each reading were reflected with numbers and charts, which facilitated the researcher to observe the participants' progress regularly. Meanwhile, the control group completed a pretest (See Appendix 4) and worked on reading activities each week, which were taken from the textbook called *Interchange 1B 4<sup>th</sup> Edition* (See Appendix 5 and 6) and different websites. It is worth mentioning that all the students from the control group were given the same readings; that is, there were not different readings for each student in the group.

The third instrument was the posttest, which was applied to both the experimental and control group. It was paper-based and it was taken from the third-level of the *Readtheory.org* program (See appendix 5). This posttest consisted of 6 multiple choice questions; there was one vocabulary question, three detail questions, one inference question and a global question. Finally, a survey (See appendix 6) was designed to be applied to the experimental group to obtain the students' opinions about the use of the website.

As a final point, it is worth pointing out this program is mainly used in primary and secondary schools in other countries to improve students' reading ability despite the fact that their students are native English speakers. Moreover, the purpose of this website of developing critical reading and thinking made the teacher/researcher reflect on the possibility of using this program, which has authentic material (since it is not elaborated for



English learning) as a tool for English classes. Unlike other English learning or reading websites, this one is online and free, so everyone can have access to it without paying any fee. Due to these reasons, the researcher reflected on conducting a study on the use of this program.

About the material, it was essential to include the material of the ReadTheory website as pretest and posttest instruments for some reasons. First, as it has been mentioned, the material of this website is based on objectives and parameters that are specific to this website. The development of critical reading and thinking, for instance. To accomplish this objective, questions are elaborated within the CCSS (Common Core States Standards) framework. Therefore, it was not appropriate to use reading exercises from other sources because it would not have provided reliable results.

Finally, the last instrument was a survey elaborated by the teacher researcher and provided to the students of the experimental group to know their opinions and comments about their experience with the program. At the beginning the idea was to interview students but was not possible because of time. However, a few students send their comments via e-mail, though (See chapter 5). In the following chapter, the analysis and results would be described.

### **3.5 Research Procedure**

Before starting with this research study, permission for the application of this investigation was requested to the Director of the Institute. The purpose of the study, the intervention time, procedure and the participants' selection were explained to the authority of the Institute. This request was asked both orally and printed to keep evidence of it (See



appendix 2). This permission was requested in January 2016 when the thesis design was being elaborated. Since this permission was positively responded, second level students of the period September 2016 – April 2017 were informed about this research study and asked to participate. Since the students' age ranged between 20 and 28 years old, parents' approval was not necessary, but an informed consent was signed by participants (See appendix 2).

The reading methodology conducted with the Control Group is known as PPP method or 3P's, which mean present, practice, and produce. During the presentation, students' attention was directed to a question, pictures, or a short task as an introduction, which led to vocabulary pre-teaching. That is, before students were given a reading assignment, some new words were taught emphasizing on meaning, form, and pronunciation. A gist task and a detail one based on the text given were solved during the practice. To close the session, a writing or speaking task based on the topic of the reading was given to students.

The control group worked on reading once a week. Each reading session was done in approximately 50 minutes in class. Participants worked individually during the reading process and in pairs or groups during the productive part to close the session. The gist and detail tasks were analyzed to evaluate students' comprehension. Likewise, production was also a significant part of this process, in evaluation specifically, since the teacher researcher could monitor and observe students' comments on the readings done and therefore analyze their comprehension.

The study conducted with the experimental group was divided into three stages: pre-stage, intervention, and post-stage. In the pre-stage, the researcher created a class and



registered 25 participants at the Readtheory.org website; which is a free online reading website that offers 12 grades being level 1 the lowest and 12 the highest level. First, students were registered by the teacher; then the program provided a username and a password for each student. With the username and password, students were able to log in to the program.

Once they had logged in, they were asked to complete a diagnostic test (which was the pretest of this study) from the same program to be placed at one of the 12 levels. The results from this pretest were available for both the teacher and students; the students could observe only their results which gave them a starting point for the next part, the intervention. In the intervention, they were exposed to multiple-choice reading exercises which are randomly selected by the website according to the level. During the process, the website provides the grade level progression, Lexile level progression, and Common Core Questions progression.

The intervention process began on October 27, 2016, and finished on January 27, 2017; that was three months in which students devoted approximately 4 hours per week to the development of 3 or 4 readings. Therefore, students of the experimental group were asked to complete at least 40 readings during the whole period of the study either at home or in the university labs. The teacher/researcher revised the participants' performance through the website once a week, since the program allowed her to observe and analyze through graphic charts each student's progress. Likewise, students were able to review their progress and receive feedback from the readings exercises.

During this process, students of the experimental group were evaluated on three different aspects. First, grade level progression, which showed whether students ascended



or descended one or more levels depending on the results obtained from the previous reading. Second, Lexile measure, which is the reading ability and text complexity measurement. Stenner (2001) compared this measure with shoe size, being the size of the shoe as well as the foot size the Lexile. That is, both the person's foot and shoe are always paired. In the same way, the complexity level of a text and the reading competence of a person have to pair to develop this competence step by step.

Third, ELA (English Language Arts) Common Core Standards (CCSS). Regarding this last aspect, the term Common Core Standards "define the knowledge and skills students should have within their K-12 education careers so that they will graduate high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs" (Thome, 2014, p. 1). As is can be seen, these CCSS are focused to enhance critical reading in English speaking children and teenagers; nevertheless, it is a useful tool to facilitate UPS students to develop critical reading, as well. The topics of the passages are not fiction; they are related to science and real-life situations.

Additionally, within this third aspect, students were evaluated on three type of questions which demanded close reading. Close Reading is "thoughtful, critical analysis of a text that focuses on significant details or patterns to develop a deep, precise understanding of the text's form, craft, meanings, etc." (Burke, 2012, p. 2). The types of questions presented were focused on key ideas and details, craft and structure and integration of knowledge.

Regarding key ideas and details, it demanded participants to "read closely to determine what the text says explicitly and to make logical inferences from it." (Thome, 2014, p. 1). For example,



Whereas craft and structure questions required students to:

- Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
- Assess how point of view or purpose shapes the content and style of a text (p. 2).

Finally, the integration of knowledge questions demanded participants to:

- Integrate and evaluate content presented [...] in words.
- Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
- Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take (Thome, 2014, p. 2).

One reading (see appendix 1) has been taken from the printable section of ReadTheory program to analyze the types of questions and see whether or not it accomplishes the characteristics previously enlisted. In this exercise, there are six multiple choice questions. Three of them belong to the integration of knowledge category (questions



1, 4, and 6); two belong to the key ideas and details (questions 2 and 5), and one question belong to craft and structure (question 3).

In the post-stage of this experimental group, each student's last online reading practice was compared to their first reading practice; this was to analyze if there was progress or not. In addition, they were given a posttest that consisted of a reading-comprehension exercise with multiple choice questions taken from the website. The posttest belonged to the third level of the program; this level was chosen because in the pretest the majority of students showed they were at level one or two; therefore, as the purpose was to know if their reading ability increased, a third-level test was applied. This printed posttest was also used with the control group.

Then a ten question-survey was carried out to evaluate the experimental group participants' opinions about use of the program. Finally, the students' tests and survey results were analyzed, compared and corroborated to establish the impact of ReadTheory program on students' reading skills.

As it was mentioned before, the minimum of texts the participants were supposed to read during the research period was 40; nevertheless, there were a few students with more than seventy. Even though they worked at home or different places, the teacher was able to observe the performance each student had every week; therefore, there was not any problem on having them working in the lab, at home or at the park.

On the other hand, the control group developed a reading – comprehension exercise in class during their first class as their pretest; it was a multiple-choice reading comprehension exercise taken from the level 3 of the ReadTheory.org website. For the



post-test, the same reading comprehension reading exercise was applied. This printed post-test was the one that was applied to the experimental group as well.

The next step was the tabulation and data analysis. To carry out this process, data were collected in the following forms:

Data of the experimental group were collected from the first and last online reading practice; that is, grade level, comprehension level, Lexile level and grades from the different type of questions were obtained from the first and last practice done with the program. Additionally, the grades from the paper-based pre and posttest applied to the control group were compared between them to know if there was progression on students' reading competence without the use of the program. Likewise, both the posttest of the experimental group and the posttest of the control group were compared to evaluate the impact of each method.

With regard to students' opinions, a survey with ten questions created by the teacher based on the observation done was applied to the experimental group since they were the ones who worked on the website. Students were supposed to mark each item from strongly agree to disagree according to their own experiences. Then, the number of marks of each item was counted to have a general idea of students' opinions.



## CHAPTER 4

### DATA ANALYSIS AND RESULTS

#### 4.1 Statistical Analysis

For the study, grade level, comprehension level, Lexile level and ELA Common Core Standard questions' results are shown by measures of central tendency and dispersion; since there was not a normal behavior in the data collected ( $K-S < 0.05$ ), non-parametric tests were applied. The Wilcoxon test was applied for related samples to compare the students' results (grade level, comprehension level, and Lexile level) between the first and the last practice they did with the program, and to compare the results of the pre and posttest in the control group; the test Rho of Spearman was used to relate variables; the U-Mann Whitney test for the comparison between the two groups and the exact test of Fisher to determine the difference in hits per question in the posttest between the two study groups.

As regards to scores, the analysis was presented through dispersion graphics and box-and-whisker plots. Decisions were taken with a consideration of the 5%.

The survey that was completed by the students of the experimental group and created by the teacher researcher consisted of ten statements which are shown with the average values assigned.

#### 4.2 Results

##### 4.2.1 Experimental Group



Students solved between 38 and 99 reading practices during eight continuous weeks, with a mean of 59.12 reading practices (SD=19.70 reading practices). The readings' difficulty level was expressed in the following ways. In the first practice, levels varied between 1 and 7 with a mean of 2.16 (SD=1.86), while at the end of the intervention, levels ranged between 1 and 6 with a mean of 2.96 (SD=1.65). There were 14 positive changes, four negative ones and seven ties and a significant difference in the students grade progress at the end of the intervention ( $p < 0.05$ ).  $p = 0.027$

Mean reading difficulty levels were registered by students between 1 and 5.3 with an overall mean of ( $\bar{x} = 2.62$ ;  $SD = 1.18$ ). After the intervention, 13 students completed their last comprehensive reading practice at a level above the general mean registered; however, no one reached the "Advanced" level. (See Figure 1).

Note: Overall mean = average of difficulty levels in all readings by students

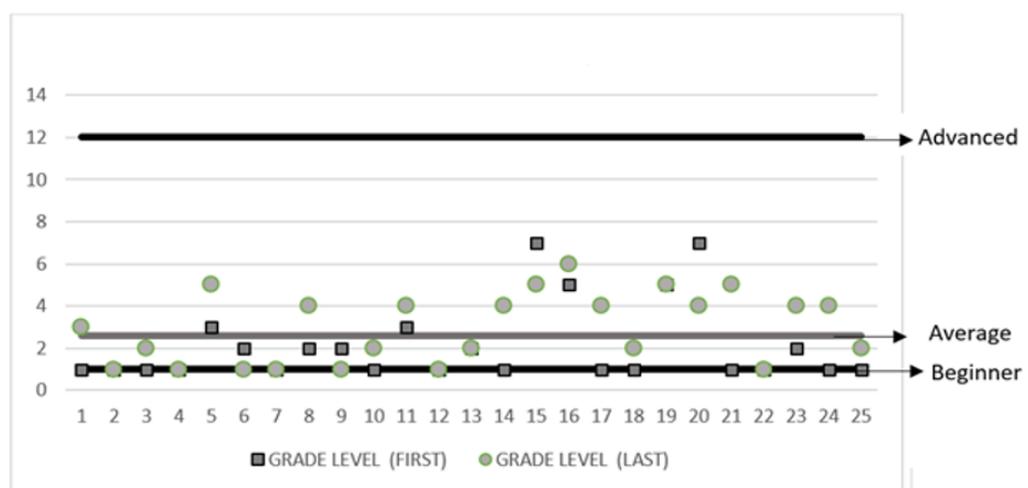
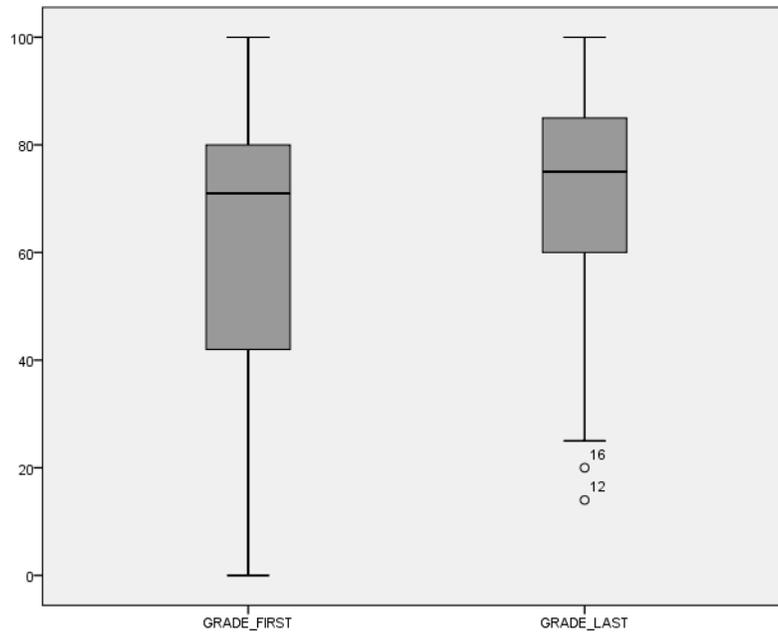


Figure 1. Grade Level Dispersion



The comprehension index registered in the first reading was between 0% and 100% ( $\bar{x}$ =58.8%, SD = 29.65%), while in the last one, it ranged between 14 and 100% with an average of 70.84% (SD = 24.53). The medians corresponded to 71% and 75%, respectively. There were no significant differences  $p > 0.05$ .  $P = 0.166$  (See Figure 2).



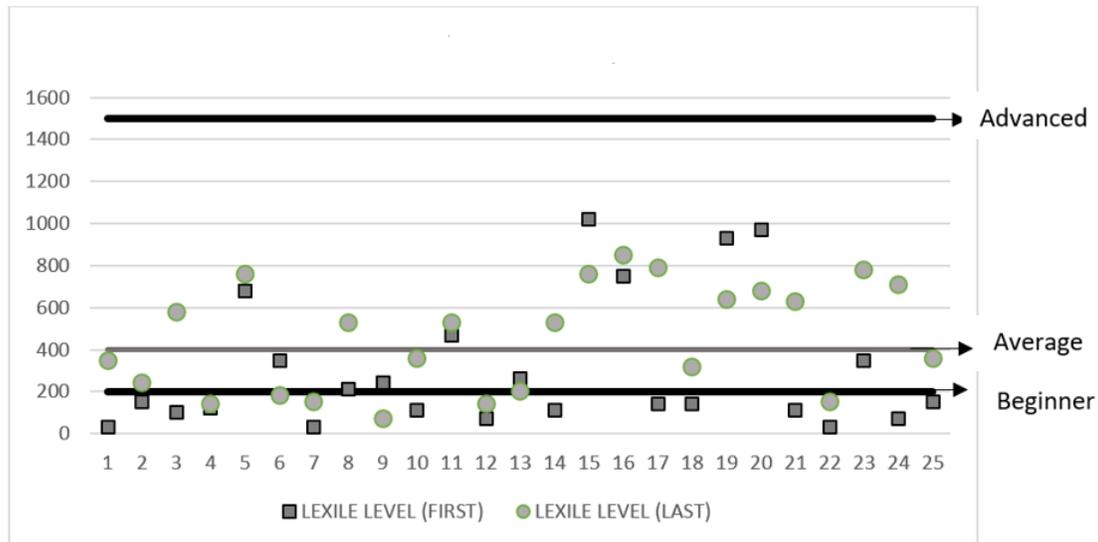
**Figure 2. First and last reading practice**

The Lexile score reached by the participants had a variation in the first practice between 30L and 1020L with a mean of 303.6 (SD = 313.54), corresponding to 14 students who were below the "Beginner" level. The results of the last reading were between 70L and 850L with an average of 457.2 (SD = 253.29); consequently, changes were reflected: 19 cases of final Lexile increase (positive change) and six negative changes. It was possible to visualize a statistically significant difference ( $p < 0.05$ )  $p = 0.014$

At the end of the last practice, there were seven students with a Lexile code below the "beginner" level. None of the students reached the "Advanced" level with a Lexile

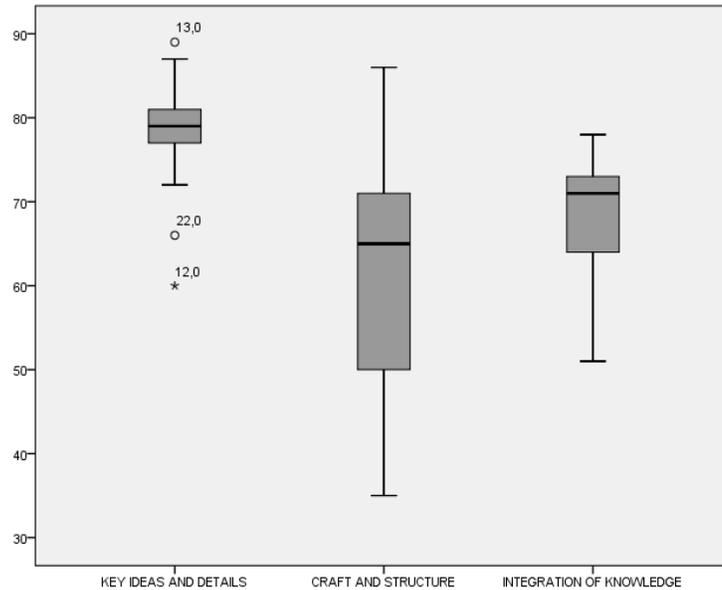


measure close to 1500. The average levels during the practice on the Online ReadTheory.org program showed Lexile scores between 140 and 810, with a mean of 400.4 (SD = 191.1) (See Figure 3).



**Figure 3. Lexile Level Dispersion**

The results on skills developed showed that the identification of main ideas and details of the reading was the one that had the best final performance reported with oscillating compliance between 60% and 89% with a mean of 78.6% (SD = 6.01) and a median of 79%, and a negative asymmetry -1.34. Regarding structure, there was a development between 35% and 86%, with a mean of 61.72% (SD = 13.31) and a median of 65%. On the other hand, the integration of knowledge questions' type had variations between 51% and 78% with an average of 68.32%, 50% (12) of the students obtained in this ability a development over 71%. The dispersion of the data was high in craft and structure questions' type (See Figure 4).



**Figure 4. Common Core Standard Questions**

It was found that the final Lexile level of the students was directly related in a moderate-strong form with the integration of knowledge and craft and structure ( $P < 0.01$ ). In addition, the ability to recognize main ideas and details was moderately directly related to the integration of knowledge and craft and structure. ( $P < 0.05$ ). Finally, it was found that knowledge integration was positively related to a moderate level with the craft and structure ( $p < 0.01$ ). The number of practices performed was not related to the skills developed, the level and the Lexile (See Table 1).



**Table 1. Correlations among the skills developed, number of readings taken, Lexile and Grade level.**

		LEXILE LEVEL (LAST)	GRADE (LAST)	KEY IDEAS AND DETAILS	CRAFT AND STRUCTURE	INTEGRATION OF KNOWLEDGE
READINGS DONE	Rs	-.383	.214	.040	-.191	-.24
	p	.058	.303	.851	.361	.237
LEXILE LEVEL (LAST)	Rs		.120	.390	.607**	.571**
	p		.567	.054	.001	.003
GRADE (LAST)	Rs			.135	.308	.101
	p			.519	.134	.633
KEY IDEAS AND DETAILS	Rs				.484*	.422*
	p				.014	.036
CRAFT AND STRUCTURE	Rs					.513**
	p					.009

\*\* . The correlation is significant at the 0.01 level.

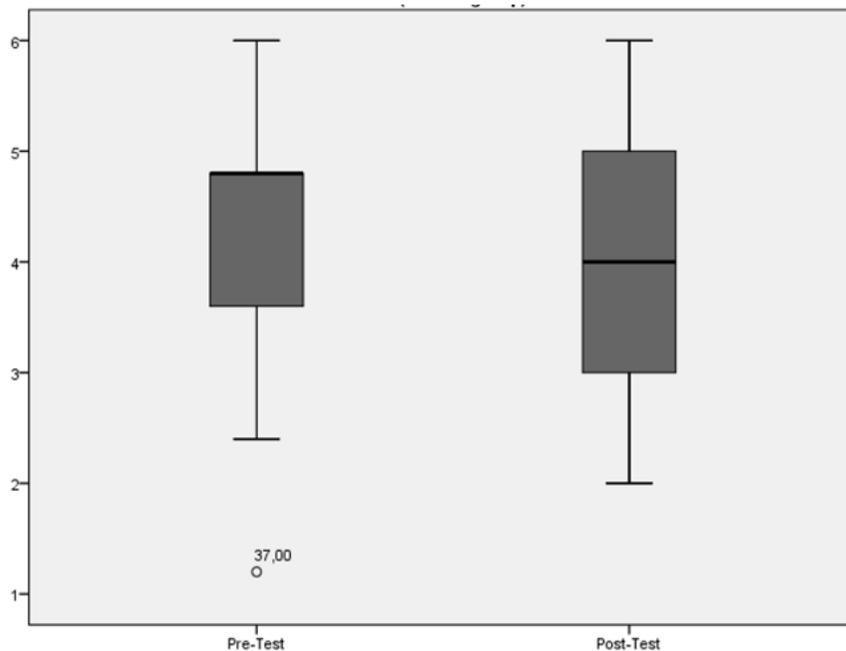
\* . The correlation is significant at the 0.05 level.

#### 4.2.2 Control group

The analysis of the control group revealed that students in the pre-test (paper-based exercise performed in class) registered values between 1.20 and 6.00 with an average of



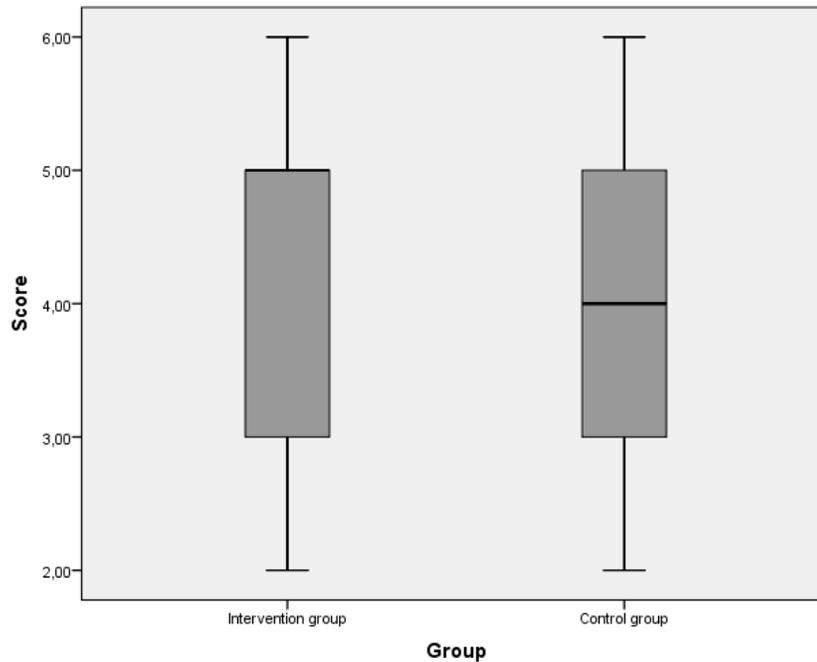
4.26 points. While in the posttest (paper-based exercise performed in class), values were registered between 2 and 6 points with a mean and median of 4 points. There were 14 negative changes and 11 positive changes. Nevertheless, there was no significant difference in the non-parametric test for related Wilcoxon samples. ( $P > 0.05$ )  $p = 0.263$  (See Figure 5).



**Figure 5. Score – Control Group**

#### **4.2.3 Posttest: Intervention Group vs. Control Group**

It was found that in both the experimental and the control group students were successful in at least two of the six questions proposed. The mean obtained in the Experimental Group was 4.32 (SD = 1.37), while in the Control Group, it was 4 (SD = 1.22). The non-parametric U-Mann Whitney test did not show a significant difference between groups in the total score obtained by the students ( $P > 0.05$ ) (See Figure 6).



**Figure 6. Score – Intervention and Control Group**

The analysis by question of the posttest revealed that in questions 4 and 5, in both groups, at least 20 students answered correctly. While question 1 was the one that presented the least hits. Question number 3 was the one that presented the most success in the intervention group (22 students), while in the control group it was question 5 (23 students). Fisher's exact test showed a significant difference between groups in question 3, which was a detail question stated as follows “What is the main purpose of paragraph 2?” Being the participants of the experimental group who presented the highest number of right answers ( $P < 0.05$ ) (See table 2).



Table 2. Fisher's Test per question

Item	Intervention Group	Control Group	F	p
Question 1	8	7	0.10	1.000
Question 2	18	19	0.10	1.000
Question 3	22	14	6.35	0.025*
Question 4	21	22	0.17	1.000
Question 5	20	23	1.50	0.417
Question 6	19	15	1.47	0.364

Note: \*Significant difference.

#### 4.4.4 Students' Perception

The affirmations that emerged in the survey applied to the students referred to: increased vocabulary. ( $\bar{X} = 3.88$ ,  $DE = 0.33$ ) and the perception of improvement in reading ability ( $\bar{X} = 3.76$ ;  $SD = 0.44$ ). Even though, the students' responses reflected their agreement with the statements, what they considered least as a contribution from the program was the motivation to read texts in English ( $\bar{X} = 3.24$ ,  $SD = 0.44$ ) (See table 3).

**Table 3. Students' perceptions about the Readtheory.org website**

Question	Mean	SD
1. This program has motivated me to read texts in English.	3.24	0.44
2. Once the researching period has finished, I will continue using the program by myself.	3.32	0.56
3. I have found out new reading comprehension strategies.	3.60	0.50
4. I translate less words from English to Spanish.	3.44	0.58
5. I believe this tool should be used always in English classes.	3.76	0.44
6. It takes me less time to comprehend a reading.	3.36	0.57
7. I have learned new words with the use of this program.	3.88	0.33
8. Now, I can infer the meaning of a word according to the context and understand the author's purpose according to the words he/she uses.	3.36	0.49
9. I consider this program has helped me to improve my reading competence.	3.76	0.44
10. I consider the number of readings per week was appropriate.	3.36	0.64



## CHAPTER 5

### DISCUSSION, CONCLUSIONS AND FURTHER RESEARCH

#### 5.1 Discussion

To interpret the results of the impact this ReadTheory.org website has had on students' reading comprehension competence, it is worth mentioning the different aspects that are considered to evaluate students' performance by the program; these aspects are Grade Level Progression, Lexile Level Progression, and Performance on Common Core Question Types. This last one includes three types of questions which are Craft and Structure, Integration of Knowledge, and Key Ideas and Details. Although the participants belonged to a control and experimental groups, this process was carried out with the experimental group only; that is, 25 students.

First, according to Grade Level Progression, on average, each student fulfilled 59.12 reading practices (they were asked to complete at least 40 reading exercises during the whole intervention process), which showed high dispersion. However, at the end of the intervention 14 cases of change were revealed, which could be seen in the charts provided by the website as the following one. The bars show the average level reached by each student and the diamond the starting point (pretest) of each student. The line of dots shows the whole group average level reached (See figure 7).

Source: ReadTheory.org



[learn more](#)

### Grade Level Performance

Average grade levels of quizzes taken by students in this class  
Each of our quizzes has an associated grade level

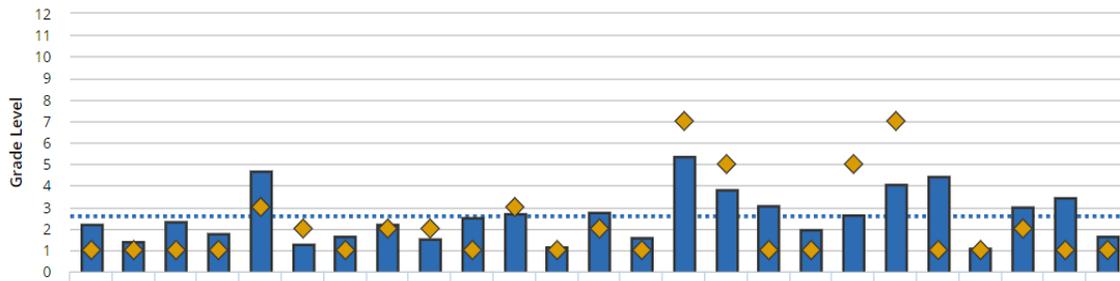


Figure 7. Grade Level Performance

The grade level average was 2.62; that is, the comprehension index between the first and the last reading did not show significant changes. Nevertheless, if the chart is deeply analyzed, it can be observed that the majority of the students who improved were the ones who started at the lowest levels.

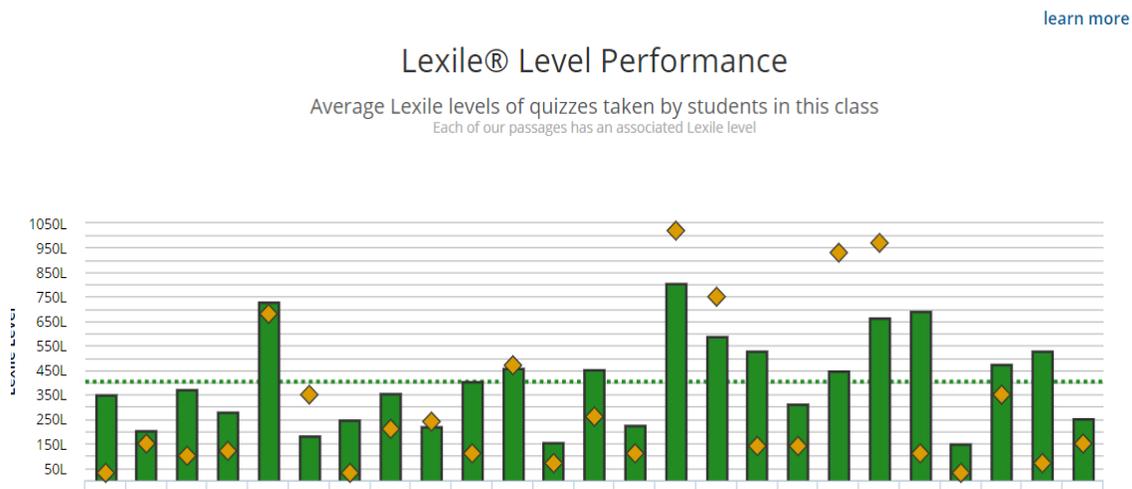
Here, a similarity with Albeckay’s (2014) study can be found since in one of the findings the author made a distinction between improvement and increase by arguing high-level students improved their abilities, but they stayed at the same level; while, low-level participants move one level higher. What can be analyzed here is that low-level participants need less time to demonstrate progress; whereas, participants with a higher level need more practice to demonstrate significant progress.

As regards with Lexile Level Progression, significant changes were observed. Taking into account that during the first practice the Lexile level ranged between 30L and 1020L with a mean of 303.6L, it can be said most participants (19) demonstrated a positive change since in the last reading this measure ranged between 70L and 850L with a mean of



457.2L. The Lexile level average was 400L, having 14 students over 400L level. Nonetheless, no one reached the Lexile advanced. In the following chart, bars demonstrate the Lexile level reached by each student; diamonds show the Lexile level of each student in the pretest. Finally, the line of dots indicate Lexile average level of the whole group of participants (See figure 8). Changes may have occurred due to the amount of time devoted by the participants.

Source: ReadTheory.org program



**Figure 8. Lexile Level Performance**

Performance on Common Core Question Types was another essential aspect evaluated by the program which revealed the following data. First, it is essential to remind the three types of questions participants was exposed to during the intervention process. These were Craft and Structure, Integration of Knowledge, and Key Ideas and Details.

The type of questions with the highest level of success is the one about Key Ideas and Details with a mean of 78.6%. It is worth pointing out this type of questions demanded readers to “read closely to determine what the text says explicitly and to make logical inferences from it” (Thome, 2014, p. 1). As it is revealed, students did not face much



difficulty with questions about information that is explicitly expressed in a text. Consequently, there is the Integration of knowledge with a mean of 68.22%. Both types of questions had low dispersion levels while the Craft and Structure Questions revealed a high dispersion level. That is, these last types of questions were the ones with the lowest scores. It is important to consider which subskills these last types of questions demanded from students to understand these results.

- Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
- Assess how point of view or purpose shapes the content and style of a text. (Thome, 2014, p. 2)

It can be then stated that the lack of vocabulary as well as reading practice from students might be the reason for the results obtained; this is demonstrated because the type of question with the lowest scores is the one that needs readers to interpret texts, to go beyond what is explicitly written to be able to make meaning.

Furthermore, it was found that the Lexile level was highly and directly related with the Integration of Knowledge (0.607) and Craft and Structure (0.5071) questions. Likewise, the identification of Key Ideas and Details was directly related to the other two types of questions –Integration of knowledge (0.422) and Craft and Structure (0.484). Additionally, it was found that the Integration of Knowledge was positively related to Craft and Structure



(0.513). That is, all these types of questions demanded reading subskills from students that were related among each other; nevertheless, there were ones such as inferring and analyzing words in context, for instance, which lead students towards a critical type of reading.

Another significant finding from this study is that the quantity of readings done was not related to the results obtained from the other variables. Perhaps what influenced in this study was the fact that although students completed a high number of readings, they did not dedicate much time to develop the exercises accurately.

Even though the results collected from the posttest of the Control Group were lower than the ones from the Experimental Group, there were no significant differences between both groups. However, the fact of using the program does not mean that the work done in class has not been effective; on the contrary, it is demonstrated that the work done in class without the program was effective as the program. Due to the results obtained, the use of the program can be adopted as a complementary tool to develop reading comprehension.

If only results from the pre and posttest from the experimental group were taken into account, there is a positive progression of participants in the experimental group. With numbers, it is not easy to observe since as participants move from a certain level to a higher one, then the scores from the higher level were not as good as the scores in the previous level. However, there was an increase in student's Lexile level. Another variable that could be analyzed is the intervention process.

With the Control Group all reading exercises were applied within the classroom; while, the intervention group did some reading exercises at home and some others in the



lab; there is the possibility that if the intervention group had done all their exercises in the lab, probably participants' commitment would have been higher and therefore their results.

In both groups, students responded correctly at least two questions out of 6 of the posttest (See Appendix 5). The questions were divided in the following way. 1. Vocabulary; 2. Detail; 3. Detail; 4. Detail; 5. Inference; and 6. Global. Nonetheless, in the analysis conducted per question it was found that the first question was the one with the lowest answers from both groups; this question was stated as follows 'As used in paragraph 1, we can understand that something **special** is NOT'. The word 'not' was written in capital letters, but probably participants did not realize it. Differences were not evidenced in question 2. Questions 4 and 5 were the ones with 20 or more correct answers from both groups. These questions are different since number 4 is a detail question; in this one, data was explicitly written in the text. However, question 5 was an inferential question, which demanded analysis of text, therefore it showed students were able to infer meaning. Question 3 which asked about the author's intention was one with significant differences between both groups. The experimental group had more right answers than the control group.

Another essential point of this research study was the students' opinions about the use of the program. According to the survey applied, it could be observed that students had a positive attitude towards it. All ten statements of the survey were responded positively by almost all participants (25).

Five statements out of ten obtained more than 50% marks in the option entirely agree. First, the one with the highest mean number was the one that stated students felt they have learned new words with the use of the website since 22 students marked agree and the



other three marked agree. It is an important and interesting point of view from students since what usually is an obstacle to overcome is the lack of vocabulary. It is important to mention some readings were done at home, and some other practices were done in the lab. Students were not allowed to have dictionaries while working on it, especially in the lab where the teacher/research could monitor this, but they were asked to make notes of new words.

Another finding from the students' opinions was that students agreed with the point that this tool should be used in English classes. Nineteen students marked strongly agree, and six students marked agree. Therefore, as compared with Ilter's (2009) or Quesada's (2006) studies mentioned in the previous chapters, participants from the Politécnica Salesiana University were also engaged with the program because it was attracting and exciting for them to work with the program. Finally, another statement with the highest mean average was the one that stated students considered this website has helped them to improve their reading competence as stated by a few students who sent their comments via email to the researcher of this study.

Participant 1: "El programa de ReadTheory fue muy importante aprendí a desarrollar mis destrezas y habilidades y recomendaría que se siga y seguir estas clases para el mejoramiento y rendimiento académico".

Translation: "The program "ReadTheory" was very important; I learned to develop my skills so I would recommend continuing using this program to improve and get a better academic performance".



Participant 2: “Es bueno porque dependiendo a la encuesta llenada, nos pone un grado de dificultad y ésta cada vez sube según como avance”.

Translation: This program is useful because depending on the pretest, it places us on a grade and according to our performance, it moves to another grade.

Participant 3: “Es buena porque de alguna forma nos ayuda a tener constancia en la lectura en Inglés y con ello podríamos enriquecer nuestro vocabulario”.

Translation: It is good because it helps us to be constant with English reading activities and with that we could enrich our vocabulary.

Participant 4: “Me pareció buena porque es interactiva y ayuda a mejorar la destreza del estudio en todas las personas”.

Translation: I consider it a useful tool because it is interactive and helps to improve people’s studying skills.

Participant 5: “Me gustó porque se me hizo algo simple y poco a poco aumentaba la dificultad”.

Translation: I liked it because at the beginning it was easy to use and little by little it increased the difficulty level.

Participant 6: “Nos ayuda a mejorar el vocabulario y familiarizarnos con las palabras”.

Translation: It helps us to improve our vocabulary and to familiarize ourselves with words.

Statements with 50% or fewer marks were: statement 1 “The website has motivated me to read texts in English’ were only six students agreed, and 19 students agreed. Another



statement with nine agree on marks, 15 agree marks, and one disagrees mark was ‘Once the intervention period has finished, I would like to continue working on the program’. The same percentage had this statement ‘Now, I can infer the meaning of a word according to the context and understand the author’s purpose according to the words he/she uses.’ Afterwards, it can be seen that students’ responses were between agree and agreed, which conveys their positive attitude towards the website.

## 5.2 Conclusions

The purpose of this study was to analyze the impact this online ReadTheory.org website has on students’ reading skills. The main reason for using this new technological tool was to motivate and engage students to practice and acquire reading strategies, as well as habits to develop critical reading skills. Consequently, it was used to provide students with a tool to learn English not only within a classroom but also from their places in a more comfortable way.

To conclude this study, it is worth having in mind the research question and objectives that were under study during all this process. The research question was ‘To what extent can second-level students’ reading skills be enhanced by the use of ReadTheory program?’ and the specific objectives were: 1. To analyze the software impact on students’ reading-comprehension skills from the Politécnica Salesiana University; 2. To evaluate students’ opinions about the use of the software.

As it could be seen in the previous chapter and in the discussion, some positive changes were revealed after the intervention with the Experimental Group. Some of these changes were appreciated specifically with the participants who went from grade 1 or 2 to



the following one; that is, with the low English level participants. Additionally, Lexile level progression was also one of the positive findings since participants' results demonstrated improvement. From these results, it can be stated that this three-month intervention was the beginning of a reading development process; therefore, it is convenient to have students working on it for a longer period.

That is, if one compares the results from the first and last reading practice of the experimental group, it can be said there is an improvement, not something significant, but there is. However, if one compares the results from the posttest, both groups –the Experimental and Control-, showed positive change. Then it makes the researcher think of the method since participants' results demonstrated improvement with and without using the program. It can be stated then that there were some other variables that helped the control group to improve their reading skills. The type of reading-comprehension exercises and the methodology used by the teacher in her classes for instance.

Finally, there were students' opinions which reflected students agreed on the use of this tool for their English classes since they felt their vocabulary increased and their reading competence improved.

Although the main conclusion, which answers the Research Question of this study, is that there is no significant impact of this ReadTheory.org program on second level students' reading skills; there are some essential variables that played an important role in this study which must be taken into account for further studies. Additionally, it is worth recognizing the impact was not as expected since this three-month intervention can be considered as the beginning of a reading development process rather than the end of one.



To sum up, it can be stated that both the research question and objectives of the investigation were achieved through this study. It is worth explaining to other teachers about the existence of this website and the results reached to have them working on this website too and obtain opinions from other students and teachers as well. Thanks to the diagnostic test given to the group of the experimental group, it was evidenced that not all students began at the same grade level, so it was positive for them to work at their own pace with the program. This fact is sustained by Krashen's hypothesis about comprehensible input and also Bloom's taxonomy which categorizes the learning process to make people comprehend learning is a step by step process. This is why once again it can be stated that this three-month intervention is the beginning of a reading development process.

### **5.3 Further Research, Recommendations and Limitations**

For further research studies, some aspects should be taken into account. First, the intervention period should be done in a more extended period, of at least six months to collect more data and provide reliability to the study. Usually, students go up two grades and then go back one or two. That is why it is essential to work a long time since the development of a skill is not a quick process.

Another important recommendation would be to take into account when the intervention process takes place to avoid having long holidays like Christmas or Carnival since students have days off at their educational institutions, and therefore they stop working and go on vacation. This point noticeably influenced the intervention process of this study since students went on Christmas vacation and they did not work with the website as established; that is why at the end of the intervention process the researcher had



to give students two more weeks to work on it. Even though at that moment, that was the best solution, students lost the habit since they were working on it almost every day and then they stopped for two weeks.

Moreover, the number of participants is an important aspect which influences on the study results. Also, to make the findings more reliable, it is necessary to have a higher number of participants. In this study, to have all participants from the same English level, only a few number of students were asked to participate.

Moreover, the last but not the least important recommendation is to take into account the lack of studies with programs like this one; it turned out to be a limitation in this study since it was difficult to find experiences from other researchers who had worked with reading programs in similar educational contexts. Additionally, it is necessary to compare results, analyze both methodologies and similar instruments. There was a vast variety of studies focused on reading but not on websites like the one studied here. This was a limitation since it was difficult to consider other contexts and procedures, which could have been a significant contribution to this study.

However, the fact that this study was one of the first ones carried out on the use of this program was beneficial since this study may be considered as a contribution for some positive aspects as well as limitations or weaknesses found during the development of this study and that could be taken into account further research.

Finally, another fact worth to be considered is that this program was created to enhance L1 critical reading skills; that is, it was for native speakers of English. However, students of English as a foreign language could take advantage of it to acquire vocabulary



and reading skills. Material that can be considered authentic and non-authentic; authentic because it was not elaborated to teach English, but to develop critical reading skills and non-authentic because it was prepared for reading development.



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## APPENDICES

### Appendix 1. ReadTheory.org Sample – Level 3

(2017)

#### THINKING FIRST

Police officer Rachel Blair works in Queens, New York. A reporter is asking Rachel about how she does her job.

**Reporter:** How long have you been a police officer?

**Blair:** Six years.

**Reporter:** How did you get started?

**Blair:** First, I had to take a lot of tests. Then, I went to the Police Academy for 12 weeks. I learned how to drive a police car, make an arrest, and file a police report. I also had to exercise every day!

**Reporter:** How do you stay safe on the job?

**Blair:** I use my training. That helps me make sure a situation does not get out of control. I am always cautious. If I think a situation is too dangerous, I call for backup. If I run into a dangerous situation without thinking first, I can get hurt.

**Reporter:** Are there any new tools that police officers use?

**Blair:** We use special glasses that help us see better in the dark. When I wear the glasses, I can see moving objects like cars and other people at night.

**Reporter:** Have you ever saved someone's life?

**Blair:** No, I haven't. But my partner has. He says it gave him a pretty special feeling.

**Reporter:** Do you ever get afraid?





**Blair:** There is no time to be afraid. I have to think about what I have to do to take care of the situation quickly and safely.

**Reporter:** What do you like best about being a police officer?

**Blair:** Helping people!

**1. What is this passage mostly about?**

- a. what a police officer does
- b. how a police officer is trained
- c. what a police officer wears
- d. how a police officer helps people

**2. What did Rachel Blair do first to become a police officer?**

- a. She saved someone's life.
- b. She used police equipment.
- c. She made an arrest.
- d. She took a lot of tests.

**3. As used in the middle of the passage, the word cautious most nearly means**

- a. honest
- b. quick
- c. careful
- d. understanding

**4. Why does Rachel Blair say she does not get afraid?**

- a. She uses special glasses.
- b. She enjoys her job too much.
- c. She knows how to drive a police car.
- d. She is too busy doing her job.

**5. What does Rachel Blair like most about being a police officer?**

- a. exercising
- b. filing police reports
- c. helping people
- d. using special equipment



- 6. Why did the author most likely write this passage?**
- a. to teach readers how to save lives
  - b. to make readers want to be police officers
  - c. to give readers information about police officers
  - d. to show readers how to use special police equipment



## Appendix 2. Institutional Permission

Cuenca, 3 de diciembre del 2015

Lic. Susana Castro V., Mgst.

COORDINADORA DEL INSTITUTO IDIOMAS DE LA UNIVERSIDAD POLITÉCNICA SALESIANA

Su despacho

El objetivo del presente es solicitarle me permita realizar un trabajo de investigación, el mismo que es requisito previo para la obtención del título de Master en Lingüística Aplicada a la Enseñanza del Inglés como Lengua Extranjera, programa que me encuentro cursando en la Universidad de Cuenca.

El propósito de este trabajo es conocer el impacto que tiene la plataforma ReadTheory.org en el desarrollo de lectura crítica en estudiantes del Instituto de Idiomas de la Universidad Politécnica Salesiana. Este estudio está dividido en tres partes: pre-intervención, intervención, y post-intervención. El periodo de intervención debe cubrir un mínimo de 32 horas por 2 meses. Para la selección de la muestra, se les explicará a los estudiantes sobre el proyecto y el trabajo que implica para que de forma voluntaria participen en el mismo.

Vale mencionar que el aporte de los estudiantes en este proceso es de vital importancia para medir el impacto de una plataforma de carácter gratuito que tiene como enfoque el desarrollo de lectura crítica. A su vez, este es un aporte para las clases que se ofrecen en el Instituto ya que si se registra un aporte significativo, se podría contar con esta herramienta como material principal para que los estudiantes desarrollen hábitos y estrategias de lectura y comprensión.

Por la favorable acogida que dé a la presente, anticipo mis agradecimientos.

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Lic. Verónica Piedra Carrión



### Appendix 3. Informed Consent Form

Señor(ita)  
De la Universidad Politécnica Salesiana  
Ciudad

De mis consideraciones:

En calidad de docente de Inglés de la prestigiosa institución donde usted estudia y como estudiante del programa de Maestría en Lingüística Aplicada a la Enseñanza del Inglés como Lengua Extranjera de la Universidad de Cuenca, me permito por medio de la presente pedirle su colaboración y autorización para que forme parte de este estudio educativo, el cual tiene como fundamento mejorar la comprensión lectora del idioma Inglés a través del uso del programa ReadTheory.org, el cual es online y gratuito.

Si está de acuerdo en participar en este proyecto que será por un periodo de dos meses, usted será requerido a realizar las siguientes actividades:

- Un pretest antes de la intervención y un posttest al finalizar la misma.
- Desarrollo de 4 lecturas semanales como mínimo, las cuales pueden ser realizadas desde casa o en el laboratorio del Instituto.
- Asistir a las sesiones requeridas para el cumplimiento del proyecto.

Cabe mencionar que su identidad será protegida y la información obtenida con este estudio que podría identificarlo será guardada con estricta confidencialidad.

Cualquier pregunta de este estudio podrá ser dirigida a mi persona a través del email [veronicapiedracarrion@hotmail.com](mailto:veronicapiedracarrion@hotmail.com) o al teléfono 099 284 9155.

Por la atención prestada a la presente, anticipo mis agradecimientos por su valioso aporte.

Atentamente  
Lic. Verónica Piedra Carrión

PD: Su firma da la validez al consentimiento de su participación en este estudio y el conocimiento explicado en este informe.

Nombre: \_\_\_\_\_

Firma: \_\_\_\_\_



## Appendix 4. Pretest Control Group



Name \_\_\_\_\_  
Date \_\_\_\_\_

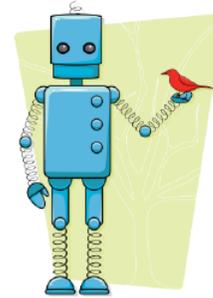
### • Reading Comprehension Sample 3.1

**Directions:** Read the passage. Then answer the questions below.

## Robots

A robot is a machine. But it is not just any machine. It is a **special** kind of machine. It is a machine that moves. It follows instructions. The instructions come from a computer. Because it is a machine, it does not make mistakes. And it does not get tired. And it never complains. Unless you tell it to!

Robots are all around us. Some robots are used to make things. For example, robots can help make cars. Some robots are used to explore dangerous places. For example, robots can help explore volcanoes. Some robots are used to clean things. These robots can help vacuum your house. Some robots can even recognize words. They can be used to help answer telephone calls. Some robots look like humans. But most robots do not. Most robots just look like machines.



Long ago, people imagined robots. Over 2,000 years ago, a famous poet imagined robots. The poet's name was Homer. His robots were made of gold. They cleaned things and they made things. But they were not real. They were imaginary. Nobody was able to make a real robot. The first real robot was made in 1961. It was called Unimate. It was used to help make cars. It looked like a giant arm.

In the future, we will have even more robots. They will do things that we can't do. Or they will do things that we don't want to do. Or they will do things that are too dangerous for us. Robots will help us fight fires. They will help us fight wars. They will help us fight sickness. They will help us discover things. They will help make life better.

Sources:  
Goldsmith, Mike. "Robots." *Everything You Need To Know About Science*. New York: Kingfisher, 2009. Print.



### Questions

- 1) As used in paragraph 1, we can understand that something **special** is NOT
  - A. normal
  - B. expensive
  - C. perfect
  - D. tired
  
- 2) According to the author, robots may be used to
  - I. make cars
  - II. explore volcanoes
  - III. answer telephone calls
  - A. I only
  - B. I and II only
  - C. II and III only
  - D. I, II, and III
  
- 3) What is the main purpose of paragraph 2?
  - A. to show how easy it is to make a robot
  - B. to tell what a robot is
  - C. to describe the things a robot can do
  - D. to explain the difference between a robot and a machine
  
- 4) According to the passage, when was the first real robot made?
  - A. 1961
  - B. 1900
  - C. 2003
  - D. 2000 years ago
  
- 5) Which of these gives the best use of a robot?
  - A. to help make a sandwich
  - B. to help tie shoes
  - C. to help read a book
  - D. to help explore Mars
  
- 6) How does the author of this passage most likely feel about robots?
  - A. Robots are old.
  - B. Robots are confusing.
  - C. Robots are helpful.
  - D. Robots are dangerous.



### Appendix 5. Reading Sample – Interchange 1B (p.69)

## TAKING THE RISK

Look at the pictures and skim the interviews. Then write the name of the sport below each picture.

**Sports World** magazine recently spoke with Josh Parker, Lisa Kim, and Alex Costas about risky sports.

**SW:** Wingsuit flying is a dangerous sport, Josh. What do you enjoy about it? And have you ever had an accident?  
**Josh:** No, I've never been hurt. But, yes, it is dangerous, even for experienced flyers. I've been doing it for five years, but I still get a little nervous before I jump out of the plane. That's the most dangerous thing. Once, I jumped too fast, and I started to spin. That was scary! But it's amazing to be able to fly like a bird.

**SW:** Lisa, you've been kiteboarding for years now. What are some of the dangers?  
**Lisa:** Oh, there are many dangers. When you're in the ocean, the conditions can be unpredictable. The wind can lift you up too fast and then drop you against something hard, like sand, or even water. You can also hit another surfer. But I like the challenge, and I like overcoming danger. That's why I do it.

**SW:** Alex, have you ever experienced any dangers while ice climbing?  
**Alex:** Yes, absolutely. When you're high up on a mountain, the conditions are hard on the body. The air is thin, and it's very cold. I've seen some really dangerous storms. But the great thing about it is how you feel when you're done. Your body feels good, and you have a beautiful view of the snowy mountaintops.





**A** Read the interviews. Then complete the chart.

Sport	What they enjoy	The danger(s)
1. Josh .....	.....	.....
2. Lisa .....	.....	.....
3. Alex .....	.....	.....

**B PAIR WORK** Would you like to try any of these sports? Why or why not?



### Appendix 6. Reading Sample – Interchange 1B (p.77)

Scan the email messages. What city has a puppet show? What city has two personalities? What city is famous for leather?

Fez is so interesting! I've been to the medina (the old city) every day. It has walls all the way around it, and more than 9,000 streets! It's always crowded and noisy. My favorite places to visit are the small shops where people make local crafts. Fez is famous for its leather products. I visited a place where they dye the leather in dozens of beautiful colors.

I came at the perfect time, because the World Sacred Music festival is happening right now!

Kathy



I've discovered that Cartagena has two different personalities. One is a lively city with fancy restaurants and crowded old plazas. And the other is a quiet and relaxing place with sandy beaches. If you come here, you should stay in the historic district – a walled area with great shopping, nightclubs, and restaurants. It has some wonderful old Spanish buildings.

Last night, I learned some salsa steps at a great dance club. Today, I went on a canoe tour of La Ciénaga mangrove forest.

Mike



Hanoi is the capital of Vietnam and its second-largest city. It's a fun city, but six days is not enough time for a visit. I'm staying near the Old Quarter of the city. It's a great place to meet people. Last night I went to a water puppet show. Tomorrow I'm going to Ha Long Bay.

I took a cooking class at the Vietnam Culinary School. I bought some fruits and vegetables at a local market and then prepared some local dishes. My food was really delicious! I'll cook you something when I get home.

Belinda



**A** Read the emails. Check (✓) the cities where you can do these things. Then complete the chart with examples from the emails.

Activity	Fez	Cartagena	Hanoi	Specific examples
1. go shopping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
2. see old buildings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
3. go dancing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
4. attend a festival	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5. take a boat trip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....

**B PAIR WORK** Which city is the most interesting to you? Why?



## Appendix 7. Posttest Experimental and Control Group



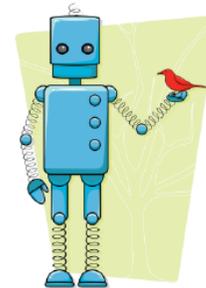
Name \_\_\_\_\_  
Date \_\_\_\_\_

### • Reading Comprehension Sample 3.1

**Directions:** Read the passage. Then answer the questions below.

## Robots

A robot is a machine. But it is not just any machine. It is a **special** kind of machine. It is a machine that moves. It follows instructions. The instructions come from a computer. Because it is a machine, it does not make mistakes. And it does not get tired. And it never complains. Unless you tell it to!



Robots are all around us. Some robots are used to make things. For example, robots can help make cars. Some robots are used to explore dangerous places. For example, robots can help explore volcanoes. Some robots are used to clean things. These robots can help vacuum your house. Some robots can even recognize words. They can be used to help answer telephone calls. Some robots look like humans. But most robots do not. Most robots just look like machines.

Long ago, people imagined robots. Over 2,000 years ago, a famous poet imagined robots. The poet's name was Homer. His robots were made of gold. They cleaned things and they made things. But they were not real. They were imaginary. Nobody was able to make a real robot. The first real robot was made in 1961. It was called Unimate. It was used to help make cars. It looked like a giant arm.

In the future, we will have even more robots. They will do things that we can't do. Or they will do things that we don't want to do. Or they will do things that are too dangerous for us. Robots will help us fight fires. They will help us fight wars. They will help us fight sickness. They will help us discover things. They will help make life better.

Sources:  
Goldsmith, Mike. "Robots." *Everything You Need To Know About Science*. New York: Kingfisher, 2009. Print.



### Questions

- 1) As used in paragraph 1, we can understand that something **special** is NOT
  - A. normal
  - B. expensive
  - C. perfect
  - D. tired
  
- 2) According to the author, robots may be used to
  - I. make cars
  - II. explore volcanoes
  - III. answer telephone calls
  - A. I only
  - B. I and II only
  - C. II and III only
  - D. I, II, and III
  
- 3) What is the main purpose of paragraph 2?
  - A. to show how easy it is to make a robot
  - B. to tell what a robot is
  - C. to describe the things a robot can do
  - D. to explain the difference between a robot and a machine
  
- 4) According to the passage, when was the first real robot made?
  - A. 1961
  - B. 1900
  - C. 2003
  - D. 2000 years ago
  
- 5) Which of these gives the best use of a robot?
  - A. to help make a sandwich
  - B. to help tie shoes
  - C. to help read a book
  - D. to help explore Mars
  
- 6) How does the author of this passage most likely feel about robots?
  - A. Robots are old.
  - B. Robots are confusing.
  - C. Robots are helpful.
  - D. Robots are dangerous.



### Appendix 8. Survey

Estimado estudiante:

El siguiente cuestionario está diseñado con la intención de conocer puntos de vista y opiniones acerca de la plataforma ReadTheory, la misma que está siendo utilizada por usted como herramienta de aprendizaje. Le tomará aproximadamente 10 minutos llenar esta encuesta. Gracias de antemano por su participación.

	Totalmente de acuerdo	De acuerdo	En desacuerdo	Totalmente en desacuerdo
1. La plataforma me ha motivado a leer textos en Inglés.				
2. Una vez terminado el período de investigación, seguiré utilizando la plataforma por mi cuenta.				
3. He descubierto nuevas estrategias para entender mejor un texto en Inglés.				
4. Traduzco palabras o frases en menor escala.				
5. Creo que siempre se debería usar esta herramienta en las clases de Inglés.				
6. Me toma menos tiempo entender una lectura.				
7. He aprendido nuevas palabras con el uso de esta herramienta.				
8. Ahora puedo inferir el significado de una palabra según el contexto y entender la intención del autor según el uso de determinadas expresiones.				
9. Considero que esta plataforma me ha ayudado a mejorar mi habilidad lectora.				
10. Considero que el número de lecturas semanales (5) fue apropiado.				



a. ¿Ha tenido problemas utilizando la plataforma? \_\_\_\_\_

b. Si su respuesta es positiva, ¿qué tipo de problemas tuvo?

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c. ¿Existe alguna recomendación o sugerencia que desee hacer?

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Muchas gracias por su participación en este proyecto de investigación. Si desea participar en una entrevista, escriba su correo electrónico en la parte inferior.

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**Appendix 9. Experimental Group Results Description**

Experimental Group Results Description					
	Lowest score	Highest score	Mean	Standar Deviation	p
READINGS DONE	38.0	99.0	59.12	19.70	-
GRADE (firts)	0.0	100.0	58.80	29.65	
GRADE (last)	14.0	100.0	70.84	24.53	0.166
LEVEL (first)	1.0	7.0	2.16	1.86	
LEVEL (last)	1.0	6.0	2.96	1.65	0.027*
LEXILE LEVEL (first)	30.0	1020.0	303.60	313.54	
LEXILE LEVEL LAST (last)	70.0	850.0	457.20	253.29	0.014*
AVERAGE (LEXILE LEVEL)	140.0	810.0	400.40	191.41	-
AVERAGE (GRADE LEVEL)	1.0	5.3	2.62	1.19	-
KEY IDEAS AND DETAILS	60.0	89.0	78.60	6.01	-
CRAFT AND STRUCTURE	35.0	86.0	61.72	13.31	-
INTEGRATION OF KNOWLEDGE	51.0	78.0	68.32	7.18	-