THE THEORY OF THE SIX READINGS: PROMOTING READING COMPREHENSION IN ENGLISH AS A FOREIGN LANGUAGE

Research project to the Faculty of Education in partial fulfillment of the requirements for the degree of Master in Education with Emphasis on Foreign Languages Teaching

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To God,

To our parents,

and to our beloved son: Bryan…

Mónica & David
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Title: The Theory of the Six Readings: Promoting Reading Comprehension in English as a Foreign Language.

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Key words: Inferential reading comprehension, product and process in reading, The Theory of the Six Readings.

Sources: Pre and posttest, interview, observation.


Interview: Students qualitative data.

Observation: Students qualitative data while treatment.

Chapters

Introduction

Reading is defined as a human skill in which it is possible to interact with the written text, becoming one of the ways to acquire knowledge in a receptive way. In this sense, inferential reading comprehension level is the opportunity to deepen into the text by means of specific strategies which drives the reader to deduce detailed information from the text. Thus, in this study, the inferential reading comprehension level is promoted by the Theory of the Six Readings.

Theoretical constructs: The meaning at moment of reading

This chapter embraces the theoretical support of the study, in which the main points of reading and reading comprehension was taken into account by two relevant aspects in reading: the product and process. The product of reading states to the text comprehension at various levels of
understanding, and the process refers to the strategies used by the reader in order to reach the product of reading. Finally, this project emphasizes on the process by means of the Theory of the Six Readings with the aim of promoting the product of reading.

**Methodological framework**

This chapter covers the aspects related to the design of this study, taking into account Creswell & Plano (2011), who establish the embedded experimental design with the aim of developing mixed educational researches. By the way, this section of the study is organized in the following sequence: first, it is established the design of the study; second, the research variables are delimited in order to verify the hypothesis of the study; third, the characterization of the participants of the study; fourth, data collecting instruments, and finally, the procedure associated with the embedded experimental design.

**Data analysis**

Both the quantitative and qualitative data were analyzed in order to confirm the hypothesis of this study. In this sense, the quantitative data analysis was done by means of *relative frequency tables* with the aim of comparing the pre and posttest outcomes. On the other hand, the qualitative data were analyzed through the use of *tabulation* and *categorizing*, in which the information was organized, classified, systematized, and presented in tables of data relationships in order to facilitate their interpretation.

**Conclusions**

In this study it was noticed that Phonics Reading allowed acquiring and recognizing printed words and, as consequence, it is stated that training in Phonics Reading permits that reader pays more attention to understand the reading than to connect the word letters in order to get the whole word.
The importance of recognizing words by sight allows promoting reading fluency. Thus, it was evident that participants were struggled readers at moment of they did not know the meaning of words. Moreover, along the implementation, participants started to recognize much faster the words in the text letting them to have a constantly reading fluidity, text understanding, and better reading comprehension performance.

Both Secondary and Tertiary Decoding mechanisms encourage the inferential reading comprehension level because they seek the reader extracts relevant ideas to give and build meaning to the text while it is established the relationship of the ideas to the context of the text.

The Theory of the Six Readings promotes the inferential reading comprehension level in English as a foreign language in connection with faster word identification, knowing the meaning of the words of the text –or almost all words-, giving coherent meaning in relation to the text meaning, and modelling the inference of the text. Howbeit, this model encourages facing the inference of the text at the same time that favoring listening and writing skills plus the foreign language acquisition.

**Recommendations**

It is recommended to apply it in a didactic way in order to avoid participants’ tiredness and dreariness.

It is important to use striking readings with the aim of calling participants’ attention.

Another point to take into account is to give students the option of monitoring their own reading comprehension. It is important to include that aspect in this model since it is its flaw.

**References**


**Description**

This mixed research seeks to determine to what extent the mechanisms of the Theory of the Six Readings promote the inferential reading comprehension level in English as a foreign language with ninth graders at a public school.

Reading is defined as a human skill in which it is possible to interact with the written text, becoming one of the ways to acquire knowledge in a receptive way. In reading there are two main aspects: the *product* and the *process*. The *product* of reading is established as the level of comprehension in reading understanding, and the *process* of reading are the tools or strategies
used in order to reach the *product*. Thus, with the aim of affecting the *product* of reading, in the *process*, this project takes into account the strategies proposed by the Theory of the Six Readings.

In this sense, the design of the study was guided by an *embedded experimental design* done in three main phases: pretest, treatment, and posttest where researchers collected both quantitative and qualitative data. These data is analyzed by means of *relative frequency tables* in the quantitative data; and *tabulation* and *categorizing* in the quantitative data.

In conclusion, the Theory of the Six Readings promotes the inferential reading comprehension level in English as a foreign language in connection with faster word identification, knowing the meaning of the words of the text—or almost all words—, giving coherent meaning in relation to the text meaning, and modelling the inference of the text. Howbeit, this model encourages facing the inference of the text at the same time that favoring listening and writing skills plus the foreign language acquisition.

Bogotá, April 10th, 2016.
**Introduction**

Reading is defined as a human skill in which it is possible to interact with the written text, becoming one of the ways to acquire knowledge in a receptive way. Along these lines, this research project contemplates the process and the product in reading comprehension in English as a foreign language. Therein, the product refers to the text comprehension, and the process is related to the strategies that the reader uses in order to reach the product. In point of fact, this project seeks to affect the product by means of the implementation of the first version of the Theory of the Six Reading proposed by De Zubiria (1995) taking into account that this study emerged from the students’ necessities in their inferential reading comprehension level.

English teaching and learning processes have taken place in Colombia by means of the National Policies. In this way, The *Ley General de Educación*, Law 115 of 1994, National Government of Colombia demands “desarrollar las habilidades comunicativas para leer, comprender, escribir, escuchar, hablar [en estudiantes de educación básica]” (Ministerio de Educación Nacional, 1994, pág. 6). Thus, the main Colombian policy is seeking a competent student, understood as a person who is able to create, investigate, and use technology at any national or international contexts. In its article 23, MEN\(^1\) gives mandatory subjects; herein, it establishes foreign languages as a part of the curriculum in each educational institution.

In this way, National Government of Colombia included English as a fundamental and mandatory subject for all schools (Congreso de la República de Colombia, 1994, pág. 6). That obligation was materialized in the classroom with the publication of *Lineamientos de procesos Curriculares en idiomas extranjeros* (Ministerio de Educación Nacional, 1996). It was the first guide that English teachers had for standardizing their English program studies at institutions; this means that English teaching process found a way to be developed inside the classrooms. For

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1 Ministerio de Educación Nacional.
this reason, “Lineamientos de procesos Curriculares en idiomas extranjeros are pedagogical orientations to foreign language teachers in order to take basic and conceptual elements as well as generating an effective autonomy to lead teaching processes” (Ministerio de Educación Nacional, 1996, pág. 1).

In fact, the highest development in national policies, in favor of English proficiency in Colombia, was the Programa Nacional de Bilingüismo (PNB) (Ministerio de Educación Nacional, 2004). Then, this PNB is improved by the Programa Nacional de inglés (PNI): Colombia very well (2015-2025). In relation to the PNB, its goals were directed by three aspects: The first one is defining and diffusion of the English standards to regulate the teaching – learning process in basic and high school. The second one is defining a coherent system of evaluation, and the last one is development of English teachers training.

In relation to the first two aspects mentioned above, MEN decided to standardize and regulate the foreign language teaching – learning process in the classroom. For that reason, It published the paper "Guia No. 22 Formar en Lenguas: El reto” (Ministerio de Educación Nacional, 2006); here, the proficiency levels, that students of Educational Institutions must achieve, are formalized. Finally, and concerning the last aspect, MEN has done agreements with the aim of qualifying English teachers. Recently, in the long term policy, Programa Nacional de inglés: Colombia, very well 2015-2025, the goals and plans seek to consolidate Colombia as a bilingual country.

On the other hand, “el Plan [Nacional de Lectura, Escritura y oralidad] (ILEO) implica acciones con los estudiantes durante toda la escolaridad y de manera trasversal con todas las áreas” (Ministerio Nacional de Educación, 2011, p.7). This is one of the Educational Policy strategies that takes into account all knowledge areas. This paper refers to the actions that the
government has implemented with the aim of developing reading and writing skills in Colombian people. MEN thinks that “la gente se enfrenta con mucha información escrita la cual necesitan comprender, para así tener su criterio de lo leído” (2011, pág. 2). In consequence, the main transformation starts at school where students must be involved into a reading environment in a transversal way from all curriculum subjects, in which students have the opportunity to use strategies and tools with the purpose of being competent readers in the world that is waiting for them.

IED Liceo Femenino Mercedes Nariño (LiFeMeNa) is a public school, which Secretaría de Educación Distrital (SED) approved as Media Fortalecida en lenguas extranjeras (Secretaría de Educación de Bogotá, 2011). At LiFeMeNa School, basic secondary students have three English classes of 80 minutes per week where they have the opportunity to study the language according to the English curriculum of the school which is based on the Lineamientos de procesos Curriculares en idiomas extranjeros. This curriculum proposes that the students “will be able to interact with their environment by using the communicative skills (reading, writing, speaking and listening)” (Liceo Femenino Mercedes Nariño, 2013, p. 3) and following the Communicative Language Teaching (CLT) as methodology, herein, English teachers adapt different type of activities focused on the communicative skills according to the specific objectives that students must reach in order to face later their English language learning in high school.

As follows, ninth level is the last basic secondary grade before high school. In this level the students are from 13 to 17 years old. Their socioeconomic status is low and at class their behavior is disciplined. In relation to the English class, the English curriculum of the school ask them to be an “independent language users [B1 level]” (Consejo de Europa, 2002, p.26) by
means of the communicative skills. Specifically in reading, ninth graders have to “read and infer different kind of texts” (Liceo Femenino Mercedes Nariño, 2013, p. 17). However, the real situation is different because at English class ninth graders (905) have shown difficulties when they face diverse types of English texts. The most common complications are: to get the main idea from the text because they think that the main idea is any sentence from it, when classifying relevant and non relevant information form the text, and with the text topic or what the text is exactly about. Also, reading activities are not designed in a transversal way as ILEO program requires to do it, those activities do not involve readings about the different knowledge subjects.

Pointing to the above aspects, a test was applied to ninth graders (905) with the aim of corroborating their reading difficulties (annex 1). This test was taken from Preliminary English Test (PET) (McGeary, 2003) which measures reading comprehension in five steps: 1. Read short texts to understand the main idea, 2. Read short texts to find specific information, 3. Read a text to find any information, 4. Read to understand the detail of a text, and 5. Comprehend the vocabulary and grammar (McGeary, 2003, pág. 3).

The results of the test showed that the students achieved good scores in questions about the literal reading level because they gave and talked about explicit information from the text. However, this test also indicated that they obtained low scores in questions related to the inferential reading level in which were corroborated the difficulties observed at class and described before in this paper. With these data, it is concluded that there are some problems in inferential level which affect students’ reading comprehension when they are asked to extract the precise text topic, the main ideas and supporting details from the text.

To complete this diagnosis, a survey was applied with the aim of knowing students’ preferences about reading, the use of reading strategies and their English reading comprehension
level (annex 2). In front of their preferences about reading, it was concluded that the students like reading but they do not read in their free time and obviously they prefer to read in Spanish more than in English. In relation to the use of reading strategies, the survey indicated that most of the students did not know reading strategies and students who knew about them think that they did not use them when they read. Finally, taking into account their English reading comprehension level, students said that they better understand a text when the information is written in the text (explicit information) than when they have to talk about aspects that the text does not mention (implicit information), students argued that in the last one they have difficulties; with this, it is possible to say that students cannot extract the inferential information as well as they are not able to give implicit information from the text. In conclusion, ninth graders are in the literal reading comprehension level and it is necessary to take them to the inferential level taking into account the aspects that the English curriculum of the school asks them as it was mentioned before. In brief, the research problem is defined as the necessity to promote inferential reading comprehension level in English as a foreign language with ninth graders at Liceo Femenino Mercedes Nariño.

Reading comprehension in English as a foreign language has been studied from different perspectives; some researchers have studied it from metacognitive strategies, readers’ role, reading strategies, social reading, among others. For instance, in 2012, Rosas applied a study in reading strategies in Spanish (L1) and English (L2). The purpose of study was to identify, detect and compare the reading strategies in L1 and L2 used by four Spanish-speaking university students, in order to find out the stage of the reading process (before, during or after) they were. The researcher focused her study on non-English speaker’s strategic reading processes and she detected that teachers before doing any task, related to reading comprehension, should give
strategies for it and these strategies should have the three times -before, during and after- of reading even more when the reading is in English. As it is notice, the author concluded that it is relevant to train students in English reading comprehension following any sequence.

Perales & Reyes (2014) conducted a study in titled: Teaching strategies for understanding inference in English (L2) and its impact on Spanish (L1). In their research, they described an experiment that consisted in preparing and distributing an instructional design aimed at improving rhetorical inferential comprehension skills for genres written in English (L2). The experiment was administrated in a group of undergraduates majoring in English. The results of this work helped to show that it is possible to teach reading in English to undergraduate students; so that, students can appropriate disciplinary knowledge and make inferences about the different rhetorical positions in linguistics; also this purpose affected students’ professional field because they could include components of research in their classes.

Uguarteche & Femenia’s (2011) research project explored reading strategies used by English as foreign language argentinian students. They compared the strategies chosen by different groups of reading efficiency in order to be able to influence in the future, in recognition, learning and using strategies by inefficient readers. As result, they concluded that direct strategies could have more influence in reading efficacy or in the moment of solving evaluative situations in other language.

In Colombia, there are several researches about reading comprehension. Osorno & Lopera’s project research (2012) discussed the positive and negative effects of an EFL reading comprehension distance web-based course. This research was based on four models of interaction through the case study methodology. The aim of this project was to identify the effect of each modality in terms of motivation, reading strategies, vocabulary, and interaction. On the
one hand, the negative effects were related to the participants’ anxiety because they wanted an immediately feedback by the teacher. On the other hand, participants complained to have problems with MOODLE platform. In addition, the positive effects were associated with a great interaction with the matter of the course specially in identifying the implied main idea. Students also applied the reading strategies they learnt in foreign language to their daily reading routines in their mother tongue.

Rátiva, Núñez & Pedreros (2012) conducted their study: Using Web-Based activities to Promote Reading: an exploratory study with teenagers. In this research, they shared the process and results of some activities based on web materials which were designed and used with 10th grade students with the purpose of promoting their reading comprehension. As results of their project, they stated interesting aspects about their research in which web-based activities had given new opportunities for both teachers and students in the teaching-learning process by developing authentic tasks. However, they said that it is important not to forget the traditional way to develop reading activities (the printed one).

In 2013, Becerra carried out a research in titled: The use of the dictionary and the prior knowledge of Colombian high school students to improve their reading comprehension of short scientific texts in English. In her study, she proposed that English can be applied in different contexts, enriching not only daily vocabulary, but also scientific vocabulary. It was observed that some students had an optimistic feeling towards the positive results they reached with the development of the workshops by activating prior knowledge and using the dictionary. Also, she observed that the majority of her students assessed in science and English classes in a positive way due to the fact that students had the opportunity of working in English in other contexts.
Bogoya’s study (2011) was about fostering fifth graders’ reading comprehension through the use of intensive reading in physical science. In this paper, she examined the use of intensive reading, a strategy taken from the language teaching field, in order to help students to improve their reading comprehension ability and develop understanding of science concepts. She concluded that learners enjoyed working with others, sharing their ideas, asking questions, and probing whether their hypotheses were valid. Therefore, reading practices should be adapted to new learning and teaching trends. On the other hand, she replied that reading should not take place in isolation and should be complemented by pre-reading and post-reading activities aimed at developing high-order and low-order thinking skills.

In 2011, Mahecha, Urrego & Lozano did a research with a group of eleventh graders at a public school in Bogotá. In which, they encouraged students to improve reading comprehension of texts in English. It was conducted taking into account students’ needs, interests and level of English. They implemented two reading strategies: text coding and double entry organizer. Besides, they found that the use of the two reading strategies were good tools to help students to improve their level of comprehension in reading short texts in English. They highlighted that the application of those reading strategies enhanced students’ self-esteem and students tended to become more confident readers.

Taking into account the situation described above that was corroborated by the diagnosis as well as the previous researches in this field; the importance of this study is related to the opportunity that the students at Liceo Femenino Mercedes Nariño have in order to positively affect their reading comprehension difficulties according to the demands made by the English curriculum of the school, because of it is a prospect to promote inferential reading comprehension into English classroom with the purpose of directing students to use reading
strategies when facing a text. The result of this project will benefit students’ reading comprehension as well as their language acquisition and learning process in the academic field.

Based on the previous considerations and information, this project is highlighted on “the product and the process of reading” (Alderson, 2005, pp. 5-10) in English as a foreign language. On one hand, Alderson (2005) describes the product as the level of comprehension (literal, inferential, and critical reading level). Westwood categorized these steps into literal and inferential reading levels. The first one refers to “understand the factual information presented in a passage of text” (Westwood, 2008, pág. 32), and the second one asked readers “to go beyond the text and infer other details” (Westwood, 2008, p.32).

On the other hand, Alderson (2005) argues that process implies the usage of tools in order to get the product. According to Alderson’s (2005) point of view, this research seeks intervene the process in order to reach the product and determine to what extend that intervention promotes the inferential reading comprehension level in English as a foreign language with ninth graders. For that reason, the theoretical foundations contemplate the Theory of the Six Readings by Miguel de Zubiría, because this is a cognitive, structural, didactic and methodological scheme with specific techniques and tools with the aim of helping the reading comprehension process.

Taking into consideration ninth graders’ product of reading is in the literal reading level and it is necessary to take them to the inferential reading one, in keeping with the English curriculum of the school demands, it is established this hypothesis: The implementation of the decoding mechanisms of the elemental readings, based on the Theory of the Six Readings, promotes the inferential reading comprehension level in English as foreign language.

Consequently, the object of the study is reading comprehension in English, and its field of action is inferential reading comprehension level in English.
In search of a solution, it has been defined as **general objective**: Determine to what extent the decoding mechanisms of the elemental readings, based on the Theory of the Six Readings, promote the inferential reading comprehension level in English as foreign language with ninth graders at Liceo Femenino Mercedes Nariño.

Therefore, the **specific objectives** are:

- To identify reading comprehension problems in English as foreign language with ninth graders at Liceo Femenino Mercedes Nariño.
- To determine the theoretical foundations that support reading comprehension under the decoding mechanisms of the elemental readings based on the Theory of the Six Readings.
- To implement and assess a reading comprehension strategy under the decoding mechanisms of the elemental readings based on the Theory of the Six Readings.

As well as the **tasks** are:

- Identifying reading comprehension problems in English as foreign language with ninth graders at Liceo Femenino Mercedes Nariño.
- Determining the theoretical foundations that support reading comprehension under the decoding mechanisms of the elemental readings based on the Theory of the Six Readings.
- Implementing and assessment a reading comprehension strategy under the decoding mechanisms of the elemental readings based on the Theory of the Six Readings.

The development of this study proposes using diverse research methods and techniques, and different procedures that work as support at each stage of the project. These methods,
techniques and procedures are used at different times to make the research process; hence the methods mentioned below correspond to the theoretical methodology.

First of all, this project is based on a Mixed Research approach “It is a set of systematic, empirical and critical research processes that involve the collection and analysis of quantitative and qualitative data” (Hernandez Sampieri, Fernández Collado, & Baptista Lucio, 2010, p. 546). As this study has empirical and critical processes, mentioned before, it is inside the post positivism paradigm which “is associated with quantitative approaches. Researcher claims for knowledge based on (…) detailed observation and measures of variables” (Creswell & Plano, 2011, p. 22) where this paradigm becomes as an umbrella to studies with quantitative and qualitative data.

On the other hand, the design of this research is Embedded Design, this design guide the researcher in order to “collect quantitative and qualitative data simultaneously or sequentially, but to have one form of data play a supportive role to the other form of data” (Creswell, 2012, p. 544) and the type is Embedded Experimental design which “is defined by having qualitative data embedded within an experimental design” (Creswell & Plano, 2011, p. 69).

As this study is a mixed research, the empirical methods are used in order to collect quantitative and qualitative data. The quantitative data are provided by a pretest–posttest before and after the implementation of the treatment respectively; whilst, the qualitative data are collected by the workshops and observation, in the treatment implementation; and a questionnaire when at the end of each workshop. In the diagnosis, instruments, such as diagnosis test and survey, are applied with the aim of evidencing the problem.

Furthermore, the theoretical methods use in this study are: Analysis and synthesis method, the purpose of using this method is to analyze and synthesize the collected information;
and **modeling method** which allows a theoretical, methodological and practical representation that supports the structural organization of the proposed alternative methodology.

The statistical methods help to systematize and analyze both qualitative and quantitative data. In consequence, the quantitative data are analyzed by means of *statistical tables* and *graphs*. In this case, a *relative frequency table* allows more easily seeing what occurs most often in a set of data. In this sense, relative frequency table permits to compare the pre and posttest participants’ outcomes through specific values and charts, and the *graphs* represent the quantitative data. The qualitative data are embedded and support the quantitative data. Thereby, qualitative data collected while the implementation of the treatment is analyzed by the use of *tabulation* and *categorizing*. In tabulation, the information is organized, classified, systematized, and presented in tables of data relationships in order to facilitate their interpretation (annex 7). Next, categorizing classifies the information shown in tables.

Finally, this paper presents an alternative methodological strategy that allows promoting readers’ inferential reading comprehension level in English as a foreign language. Moreover, this strategy has very particular characteristics based on the Theory of the Six Readings. The *practical contribution*, that this research gives, is to articulate features in a mixed study about the promotion of inferential reading comprehension level in English as a foreign language, and the analysis of the real situation and context that ninth graders at Liceo Femenino Mercedes Nariño have. For this reason, the implementation of the decoding mechanisms of the Elemental Readings, based on the Theory of the Six Readings, has the intention to contribute to the English reading comprehension process.
1 Theoretical Constructs: The meaning at the moment of reading

Thinking over the problem addressed in this paper, the context where this study is done, the literature review, and the hypothesis proposed: “The implementation of the decoding mechanisms of the elemental readings, based on the Theory of the Six Readings, promotes the inferential reading comprehension level in English as foreign language”, the theoretical constructs are considered under reading and The Theory of the Six Readings (De Zubiria, 1995) as follows.

1.1 What is reading?

According to Cassany, “Reading is a transitive verb (highlighter by the author) and there is no a neutral or abstract reading activity, but multiple, versatile and dynamic (...) of comprehending” (2006, p. 23). De Zubiria thinks “when you teach a child to read, you do not teach whatever (...) it is to give the access key to (...) knowledge” (1995, p. 42-43). In relation to T. Ridgway “reading is after all a form of human cognition”(1994, p. 55) where cognition is defined as “the process by which the sensory input is transformed, reduced, elaborated, stored, recovered, and used” (McIntosh, 2013, p. 20). Consequently, in this study, researchers distinguish reading as a human process in which is possible to interact with the written text, becoming one of the ways to acquire knowledge. Thereby, reading has been an important cognitive process in human being's development because this is an open door that provides knowledge through written communication. While reading, readers must find the relationship between the word and its meaning.

1.2 Reading aspects: product and process

In reading, there are two relevant aspects to take into account: the product and the process. First of all, the product is considered as “the text comprehension (…) at various levels
of understanding” (Alderson, 2005, p.5). With this, readers demonstrate what they understand from the text by means of different type of evidences such as reading summaries, questionnaires, and interviews, among others. Alderson (2005), Cassany (2006) and Westwood (2008) have shown levels of understanding (or comprehension) in terms of the product of reading, dividing them into three levels: literal, inferential, and critical level of reading comprehension (see figure 1).

**Figure 1: Levels of reading comprehension (product of reading)**

The first reading comprehension level in the product: the literal level is considered as to “be able to understand the factual information presented in a passage of text” (Westwood, 2008, p.32). This level occurs in “the lines” (Grey, 1960, quoted by Cassany, 2006, p.52), i.e. the explicit information that the reader find in the text, involving the punctual information and ideas that the text has. This level is developed by using WH questions (what, when, where, who). These types of questions deepen the read information in order to state denotative facts and details.

The second reading comprehension level in the product of reading: the inferential level “means that the reader is able to go beyond the text and infer other details” (Westwood, 2008, p.32). This level is related to imply and mean, further than what is actually said. The information is abstracted by questions like *why, what if, how* in order to read critically and get relationships...
among ideas. This level takes the reader on a subjective reading, where he or she begins to play a role as an active reader. Finally, the reader faces the text.

The third and last reading comprehension level in the product of reading is the critical level, “the reader is able to appraise what he or she is reading” (Westwood, 2008, p.32). In other words, readers analyze and synthesize information to be applied to other information or previous one. Readers are able to recognize the difference between facts and opinion. For that reason, they need to have the literal level (what it was said), and then the inferential level (what it was meant) to extend the ideas beyond the situation which corresponds to the third stage: critical level. In brief, the reader gives his or her position after facing the text. In conclusion, “inferred meanings are somehow deeper than literal meanings, and that a critical understanding of a text is more highly valued by society than a mere literal understanding” (Alderson, 2005, p. 8). Those three reading comprehension levels (literal, inferential, critical) are clearly related to the product of reading, allowing to describe some of the detected variances in readers´ understanding level.

On the other hand, the product is reached by the process, hence, the process is “the interaction between the reader and a text (...) [it] is normally silent, internal and private” (Alderson, 2005, p. 3-4). In the process, things happen in readers´ mind thanks to readers´ cognition such as: text importance, words meaning, relation between both readers´ previous and new knowledge, among others. Therefore, the process needs to be active, flexible and diverse, but understandable in order to comprehend the information from the text by means of the reading strategies. The focus of this research is the process of reading with the aim of promoting the product of reading.
1.2.1 The Theory of the Six Readings as a process in reading comprehension.

In 2002, Grabe & Sroller reflected about “general models of readings [with] useful purposes (...) that focus on individual reading processing” (2002, pp. 31-37). However, Miguel Zubiria Samper’s model: Theory of the Six Readings, considers a structured cognitive model of reading that proposes six types of readings with specific mechanisms\(^2\) in order to understand easy and complex texts, and help readers with their process of reading. There are two versions of this model of reading; the first one was proposed in 1995, and the second one was established in 2001. The second version of the Theory of the Six Readings was considered for readers who had already acquired the language of reading, leaving aside aspects included in Version one. Therefore, this study is based on the first model because it is designed according to the students’ cognitive development process (perception, attention, memory, thinking, and language), includes the acquisition of the language by recognizing the sound and meaning of the word, and follows a linear structure in order to help reading process and struggling readers. Accordingly, the shown levels in the Theory of the Six Readings are well-articulated with the literal, inferential and critical level described above. This relation is presented in figure 2.

De Zubiria has separated his scheme in two reading groups. The first group, Elemental Readings, is formed by the basic required skills in the comprehension of easy and basic texts; Elemental Reading steps are four: Phonics Reading, Primary Decoding, Secondary Decoding, and Tertiary Decoding, and they are designed in order to extract the explicit and implicit information from the text. The second group, Complex Readings, is related to the explanation of complex structures, like argumentative articles and essays. Complex reading steps are: Pre-Categorical Reading, Categorical Reading and Metatextual Reading. In which, the reader needs to find the compound organization of the text by means of the identification of the propositions

\(^{2}\) This is the name that De Zubiria gives to the reading strategies.
from the text and the explaining of the circumstances of the text. In this sense, the Theory of the Six Readings does not only have six reading steps, but also it has seven stages in which Pre-Categorical Reading was included with the aim of “decoding the structure of the text” (De Zubiria, 2001, p. 163), this means that the reader seeks the argumentative structure of the text and the propositions that the author wrote in order to develop his/her idea along the text (See figure 2).

![Figure 2: Theory of the Six Readings](image)

1.2.1.1 **Elemental readings.**

1.2.1.1.1 **Phonics reading.**

This is the first reading level proposed in the Theory of the Six Readings. With the aim of understanding phonics reading in De Zubiria’s terms, it is relevant to answer: What is phonics according to the Theory of the Six Readings? To give a solution to this question, in 1971, the English psycholinguist Frank Smith established two great distinctions in order to define what phonics is. Firstly, Smith argued that “phonics is not phonetics, which is the scientific study of the sounds of a language” (1971, p.159), so phonics reading is not directly related to the
International Phonetic Alphabet. Secondly, he said that “phonics is not phonemics, which the study of the classes of sounds that do constitute significant differences in a language” (1971, p.160), because Phonics Reading is guided by perception of the sounds. Last of all, the author defines phonics as “a strategy for mediated word identifaction a system for finding out the sound (...) of a word” (Smith, 1971, p.160). This definition of phonics is likewise De Zubiria’s conception about, because in the Theory of the Six Readings, Phonics Readings is to “convert sequences of graphic signs into words, combining the skills to recognize the graphemes and syllables” (De Zubiria, 2001, p. 12).

In this step, the reader begins to learn to domain the sounds of the graphic signs, while he/she does a fast secuential process of analytic / synthetic or synthetic / analytic cycles. According to the figure 3, the first phonics mechanism -Analysis- disassembles the word in its smallest components: phonemes or its graphic equivalent. After disassembling and identifying the phoneme and grapheme, the second phonics mechanism -Synthesis- assembles the phonemes in a syllable unit in order to reach the whole word and its understanding. In the brain, these changes occur automatically in a second, providing a fast process that continues word by word while reading.

![Analytic-synthetic mechanism in phonics reader (adapted from De Zubiria, 1995)](image)

Lems, Miller, & Soro (2010) consider “the ability to phonics decoding is a vital skill for beginning readers. The ability to decode and pronounce words is one of the most powerful predictions of reading success” (2010, p. 157). Phonics Reading contributes to word recognition;
the brain has the capacity to recognize words by their spoken sounds, because “when we encounter a new (...), phonics loop converts the visual or audio stimulus of the word into a sound-based *phonics image*. The brain (...) creates a short term *slot* to hold the word” (Lems et al., 2010, p. 157) the reader has this ability in his/her mother language, as well as, when acquiring a foreign one, for the reason that, the brain is opened to incorporate new knowledge -words-. Accordingly, De Zubiria claims that, by means of the elemental operations of phonics elemental recognition, “the brain identifies the grapheme pattern as a unit after a time of practicing, this occurs until the reader learns how to pronounce the word [automatically]” (1995, p. 85). In addition, the new knowledge -words- leaves the short term slot and moves to the long-term memory as explained by Lems et al. “Rehearsal solidifiers the word in long-term memory through visual and auditory repetition” (2010, p.157).

In view of the figure 3: analytic-synthetic mechanism in phonics reading, it is important to highlight the specific moments when Analysis and Synthesis mechanism are activated. Close to De Zubiria, the synthetic mechanism is used “when a word is known (...), this becomes automatically recognition” (1995, p.88) in phonics reading process, the analysis and the synthesis work according to reader’s needs, this means that the brain activates the synthetic operations when the word has been included in the long-term memory, in other words, the synthesis is activated as soon as the word is recognized by the reader, hereon, the reader takes into account the whole word, the global, instead of the disassembled word -grapheme by grapheme-. On the contrary, when the brain does not recognize a word the analysis mechanism is switched on in order to dissemble the word in each grapheme; with this, the reader can do a better reading of the word. Then the reader learns to dissemble swiftly a word. After using the
analysis mechanism, the synthesis mechanism is activated, this happens with each new word while the reader incorporates the new word in his / her long-term memory as said before.

Finally, there are specific tasks with the purpose of favoring the usage of analysis and synthesis mechanisms. When the reader faces unknown words, the brain is forced to use the analysis mechanism because the phonics sound is new and the reader needs to pay clearly attention and avoid any distraction. On the other hand, the best way to favor the usage of synthesis mechanism is when the reader faces known words, words that the reader already familiar. At the end of use of these mechanisms, the reader has added new phonics sounds and words to his / her brain. In conclusion, the analysis and synthesis mechanisms of the phonics reading help readers with the recognition of the known and unknown words, allowing him / her domains the grapheme and words when reading.

1.2.1.1.2 Primary decoding.

The second reading comprehension level is related to the word, remember that the first one is according to the smallest part of the word: the grapheme. Before talking about Primary Decoding, it is significant to establish what the conception of the word is in relation to the Theory of the Six Readings; De Zubiria considers “word would not exist without thought (…). Thinking implies the words” (1995, p. 93), in point of fact, word generalizes things in a specific category; this means that generalization constitutes the basic mental operation closely associated with thinking processes otherwise notions as concepts would dissipate; thereby generalization originates notions -concepts-. However, not all words have semantic independence, i.e., they do not give a specific notion (concept), for example water is a notion that evocates particular knowledge, this has semantic independence. In the other hand, the article the needs more words with the aim of expressing any notion; in this case, the does not have semantic independence.
Tantillo says that “we must recognize words and decipher unfamiliar vocabulary” (2013, p. 12), words constitute vocabulary, in which; words are the single unit of language, while vocabulary is all words in a particular language. The importance of vocabulary is because “vocabulary knowledge is clearly a key component of the background knowledge that enables comprehension” (Tantillo, 2013, p. 12), indeed, reader is exposed to a number of words, De Zubiria names vocabulary as lexicon and defines it as “the quality and quantity of significant words of a speaker” Now, a question comes on this case: is it enough to be exposed to or understand the words in a text? De Zubiria reflects about that issue, and obviously, it is important to understand the text, in effect, “Primary Decoding is the first step in reading comprehension” (De Zubiria, 1995, p. 107), it means that Primary Decoding begins with the lexical retrieval mechanism (see figure 4) with the aim of transforming each word into notion, this mechanism is responsible for “finding each concept by each word that gets into [the brain]” (De Zubiria, 1995, p. 108). Thus, this mechanism must be highly sophisticated with the intention of solving a number of problems. In addition, lexical retrieval mechanism also operates in language learning; Lems et al. declare “for English language learners, it is especially important to receive ample exposure to new words so that they can reach a comfort level in trying them out” (2010, p. 173), involving Phonics Reading, when being exposed to (new) words; and Primary Decoding, while trying them out by means of the lexical retrieval.

The lexical retrieval mechanism is helped by the memory. While the reader is reading, he/she recognizes words written in his/her memory and its meaning gives significance into the text. According to Truelove, Clarkle, Hulme, & Snowling (2014), in lexical retrieval mechanism reader is working memory processes, where “reading involves holding information in mind about what has just been read while continuing to decode upcoming words and to integrate this
new information with what has gone before” (2014, p. 20). In conclusion, *lexical retrieval* is directly joined to the identification of the words that the reader has and remembers from his/her working memory.

Continuing with Primary Decoding, there are three mechanisms more (see figure 4): Contextualization, Synonymy, and Word-formation. When students face a text in foreign language, even in mother tongue, they confront unknown words, at the same time; they need to know how to employ strategies in order to recognize those strange words. In this sense, the Lexical retrieval mechanisms recall notions according as the reader reads the word.

![Figure 4: Primary Decoding mind-fact](image)

*Contextualization* is defined as “finding the unknown meaning of unfamiliar word taking clues from the context in which the unfamiliar word is written” (De Zubiria, 1995, p. 110). In primary decoding, this is the second main mechanism; number one is *lexical retrieval*, because this helps the reader to understand the use of the words. In addition, contextualization has an important role: *connotation*. In order to describe the connotation of a word it is pertinent to take into account the possible meanings that a word would have (polysemic word), for instance the word *bank* in the following sentences:

---

3 This term is used in order to define the creation of new words by means of adding prefixes and suffixes.
1. They pulley the canoe up on the bank.

2. That bank holds the mortgage on my home.

3. Where do you bank in this town?

4. Bank on your good education.

Analyzing the connotation of the word bank in the context of the above sentences, it has different meanings. In sentence 1, bank means “the scope beside a body of water” (McIntosh, 2013, p. 60), while in sentence 2, bank means “a financial institution that accepts deposits and channels the money into lending activities” (McIntosh, 2013, p. 60), in sentence 3, bank means “to do business with a bank or keep an account at a bank” (McIntosh, 2013, p. 60). Finally, in sentence 4, bank means “[to] have confidence or faith in” (McIntosh, 2013, p. 60).

As it is seen, bank is the same written word in all of the sentences; however the meaning is different in each one. This occurs through the words that accompany the word bank, that is called context and the different meanings of the word in the context are called connotation, Aebersold & Field, 1997, say that “guessing the meaning of the word from the other words around it (…) is perhaps the most usefull skill that readers can have. (…) to guess, or infer, what that word mean (…) will serve students well in almost every reading situation” (Aebersold & Field, 1997, p. 142). The mechanism of contextualization permits to identify the different connotations that the words have taking into account the context. As a final point, in 2013, Tantillo considers contextualization as a relevant aspect in inference, she says that “this [mechanism] also involves inference, because you have to draw an inference based on the context in order to figure out what a word means” (Tantillo, 2013, p. 29).

The third mechanism in Primary Decoding is synonymy (see figure 4); “this mechanism refers to many words which are conceptually interchangeable” (De Zubiria, 1995, p. 120),
therein, it is possible to say the same notion in different ways by using words with similar connotation. In this sense, Fromkin, Rodman, & Hyams found “there are no perfect synonyms, yet have many semantic properties in common” (2003, p. 181). However, the synonym—or synonyms—of a word depends on the contexts where the original word is placed; in fact, “some synonyms have very close to the same meaning and are used interchangeably” (Fondrk & Frasca, 2005, p. 81), for instance, the words awful and terrible have a close meaning “causing fear or dread or terror” (McIntosh, 2013) for that reason they are recognized as synonyms.

Other aspect that De Zubiria relates to synonymy mechanism is antonymy “synonymy searching possible meanings for a word (...) by similarity or opposition” (De Zubiria, 2001, p.19). Antonym is defined as “words that have opposite or almost opposite meanings” (Fondrk & Frasca, 2005, p. 81), the importance of synonyms and antonyms is connected to the text comprehension because “familiarity with synonyms and antonyms will make it easier to understand everything you read” (Saddleback educational publisher, 2011, p. 7). For example, when a reader faces the antonyms of the word bad: good, nice, fine, among others, adds new vocabulary to his/her lexicon; for that reason, both synonyms and antonyms are indispensable for building reader’s vocabulary because each one adds more words to readers’ lexicon, and those new words are remained by means of the lexical retrieval mechanism.

The fourth and last mechanism in Primary Decoding is word-formation, De Zubiria describes this process as “the decomposition of the unknown words in their roots” (2001, p. 19), this type of process helps readers when they need to know the meaning of any unknown word, if a reader can analyze the parts of a word, he/she can understand the words into the text, i.e., the reader reads the word unfriendly, but he/she does not know its meaning, by means of word-formation mechanism he/she can understand the meaning of unfriendly word. Aebersold & Field
(1997) considers “every word has a base, also known as a root or stem, which is the smallest unit of meaning” (1997, p. 144). Coming back to the previous example, the word *unfriendly*, and the reader can identify the meaning of this word by finding its smallest unit of meaning. In fact, the reader does *un-friend-ly* and finds the *prefix*: un-, the *base*: friend and the *suffix*: -ly. Probably, the reader knows the meaning of the base friend, and could identify the new word adding the *suffix* –ly (friendly, adjective) and finally the *prefix*: un- (unfriendly) which means not, i.e. the word changes into a negative sense. *Word-formation* mechanism gives to the reader a specific strategy in order to identify the meaning of the word without any help that the word itself. To sum up, the mechanisms of the Primary Decoding: Lexical Retrieval, Contextualization, Synonymy, and Word Radicalization, (see figure 4) help the reader to understand the meaning and the function of the word into the text, for that reason De Zubiria considers that Primary decoding is the first step to understand the text and, obviously, here reading comprehension process starts.

**1.2.1.1.3 Secondary decoding.**

To continue with the reading comprehension steps according to the Theory of the Six Readings, and after considering the graphemes in Phonics Reading, and the word in Primary Reading, it is the *Secondary Decoding* in which the sentences are the part of the text that transmits author's *thoughts* or, as De Zubiria names them, *propositions*. In Secondary Decoding the reader is centered in the sentence and how the sentences construct the meaning of the text, and transmit author’s thoughts –propositions-. De Zubiria says that “words express concepts, concepts integrate though its, and thoughts –propositions- are expressed by means of sentences created with words” (1995, p. 149). In this reading comprehension level, the reader has four mechanisms with the aim of healping to get the propositions. The four mechanisms proposed in
Secondary Decoding are *punctuation*, *pronominalization*, *chromatization*\(^4\), and *propositional inference* showed in figure 5.

![Diagram](image)

**Figure 5: Secondary Decoding mind-fact**

*Punctuation* is considered as “separation of phrases and sentences” (De Zubiria, 1995, p. 175), helping readers to understand the message in an easier way, so punctuation helps to guide the readers to comprehension, in this case, reading comprehension. In 2007, Curtis says that “the basic purpose of punctuation is to organize the words in a way that helps the reader understand precisely what the writer meant to say” (2007, p. 10) where the reader reaches the message because of punctuation delimits phrases and sentences, indicates when to stop, do a pause, connect, disconnect and notice ideas. In addition, Dorn & Soffos (2005) consider “readers must understand punctuation in order to understand writers’ message” (2005, p. 57). However, meaning can be incomprehensible “if punctuation is misused or ignored” (Dorn & Soffos, 2005, p. 57). As follows, punctuation is a relevant aspect to take into account when reading. In terms of the Theory of the Six Readings, De Zubiria establishes “students are in need of learning to separate phrases [and sentences] in order to recognize the limits of the phrases [and sentences]”

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\(^4\) De Zubiria uses this term in order to describe those words that give any nuance to notions and relations (verbs) into the propositions.
(1995, p. 175); it is possible by means of punctuation. Next, an example is given with the aim of understanding the importance of punctuation in reading comprehension:

1. He wants to thank my brothers, Sam and John.
2. He wants to thank my brothers, Sam, and John.

Notice that in sentence one the punctuation mark (comma) separates his brothers’ names; this comma clarifies that his brothers are Sam and John; whereas in sentence two the use of the punctuation marks indicates that he wants to thank his brothers and two men more: Sam and John. Finally, with this sample, it is clear to see that punctuation influences reading and readers’ understanding from different viewpoints: the sentence length, the sentence meaning, the speed while reading, and, obviously the inference in reading comprehension. Lastly, when students “see and heard punctuation at the same time, they will develop a sense of how punctuation contributes to the meaning of words” (Lems et al., 2010, p.176).

Next mechanism in Secondary Reading, according to the Theory of the Six Readings, is pronominalization (see figure 5); which De Zubiria defines as “the secondary reading process in which the brain locates the previous sentence terms substituted by the pronoun[s]” (1995, p. 177); in this sense, pronominalization helps writer avoid repetition and redundancy, the point is that the reader has to discover the connection among nouns, names –subjects- and pronouns. Therein, pronominalization asks for concentration by the reader, because he/she needs to know what previous word (noun, name, or subject) is linked with the pronoun placed after, as it is explained by Tennent: “the reader has to work out what the pronoun refers to (…) so the reader has to make a link within the text if coherence is to be maintained” (2015, p. 47).

Taking into account the pronominalization mechanism considerations mentioned formerly and the concept that at this point, “pronouns resolution relates to (…) sentence levels”
(Tennent, 2015, p. 47), by means of the following text, this paper continues illustrating how pronominalization mechanism works:

“(1) The children built a sandcastle. (2) The children took a long time to build the sand castle. (3) The waves came near the sandcastle. (4) The children tried to protect the sandcastle, but (5) the waves went pass the children. (6) The waves hit the sandcastle and knocked over the sandcastle”

(Tennent, 2015, p. 47)

The above text avoids the use of pronouns, this brings different aspects like repetition which becomes redundant, tiredness because the reading does not flow, giving the impression that the text stops all time at the end of each sentence. It is different if the text is written by using pronouns in order to avoid the aspects mentioned before: (1) The children built a sandcastle. (2) They took a long time to build it. (3) The waves came near it. (4) The children tried to protect the sandcastle, but (5) the waves went pass them. (6) The waves hit the sandcastle and knocked over it. In this example Pronominalization changes the nouns children and sandcastle into pronouns that are related to; such as, sentence one relates the word children to the pronoun they in sentence two, and the word sandcastle (sentence one) with the pronoun it (sentence two), these changes provoke fluency while reading, as well as, demand reader’s attention and inference. In general, Pronominalization exchanges words (names, nouns) by using pronouns without any variation in the meaning of the message, and reader needs to have the ability to recognize and link them.

Up to this point, Secondary Decoding has worked identifying sentences in the text. In this way, reader identifies the sentence taking into account its structure by means of punctuation and pronominalization. However, sentences have other important aspects that give and help readers with the connotation and interpretation of the propositions (or author’s thoughts). Thereby, chromatization is the mechanism that helps the reader with the identification of specific features which explain, clarify, and expand the message of the proposition.
Many propositions, particularly complex ones, have nuances and shades between yes and no “a kind of ‘shorthand’ telling you that the person doesn’t agree and is planning to object” (Lems et al., 2010, p. 176) usually, shorthand words are connectors and they provide the sense of positive or negative authors’ point of view, indeed De Zubiria cathegorizes them as *chromatic words*. This means that, this attribute of the propositions forces readers to grasp, discover and preserve the inherent nuance in every thought with the aim of understand what the author wants to say. It is considered “Students’ reading difficulties are partly related to *chromatization* mechanism: they have never been trained in discovering the exact nuance of the proposition” (De Zubiria, 1995, p. 183). On the contrary, *chromatization* mechanism permits the identification of the type of the sentence in positive or negative one, and the modification of the any part of the proposition.

Propositions have three main parts: notion one (N1), who or what does the action; relation, this is the action of the proposition; and notion two (N2), who or what receives the action. In addition, there are chromatic words in all parts of the proposition. In this sense, they are: chromatic words of the notion, the relation and the proposition; they are explained in the following table:

*Table 1:*

*Types of chromatic words*

<table>
<thead>
<tr>
<th>Type of chromatic words</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromatic words of the notion</td>
<td>They modify notion one and two of the proposition by means of illustrating,</td>
<td>Exemplifying: such as, as. Quantifier: all, few, most of them, cardinal numbers.</td>
</tr>
</tbody>
</table>
indicating quality and quantity of them. They are usually adjectives.

<table>
<thead>
<tr>
<th>Property:</th>
<th>size (tall, small), color (red, blue, green), shape (round, square), and features.</th>
</tr>
</thead>
</table>

They are generally connected to the relation. Most of them end in –ly, and others have different spelling. They are the modifier of the relation.

<table>
<thead>
<tr>
<th>Certainty:</th>
<th>Also, sure, certain, really, indeed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negation:</td>
<td>Never, no, neither, at no time, etc</td>
</tr>
<tr>
<td>Doubt:</td>
<td>Maybe, perhaps, etc.</td>
</tr>
<tr>
<td>Mode:</td>
<td>Firstly, lastly, strongly. Etc.</td>
</tr>
</tbody>
</table>

They are related to the sense of the whole proposition.

<table>
<thead>
<tr>
<th>Place:</th>
<th>at home, in Bogotá, in the hospital, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time:</td>
<td>in 1995, Now, before, after.</td>
</tr>
<tr>
<td>Circumstance:</td>
<td>According to,</td>
</tr>
</tbody>
</table>

In the Secondary Decoding the last mechanism is Propostional Inference (see Figure 5); where “reader reduces the sentence to authors’ thought(s): propositions” (De Zubiria, 1995, p.190), because of “the writer encodes thought as language and the reader decodes language to thought” (Goodman, 1990, p. 12). In order to get those propositions, reader needs to consider the information given by the sentence, finding the most and less important facts, obviously, depending on the relation of the sentences with the main topic of the text; consequently, “inference (…) engages students and solidifies understanding” (Tantillo, 2013, p. 24) by means of the proposition reader achieves to consolidate the understanding of the information which has been read. However, reader has to take into account and do not forget that Propositional
Inference mechanism requires previous ones because “inference means making use of syntactic [and] logical (...) clues to discover the meaning of unknown elements [even] if these are words, then word-formation and derivation will also play an important part” (Grellet, 2004, p. 14).

Briefly, De Zubiria contemplates Propositional Inference as the processes in which reader eliminates the unnecessary words and finds the essential information of the reading. This process is done through given or proposing the proposition of the sentence taking into account how much information the writer expects reader to infer. Finally, the reader starts to connect his/her understood ideas with the meaning of the reading; therein, Nuttall (2005) considers “inference requires readers to use their intelligence” (2005, p. 116) that is not hard at all. Nevertheless, reader has the need of “knowing how to make inference” (Lems et al., 2010, p. 177) as well as “to improve it by training” (Nuttall, 2005, p. 116) due to inference is not difficult, but it needs practice with the purpose of reaching expertise.

1.2.1.1.4 Tertiary decoding.

As it has seen, The Theory of the Six Readings leads readers along reading understanding, starting with the sound of the word in Phonics Reading; next, word meaning in Primary Decoding, and then the sentence in Secondary Decoding. Now, in Tertiary Decoding, the reader is guided to find the semantic structure of the text; this means that the reader needs to understand how the writer wrote the text as well as what the meaning of the text is, i.e. author’s macro-thoughts, bearing in mind the propositions, macro-propositions, and the relation among them.

Tertiary Decoding has three mechanisms which help reader to find that semantic structure of the text. Those mechanisms are macro-proposition, semantic structure, and modelling (see figure 6).
Macro-proposition is constructed by using the propositions inferred in Secondary Decoding. In other words, macro-proposition refers to the “main argument” (Tantillo, 2013, p. 38) of the text or paragraph. Tantillo considers “the use of evidence [in order to] make arguments” (2013, p. 38). According to The Theory of the Six Readings, propositions are the evidence that reader gets in order to construct the macro-proposition or the main argument as Tantillo proposes. While reading, reader faces relevant and non-relevant information this is why, in Tertiary Decoding, reader have to discover the essential propositions or, as it was said before, “main arguments” named Macro-proposition. At this point, reader “must be able to find the topic sentence [propositions] which expresses the main argument [macro-proposition] in a paragraph” (Tantillo, 2013, p. 68).

Macro-proposition is built by the use of classifying the principal and secondary ideas from the text, i.e. to categorize the propositions, extracted from reading, into relevant and non-relevant propositions. Relevant information expressed in the propositions needs classifying, selecting, and removing with the aim of inferring the ideas that the writer wanted to transmit by
means of the text, this information is stated through macro-proposition in which the data included in propositions is summed up.

After getting macro-proposition(s) from the text, it is important to get the relation among them. In this sense, the second mechanism in Tertiary Decoding: semantic structure (see figure 6) allows decoding the relation among macro-propositions of the text becoming the main purpose of this type of reading. In 1995, De Zubiria establishes the semantic structure as: 1. “the system of the macro-propositions, 2. linked by taking into account the nexus that exist among them” (De Zubiria, 1995, p. 203). Actually, in reading comprehension and exactly semantic structure “inferencing requires actively interacting with the words in a sentence and among sentences” (Lems et al., 2010, p.177).

In order to get the semantic structure as well as its logical coherence, readers need to use linking words which allow connecting macro-propositions thereby readers get an absolutely understanding of the reading. Thus, the use of signal words transitions and connectors help readers to build the ‘traffic signal’ among macro-propositions and help to understand what is coming up and where to go. While getting the semantic structure, readers must use different types of connectors: conjunctions and adverbs; taking into account De Zubiria’s purpose, they are classified in three main groups: Adding and connecting ideas, sequence and conclusion. Some of them are summed up in table 2.

Table 1:

Types of connectors

<table>
<thead>
<tr>
<th>Types of connectors</th>
<th>Adding and connecting ideas</th>
<th>Sequence</th>
<th>To conclude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Again</td>
<td>Because</td>
<td>First</td>
<td>In conclusion</td>
</tr>
<tr>
<td>Also</td>
<td>But</td>
<td>Second</td>
<td>Finally</td>
</tr>
</tbody>
</table>
Finally, the last mechanism is *modelling*, which is understood as “the mnemotechnic procedures to convert the semantic structure into a graphic model” (De Zubiria, 1995, p. 207). In fact, when readers have the skill of using graphic models actually they have gotten, understood and interpreted the new knowledge, because of graphic model “specially helps activate a reader’s prior knowledge for reading” (Lems et al., 2010, p. 179), accordingly, De Zubiria’s considers *modeling* mechanism “records, in the long-term memory, the acquired knowledge while reading” (2001, p. 22). Therein, readers get the intellectual purpose of reading: acquire new knowledge because “anything that ever gets into long-term memory stays there permanently” (Smith, 1971, p. 78). In *modelling* mechanism, De Zubiria establishes a type of digram named *mind-fact*. This is divided into notional mind-fact, propositional mind-fact, conceptual mind-fact, and argumentative mind-fact.

The notional mind-fact (see figure 7) is directly related to the intellectual processes of introjection (from eye to image), projection (from image to object), Semantics (from image to

---

5 This paper authors’ translation from the Spanish term: mentefacto.
word), and comprehension (from word to image). This mind-fact is specially used when reader recognizes the word in Phonics Reading.

Figure 7: Notional mind-fact diagram

Next, the propositional mind-fact represents the propositional thinking. Here, readers model the proposition taking into account notions 1 and 2, Relation and their chromatic words (see figure 8). This mind-fact is related to Secondary Decoding.

Figure 8: Propositional mind-fact

The conceptual mind-fact is based on the four intellectual processes. In this sense, the supra-ordinated process includes a class in a higher one; this is to find the closest class where the concept is included. The concept has an upper class where it comes from. Next, exclusion in which the main purpose is to get differences inside the same class, i.e. the facts that does not describe the concept. Then, sub-ordinated is related to the features of the concept; here the characteristics of the concept are established in order to individualize the concept. Finally, it is the
infra-ordinated process, where reader subcategorizes inside the same class, i.e. to find the different types of concepts are inwards the concept (see figure 9).

![Conceptual mind-fact diagram](image)

*Figure 9: Conceptual mind-fact*

The last type of mind-fact explained in this section is the pre-categorical mind-fact (see figure 10) linked to the argumentative thinking. This one organizes specially the structure of essays allowing a completed view and understanding of the text. This mind-fact begins with the *thesis* which is the nucleus of the text. This thesis is supported by main ideas or main arguments which readers need to find inside the text. Finally, reader has to get the conclusions that the writer expresses in the essay, those are the derivations of the thesis.

![Pre-categorical mind-fact diagram](image)

*Figure 10: Pre-categorical mind-fact*
1.2.1.2 **Complex readings.**

1.2.1.2.1 *Pre-categorical and categorical readings.*

Pre-categorical reading level refers to complex readings understood as academic papers, essays and argumentative articles. In the first version of the Theory of the Six Readings, this level did not exist even so, in 2001, De Zubiria considers this level because he proposes that the reader needs to find the argumentative structure and the relationship that the macro-propositions have among them, which is comparing with the branches of a tree, with the aim of comprehending the text. On account of, this type of reading is preferably used in higher educational levels as high school level and university, where the reader reach the *Pre-categorical Reading* by means of five steps: Essay decoding, elemental analysis, elemental synthesis, analysis guided by the synthesis, synthesis guided by the analysis. See figure 11.

*Figure 11: Pre-categorical Reading mind-fact*
In the Pre-categorical Reading the text analysis starts with the use of the Elemental Readings (phonics reading, primary, secondary, and tertiary decoding) explained above. In this sense, in the Essay decoding mechanism, the reader manages his/her reading to understand the meaning and find the propositions of the text with the aim of extracting the macro-propositions in the second Pre-categorical Reading step: Elemental Analysis mechanism. In addition, it is important to number the macro-propositions in ascending order as they appear in the text, with the purpose of getting a logical text sequence, this can be useful later. Essay Decoding and Elemental Analysis mechanisms should be used as many times as the reader considers they are necessary.

Concurrently, the Pre-categorical Reading actually begins with the Elemental Synthesis. The purpose of this step is to identify the “thesis” on which the text is built and articulated, i.e. this intellectual action discovers the “spinal column” in which the text is written and all other macro-propositions converge on it and out of it.

With respect to the fourth mechanism in Pre-categorical Reading step, Analysis guided by the synthesis, the task is to set the role of all other macro-propositions taking into account the thesis. It means, to set which ones are arguments, derivations and definitions accordingly to the thesis. As a final point in this reading step and after marking off the role of the macro-propositions of the text, the last mechanism, Synthesis guided by the analysis, has as purpose to discover the organization of the macro-propositions, it is to get the existing connections (arguments and derivations) among them. These connections argue sub-arguments and / or sub-derivations as the structure explained in figure 10.

In the same way, De Zubiria establishes the same mechanisms in the Categorical Reading and Pre-categorical Reading steps; the difference between them is the complexity in which the
**Categorical Reading** refers to merge concepts in order to find a wider and more complex category in the text.

1.2.1.2.2 **Meta-textual reading.**

Finally, it is the Meta-textual Reading step; in other words, this process is considered as an external reading by means of the act of contrasting the text by way of three external aspects: a. the author, b. the society where the author lives, and c. other texts. This reading level seeks to compare the system of the ideas in the text with the system of ideas in other texts, with the aim of understanding the external logic of the text. Taking into account the principles of this reading level, De Zubiria (2001) recommends three mechanisms so as to reach the meta-textual reading process. They are socio-cultural circumstances, meta-semantics of the person and critical analysis mechanism. See figure 12.

![Figure 12: Meta-textual Reading mind-fact](image)

Accordingly, the **Socio-cultural circumstances** states to explain the circumstances of the text as regard to the external relationships of the text with other systems (texts). In this sense, De Zubiria considers the text is obviously written by the author. Nonetheless, the historical,
political, and cultural circumstances, that the author lives, are included in the text because of the author reflects his/her own life circumstances, to wit, read from the text to the culture. On the other hand, there is the Metasemantics of the person mechanism, it reads the author instead of the text, this means to read the aspects that the writer expresses him/herself in his/her work; in such a way, in this reading step, the reader is not in charge of discovering what the text states, but what the author pretends when he/she wrote the text; in other words, it is to read from text to the author. This kind of reading is with the aim of knowing the author and, by means of this, increasing the understanding of the text, specifically why text exists. To advance in this level permits to understand more deeply the context where the text was created.

The last mechanism proposed by De Zubiria is Critical analysis mechanism, in which the reader contrasts the text with other texts. This reading mechanism could be possible in two ways. First, when the reader contrasts the author’s ideas with other authors’ ideas; and, second, when the reader contrasts the author’s style with other authors’ styles. De Zubiria (2001) considers to read critically is to confront the ideas of the text by showing its differences, similarities, inconsistencies or/and complementariness. At this point, the reader has reached a critical stance and a high valuation attitude at the moment of facing a text.

Finally, as it has already shown, the Theory of the Six Readings is an organized structured reading strategy with the aim of driving readers’ cognition throughout the understanding of the text. As this theory is grammatical, it helps foreign language learners to understand the language, as well as acquiring vocabulary and the logical sequence of the language. This is why, this paper researchers consider the Theory of the Six Readings as an option to validate the hypothesis presented in this thesis.
2 Methodological Framework

This chapter covers the aspects related to the design of this study, taking into account Creswell & Plano (2011), who establish the embedded experimental design with the aim of developing mixed educational researches. By the way, this section of the study is organized in the following sequence: first, it is established the design of the study; second, the research variables are delimited in order to verify the hypothesis of the study; third, the characterization of the participants of the study; fourth, data collecting instruments, and finally, the procedure related to the embedded experimental design.

2.1 Design of the study

This mixed study is conducted following the embedded experimental design established by Creswell & Plano (2011) “this model is defined by having qualitative data embedded within an experimental design” (p. 69), in which, the quantitative and qualitative data are relevant at the moment of verifying the hypothesis by means of three phases, following an experiment: pretest, treatment, and posttest. In addition, this study is developed with one group in order to avoid students’ exclusion because of professional ethics issues. Correspondingly, all participants of the group are trained in the treatment; nevertheless, a sample of the group is analyzed with the aim of verifying the hypothesis.

On the other hand, a “mixed [study] involves both collecting and analyzing quantitative and qualitative data” (Creswell & Plano, 2011, p. 6), in this research, the quantitative data are collected by means of the pretest and the posttest; whilst the qualitative data are gathered by the treatment; this means, the qualitative data are embedded within a quantitative methodology in “one-phase approach” (Creswell & Plano, 2011, p. 69). See figure 13.
To work out and characterize this research, the phases of the study state their different moments; those are, the delimitation of the problem through the diagnosis in order to find the variables of the study and formulate the hypothesis. In consequence, to design the implementation on account of the *Embedded experimental design*, which is carried out as follows:

- The design, application, and assessment of the pretest to establish the initial state of the participants.
- The design and implementation of the training to verify the hypothesis of the study.
- The application and assessment of the posttest to establish the final state of the participants.
- Further considerations of the training effects and overcoming.

### 2.2 Research variables

This study considers its variables as independent variables and dependent variable. In fact, the independent variables are the cause of the dependent variable (the effect) in concordance of the core of the problem. The independent variables are related to the types of

*Figure 13: Embedded design: embedded experimental model (adapted from Creswell & Plano, 2011)*
readings proposed by De Zubiria and applied in this research. In this sense, the first independent variable is Phonics Reading, the second one is Primary Decoding, the third one is Secondary Decoding, and the last one is Tertiary Decoding. Inside of these independent variables, there are some mechanisms to each type of reading, worked in the training treatment. For that reason, each independent variable contemplates its reading comprehension mechanisms; likewise, the dependent variable is the promotion of the inferential reading comprehension level caused by the implementation accordingly to the objective of this study. See figure 14.
With regard to the independent and dependent variables, in this study, it is understandable that Phonics Reading, Primary Decoding, Secondary Decoding, and Tertiary Decoding are the cause to promote the inferential reading comprehension level. It is expected that, the effect will be perceived in the readers’ performance and comprehension at the moment of reading.

2.3 Participants

This project is carried out at a single-sex public school named Liceo Femenino Mercedes Nariño. This school has three shifts: morning, afternoon, and evening shift. In afternoon shift, there are five groups in ninth level. Accordingly, the group of this study is 905. This group was chosen because one of the researchers is in charge of its English class. In the group, there are 36 students between 13 and 17 years. All of them are in the phases of the study. However, in order to get the data to this study and verify the hypothesis, 12 of them are taken as the sample of the study. Those 12 participants were selected after the pretest was applied and the criteria of selection were related to their pretest results. Since the intention of the study is to what extend the Theory of the Six Readings promotes the inferential reading comprehension level, the participants chosen were those with the lowest results in the pretest.

The participants are disciplined, they follow instructions, and if they have any question they usually ask to the teacher. The participants’ social strata are 1, 2, or 3 according to the local stratification. They do not have the possibility to travel or interact with English native speakers. Nevertheless, at school they have the opportunity to take 4 hours of English class distributed in 3 classes of 80 minutes each one, in spite of the hourly intensity, the participants show lack of reading processes required in the English curriculum of the school taking into account their educational level; this means, their reading processes do not reach the inferential reading
comprehension level (Westwood, 2008). In addition, in this study there are two researchers, one woman and a man both are English teachers from the public sector.

2.4 Data collection instruments

In this study, the researches collect the data in two ways: quantitative and qualitative. In relation to the quantitative data, the researches plan to collect the information by means of the pre and posttest (annex 3) applied to the participants of the study. These instruments provide information about the initial and final participants’ conditions in concordance to the promotion of the inferential reading comprehension level.

On the other hand, the qualitative data are collected by way of 3 types of instruments: Workshops, observation, and questionnaire. In consequence, the first instrument is directly related to the implementation designed by 5 workshops (annex 4) based on the elemental readings of the Theory of the Six Readings structure. They are widely explained in treatment stage.

The second one is an observation (annex 5) sheet, in which the researchers have the possibility to take notes about participants’ behavior while implementation. This form leads the observation according to the independent variables of the study and takes into account aspects related to participants’ performance while doing and working in reading comprehension processes proposed in the workshops.

Thirdly, there is a questionnaire (annex 6), in which all participants are asked to answer it at the end of the each workshop with the intention of recognizing participants’ considerations, feelings, and their point of view after the intervention. Thus, this instrument has four open questions related to: participants’ difficulties at the moment of doing the workshop, language and/or type of reading aspects, language acquisition, and text understanding. In conclusion, the
purpose of collecting these qualitative data is to inform the development of the treatment and the additional information in reflection of explaining or expanding on the experimental outcomes of the study.

In brief, the qualitative data are embedded in the quantitative ones because the researches consider necessary “to follow up on the results of an experiment” (Creswell & Plano, 2011, p. 67) in concordance to the hypothesis and objectives of this study.

2.5 Procedure

As it was mentioned before, this mixed study follows an *embedded experimental design* (Creswell & Plano, 2011) developed by means of three phases: pretest (quantitative), treatment (qualitative), and posttest (quantitative); which are presented as follows.

2.5.1 Pretest.

The first phase is the pretest, which pretends to measure the initial reading comprehension conditions of the participants before starting the implementation in the treatment phase.

This pretest is divided in four parts and designed taking into account the Theory of the Six Readings structure in order to verify the participants’ preliminary performance in the literal and inferential reading comprehension levels. Thus, the structure of the pretest is according to the independent variables and starts with the Phonics Reading stage, where the participants recognize the relationship between the sounds of the words and their writing. Secondly, Primary Decoding, where the participant needs to use the mechanisms of Lexical retrieval, Contextualization, Synonymy, and Word-formation with the aim of identifying the word and its meaning inside the text. Next, the Secondary Decoding, in which the reader faces the main ideas of the text by means of punctuation, pronominalization, chromatization, and propositional
inference mechanisms. Finally, the last part of the pretest refers to the Tertiary Decoding. In this stage the participant is led to infer the meaning of the text by using the reading mechanisms of Macro-proposition, semantics structure, and modelling.

In addition, the pretest is designed based on a scientific text with effortless vocabulary and basic language structures. This means that the text is easily understandable according to the participants’ language level. Participants have one week, i.e. 3 sessions of 80 minutes each one, to answer the pretest.

2.5.2 Treatment.

The second phase, in this study, is the treatment. It is designed based on the results of the pretest and the elemental readings of the Theory of the Six Readings: Phonics Reading, Primary Decoding, Secondary Decoding, and Tertiary Decoding. At this point, it is important to consider the design of this treatment emerges from the necessity of creating an intervention taking into account the Theory of the Six Readings inasmuch as there is not any previous design using the Theory with the aim of being applied in reading comprehension in English as a foreign language.

In such a way, this phase is applied along 10 weeks; each week has three sessions of 80 minutes, in which participants work progressively in their reading comprehension processes. At this point, they have the opportunity to build the meaning of the sounds, words, main ideas, and text meaning according to the model of the Theory of the Six Readings. As regard to this process, it is clearly explained like so. See table 3.
Table 2

Structure of the treatment

<table>
<thead>
<tr>
<th>Workshop</th>
<th>Week</th>
<th>Sessions</th>
<th>Type of reading (independent variable)</th>
<th>Mechanisms</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Phonics Reading</td>
<td>Analysis</td>
<td>Sound of words</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>3</td>
<td>Phonics Reading</td>
<td>Synthesis</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary Decoding</td>
<td>Lexical retrieval</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Contextualization</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Synonymy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Word-formation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Word identification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>2-5</td>
<td>12</td>
<td>Phonics Reading</td>
<td>Analysis</td>
<td>Sound of words</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Phonics Reading</td>
<td>Synthesis</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary Decoding</td>
<td>Lexical retrieval</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Contextualization</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Synonymy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Word-formation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Word identification</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-5</td>
<td>6-10</td>
<td>15</td>
<td>Phonics Reading</td>
<td>Analysis</td>
<td>Sound of words</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Synthesis</td>
<td></td>
</tr>
</tbody>
</table>
As it is noticed above, this treatment has 5 workshops distributed in three moments in keeping with the difficulty of the Theory of the Six Readings as well as the literal and inferential reading comprehension levels. All of them are designed by the researchers and according to the necessities of the participants. Also, all the workshops have the characteristics described below:

- All workshops are designed with a different reading text, with diverse topic specially based on science and technology aspects.
- The vocabulary of the readings is known and easily understandable.
- The language structure of the texts consists of basic grammar tenses.
- Participants have the possibility to listen to a native speaker’s recording of each text in order to identify the sounds of the words in the Phonics reading stage.
• The presentation of the text has a picture with the aim of contextualizing the reader into the text.

• The design of the workshops is according to the independent variables (see figure 14).

In this way, the first workshop is related to Phonics Reading and Primary Decoding mechanisms in the literal reading comprehension level. This workshop pretends to identify the sound of the words, word extension, and word meaning into the text throughout 6 exercises designed in relation to the reading given with the workshop. This workshop takes place in the first week along 3 sessions of 80 minutes.

The second and third workshops also include Phonics Reading, Primary Decoding, as the first workshop, and add Secondary Decoding. In this moment, participants start to infer the reading by means of the main ideas. This strategy pretends workshop 2 introduce the secondary decoding mechanisms by getting the propositional inference and, in workshop 3, to reinforce that knowledge. This section of the treatment takes 4 weeks; this means 12 sessions of 80 minutes each one.

The last component of the treatment embraces the literal and inferential reading comprehension level throughout the Phonics Reading, Primary Decoding, Secondary Decoding, and Tertiary Decoding respectively. However, these two workshops promote especially the inference in reading comprehension thanks to the mechanisms used in the last two types of readings. In fact, these workshops pretend to deepen into the inference through the meaning of the text. The implementation of workshops 4 and 5 takes five weeks, i.e. 15 sessions of 80 minutes each one.
2.5.3 Posttest.

The procedure in the posttest is carried out as ones in the pretest stage. In this moment, the same test is applied in the pre and posttest, and the participants have the same time to answer the activity.

The intention of applying this posttest is to evaluate participants’ conditions after the treatment, as well as comparing the initial circumstances with the ending ones. Like so, the participants’ changes can be registered and analyzed in favor of verifying the hypothesis of this study. For that reason, both the pretest and the posttest are taken with the same settings: designing, time, space, and population.
3 Data Analysis

Taking in to account, this mixed study is based on *Embedded experimental design* (Creswell & Plano, 2011); for that reason, in this chapter, the collected data are examining in two ways: quantitative and qualitative. The quantitative data are taken from both pre and posttest results, they are comparing and analyzing by a *relative frequency table* and representing by means of pie chart and bar chart diagrams. This analysis seeks to compare and establish participants’ reading comprehension differences in the initial and ending moments of the study and according to the variables of this research whereas the qualitative data are taken from the instruments used while the treatment: workshops, questionnaire, and observation. These data are analyzing by means of inferential statistics, more exactly, the use of *tabulation* and *categorizing* with the aim of informing and supporting the results of the quantitative data. At the end, this analysis considers the validation of this study hypothesis through the independent and dependent variables delimited before (see figure 14). In this way, the effect of the treatment stage is evaluated to follow up on the results of the experiment.

3.1 Pretest – posttest analysis structure

The pretest, as well as the posttest, was applied to all 12 participants from the sample in the same space, time, and design. These had the intention of measuring respectively the initial and ending participants’ conditions in the inferential reading comprehension level. In this way, both the pre and posttest results provided the quantitative data of this study. These data were organized in a relative frequency table in order to analyze and compare them.

Notice that the relevant frequency table of this study has 12 columns distribute as follows. First, there is the *variable* column which specifies each independent variable of the study. Second, it is the *bins* column; this corresponds to the possible results to each independent
variable. In *bins* column, there are three possible results: zero (0) when the participant did not do the task according to the independent variable, 0.5 when the participant did partially the task according to the independent variable, and 1 when the participant did completely the task according to the independent variable. Afterward, there are the columns related to the pre and posttest data where \( n_i \) represents the absolute frequency of the statistical variable, it is the number of times the value of the variable it appears in the sample \( (N) \). The fourth column is \( f_i \), these data are the relative frequency, and it is the ratio between the absolute frequency and the sample size \( (N) \) represented in the following formula:

\[
fi = \frac{n_i}{N}
\]

\( N = \) sample size

Formula 1: Relative frequency formula

The fifth and sixth columns are \( N_i \) and \( F_i \) respectively, also known as absolute frequency accumulated and relative frequency accumulated. The first one is the sum of times it has appeared in the sample a smaller or equal to the value of the variable: \( N_i: n_1+n_2+n_3 \ldots +n_i \). While the \( F_i \) is the ratio between the absolute frequency accumulated and the size of the sample represented as follows:

\[
F_i = \frac{N_i}{N}
\]

\( N = \) sample size

Formula 2: Relative frequency accumulated

The last column in the pretest data is the percentage relative frequency, represented as \( p_i \). This is the 100 % of the relative frequency: \( p_i = f_i \times 100 \)
Finally, the last five columns of the relative frequency table are corresponding to the
posttest data. They are named as the pretest data: \( ni, fi, Ni, Fi, \) and \( pi. \)

Now, and after explained how the relative frequency table was designed, this paper
analyses and compares the results of the pretest and posttest taking into account each
independent variable of this delimited in figure 14, as well as the embedded data (qualitative)
gathered from the treatment, observation, and questionnaire in the implementation phase. First of
all, it is important to recall independent variables: Phonics Reading and Primary decoding work
in concordance of literal reading comprehension level.

3.2 Independent variable 1: Phonics Reading outcomes

Accordingly, in table 4, it is presented the first independent variable data obtained in the
pretest and posttest steps:

\( Table 3 \)

Relative frequency table of the independent variable 1: Phonics Reading pretest - posttest
results.

<table>
<thead>
<tr>
<th>INDEPENDENT VARIABLE 1</th>
<th>BINS</th>
<th>PRETEST RESULTS</th>
<th>POSTTEST RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonics Reading</td>
<td></td>
<td>( ni, fi, Ni, Fi, pi % )</td>
<td>( ni, fi, Ni, Fi, pi % )</td>
</tr>
<tr>
<td>Identification of the sounds of words</td>
<td>0</td>
<td>1 0.1 1 0.1 8.3</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>4 0.3 5 0.4 33</td>
<td>2 0.2 2 0.2 17</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>7 0.6 12 1 58</td>
<td>10 0.8 12 1 83</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>12 1 100</td>
<td>12 1 100</td>
</tr>
</tbody>
</table>

As table 4 shows, the pretest data, related to the first independent variable: Phonics
Reading demonstrated that the 58 % of the participants identified the sounds of words. Also, the
33 % of the participants partially achieved the goal (also see figure 15). This means, in the
pretest 5 participants did not accomplish the task according to the independent variable 1.
On the other hand, the results tended to increase in the posttest stage because the 83% of the participants completely did the task and the other 17% of them partially completed it (see figure 15). In other words, in the posttest 10 participants reached to complete the task, and 2 partially did it. In sum up, the posttest demonstrated 3 participants more got to identify the sounds of words, and 1 participant partly completed the task by using the mechanism of the Phonics Reading proposed in the Theory of the Six Readings. In fact, there was not any participant who did not complete the task as it is showed in figure 15. These results indicate the participants reached to identify the sounds of words of the text as well as the relation between the written and spoken words.

Figure 15: Phonics Reading independent variable: pre and posttest results comparison
In relation to the treatment, the participants had the possibility to work with Phonics Reading independent variable in all five workshops, where it was evident that the participants began progressively to recognize the sounds of words while they listened to text. In addition, the researches could observe that, in the beginning of the intervention, participants got difficult to follow the reading and, in some cases, they got distracted. However, this situation was changing whilst the workshops were implemented because, at the end of the treatment, most of the participants got an enhanced performance in the activities related to and allowing them getting higher scores in the posttest.

The following participants’ comments reveal their perception and feelings about the aspects and activities applied according to Phonics Reading, these comments were extracted from the open questions administrated at the end of each workshop (in situ):

Workshop 1:

P6: Because we understand both the subject and the bringing to know different ways to learn the language [...] .

P7: Fortalecen mucho la forma de “ortografía” y entender mejor el inglés.

P12: Entendí mejor [...] la pronunciación.

Workshop 3:

P2: Seguir la lectura sin perderme con facilidad.

Me ayudo a mejorar el inglés.

In this sense, in the open questions of the questionnaires applied, the participants expressed that Phonics Reading helped them with imperative aspects like English spelling, to follow a reading without getting lost, and language acquisition by means of listening. Closely to this aspect, Mora states “students should be encouraged to bring together their knowledge of words with phonics when reading” (2011, p. 99).
3.3 Independent variable 2: Primary Decoding outcomes

In the second independent variable, *Primary Decoding*, the participants specially worked in written word identification by means of *Lexical Retrieval, Contextualization, Synonymy, and Word-Formation* mechanisms based on the Theory of the Six Readings. In this independent variable, participants faced tasks related to their lexicon or the vocabulary they previously knew, the meaning of words, the possible synonyms or antonyms of a word, and the words which could be possibly formed from other words taking into account their context and in consideration of the text. As follows, table 5 shows the results of both pre and posttest in the second independent variable:

*Table 4*

*Relative frequency table of the independent variable 2: Primary Decoding Pretest - posttest results.*

<table>
<thead>
<tr>
<th>INDEPENDENT VARIABLE 2</th>
<th>BINS</th>
<th>PRETEST</th>
<th>POSTTEST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ni</td>
<td>fi</td>
<td>Ni</td>
</tr>
<tr>
<td>Primary Decoding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lexical retrieval</td>
<td>0</td>
<td>3</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>9</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Contextualization</td>
<td>0</td>
<td>11</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Synonym</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>4</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>8</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Word-formation</td>
<td>0</td>
<td>10</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12</td>
<td>1</td>
</tr>
</tbody>
</table>
As stated by table 5 about Primary Decoding independent variable results, the pretest indicates that most of the students had difficulties when they identified written words through the mechanism of this type of reading, this phenomenon especially occurred in the mechanisms of Lexical Retrieval, Contextualization and Word-Formation. Indeed, in Lexical Retrieval mechanism the results indicated the 25 % of the participants did not complete the task and the other 75 % of the participants partially did it; in relation to these results 9 participants partially did the task and 3 did not do it.

In like manner, participants also scored low results in Contextualization mechanism because the 92 % of them did not do the task and the 8 % of the participants did it uncompleted, these are 11 participants and 1 participant respectively. In Word-Formation mechanism outcomes were not different from the previous ones because the 83 % of the participants did not do the activity and the other 17 % of them partially did it. These results correspond to 10 participants and 2 participants one-to-one. However, there is a relevant difference with Synonymy mechanism in which the 67 % of the participants got to complete the activities related to this mechanism, and the other 33 % of them did it uncompleted. In this manner, 8 participants completed the task and the other 4 participants achieved half-done task.

On the other hand and taking into account the results of the posttest showed in figure 16, it is evidenced that the participants scored better results in each mechanism of Primary Decoding. Firstly, in Lexical Retrieval mechanism the 67 % of the participants partially achieved well-done task, while the 33 % of them got to complete the task. Thus, in comparison to the pretest, the results of the posttest moved favorably, because 8 participants incompletely did the task and 4 participants did it completed.
Secondly, in *Contextualization* the posttest displayed that the 83% of the participants completed the tasks and the 17% of them did not totally reach the goal. In comparison to the pretest, it was noticeable how *Contextualization* mechanism helped to participants and their results because of in the posttest results were moved significantly in reason of 10 participants reached good performance by completing the tasks, one did uncompleted task and one did not do the task. See figure 16.

Thirdly, In *Word-formation* mechanism, the 92% of participants reported a half-done task, and the 8% of the participants did not do the task. These mean that 11 participants got uncompleted task while 1 participant did not do it.

Lastly, as in the pretest, *Synonymy* mechanism achieved the best results for the reason that the 92% of the participants totally did the task and the 8% of the participants did a partial activity. In other words, in the posttest 11 participants achieved a completed task. This last mechanism achieved the best results in the pretest as well as in the posttest taking into account this independent variable. As a final point, figure 16 allows comparing participants’ performance in both the pre and posttest data according to each mechanism of the Primary Decoding stage. In this sense, it shows that in all mechanisms participants improved their results, even in *Synonymy* where they achieved good results before in the pretest moment.

![Primary Decoding independent variable: Pre and posttest results comparison](image-url)
Taking into account the qualitative data of the second independent variable, by analyzing Word-formation mechanism, and spite of their results in this mechanism, it is possible to say that they got ahead because in the pretest 10 participants did not do the task whilst in the posttest 11
participants did it uncompleted. Finally, it is important to highlight that, either pre or posttest; no one totally accomplished the tasks of this mechanism.

Both pre and posttest results make evident participants’ cognitive processes in reading comprehension by means of Primary Decoding mechanisms where “word identification and listening comprehension are primary determiners of reading comprehension” (Perfetti, Landi, & Oakhill, 2005, p. 239). In this manner, in the implementation of the treatment, participants were conducted in order to manage vocabulary (words) of the text while they were reading. In observation, researches could find that participants used strategies like highlight words from the text and, in order to understand unknown words, they used dictionary and their mother tongue (L1).

On the other hand, the most difficult aspect found was when participants had to give the meaning of words according to the context and “use author’s clues to meaning” (Blachowicz & Ogle, 2008, p. 54). Firstly, they had difficulties with the usage that the author gave to words in function of the text; and secondly, the participants did not have the language structure to build the definitions. However, these situations changed along the treatment because in the beginning of the implementation the participants gave their definitions in L1, then they tried to use English (L2) but with several language structure mistakes, although at the end of the implementation, they improved their definitions in relation to word meaning according to the context and the use of L2 in order to express that definition taking into account the meaning of the words into the text.

In the questionnaire, the participants said that Lexical Retrieval, Contextualization, and Word-formation mechanisms of the Primary Decoding step were difficult to understand, and then how the situation changed with the implementation, as it is showed below (in situ):
Workshop 1:

P3: Fue difícil darle un significado a cada palabra puesto que muchas veces la traducción no era del todo correcta por ende no le habría sentido.

[...] Muchas veces las palabras tienen palabras adicionales que uno no entiende, entonces ya sabiendo que es sufijo y prefijo las cosas son más claras.

P11: Porque sabemos el significado de una palabra sin necesidad de diccionario y darle un mejor sentido a las palabras.

Lo de dar un significado a las palabras según el texto y completar las palabras.

Workshop 4:

P6: Sí, porque todos los ejercicios nos hacían aprender y entender más el vocabulario, identificar y aprender más el lenguaje y el texto [...].

P7: Entendí mejor ubicar los prefijos y sufijos. Buscar el sinónimo y antónimo.

Workshop 5:

P9: Los sinónimos y antónimos me ayudaron a entender el texto.

P12: Entendí mejor la pronunciación [...]

Therefore, as it is stated “children must come to readily identify words and encode their relevant meaning into the mental representation that they are constructing” (Perfetti et al., 2005, p. 229), at the end of the implementation, they recognized that these mechanisms were applicable at the moment of acquiring vocabulary and relating it with the context of the reading with the aim of understanding the text. Lastly, participants reflected about they used less of dictionary. According to Synonymy mechanism, participants considered it was the easiest because of their previous knowledge in L1, something evident throughout the pre and posttest results.

3.4 Independent variable 3: Secondary decoding outcomes

The third independent variable is Secondary Decoding. This one contemplates the inferential reading comprehension level by using the mechanisms of Punctuation,
Pronominalization, Chromatization and Propositional Inference. In the Theory of the Six Readings, these mechanisms are related to the sentences that exist into the text and how those sentences have the main idea(s) –propositions- of the text. Subsequently, the pre and posttest were conducted in this way and the results are shown in the below table:

Table 5

Relative frequency table of the independent variable 3: Secondary Decoding Pretest - posttest results

<table>
<thead>
<tr>
<th>INDEPENDENT VARIABLE 3</th>
<th>BINS</th>
<th>PRETEST</th>
<th>POSTTEST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ni</td>
<td>fi</td>
</tr>
<tr>
<td>Secondary Decoding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>6</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>4</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Punctuation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>5</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>5</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Pronominalization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>8</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>4</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Chromalization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>5</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>6</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Propositional Inference</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As it is evidenced in table 6 above and the figure 17 below, the pretest results have a low-score tendency especially in the mechanisms of Chromatization and Propositional Inference. Therefore, in the first one, 8 participants, who represent the 67% of the sample, did not do the activity, and 4 of them, the 33% of the rest of the sample, got a half-done task. With respect to Propositional Inference, the 42% of the participants did not do the task; another 50% of them did it uncomplete and the last 8% of the participants achieved well-done activity. These results
are represented by 5 participants who did not do the task, 6 participants who did it uncompleted, and 1 participant who got good performance.

In relation to the other two mechanisms, *Punctuation* pretest results were distributed as follows: 6 participants, the 50% of the sample, did not do the activity; 4 participants, the 33% of the participants scored a partial task done; and the 4 participants, a 17% of them, achieved a well-done performance in the activities of this mechanism. The last mechanism of this independent variable was *Pronominalization*. As result, the data were principally distributed between low scores 0 and 0.5. Thereby, 0, 42 in the proportion of the participants who did not do the task (see table 6); this proportion is represented by 5 participants, a 42% of the sample. In the same way, there were a 42% of participants who did a half-done task. Lastly, the 16% of the sample achieved a complete task, they were 2 participants (see figure 17).

The posttest data indicate enhancing results in all mechanisms of this independent variable. In such a way, the best performers were in *Punctuation*, *Chromatization* and *Propositional Inference* mechanisms. In the first mechanism, 9 participants, representing the 75% of the sample, completely did the task. Notwithstanding, the other 3 participants, who represented the 25% of them, did not do it. In the second mechanism, 0, 25 was the proportion of participants who got a partially done task. This proportion is embodied by 3 participants of the sample. In this mechanism, the last 75% of the participants reached the goal. In *Propositional Inference* mechanism, the 83% of the participants reached to complete the task, this is 10 participants, and 2 participants did it uncomplete. Finally, in *Pronominalization*, the 42% of the participants did uncompleted task, this is 5 participants. The remaining 58% of the participants, i.e. 7 participants, got to do the task. See figure 17.
Secondary Decoding Independent variable 3: Pre and Posttest results comparison

Pretest: Punctuation mechanism
- 17%
- 33%
- 50%

Posttest: Punctuation mechanism
- 0%
- 25%
- 75%

Pretest: Pronominalization mechanism
- 17%
- 42%
- 41%

Posttest: Pronominalization mechanism
- 0%
- 58%
- 42%

Pretest: Chromatization mechanism
- 0%
- 33%
- 67%

Posttest: Chromatization mechanism
- 0%
- 25%
- 75%

Pretest: Propositional inference mechanism
- 8%
- 42%
- 50%

Posttest: Propositional inference mechanism
- 0%
- 17%
- 83%

Figure 17: Secondary Decoding independent variable: Pre and Posttest results comparison
In consideration of the pre and posttest results of the Secondary Decoding step, the treatment exposed participants’ advance in the mechanisms of this independent variable. In the results of the workshops 3, 4 and 5, participants enhanced gradually in the mechanisms of *Punctuation* and *Chromatization* in which they delimited the extension of the sentences - text and the different phrases could change or intensify the message of the sentence respectively. At the moment of the participants read the text by using these mechanisms, researchers observed that participants used to highlight sentences in the text which, in most of cases, it was information related to the proposition(s). During measuring of the extension of the text, participants needed to pay specially attention at moment of delimiting each paragraph without cutting author’s ideas and context; while implementation, they progressively acquired the ability to determine the sentences as well as the paragraphs taking into account the ideas of the text.

By means of *Chromatization* mechanism and propositional mind-fact, participants understood the structure of the propositions (notion 1, relation, notion 2 and chromatizers) and, as a consequence, they deducted the information from the context. In addition, participants stimulated their inference reading level through *Propositional Inference* mechanism when each of them had to get the inference of the text by using the previous mechanisms of Primary and Secondary Decoding steps. However, the most difficult mechanism was *Pronominalization*, on account of participants found troubles when they tried to connect the different types of pronouns with the persons that pronouns were related to. According to the independent variable 3, participants achieved the lowest scores in *Pronominalization* mechanism for the period of the treatment; nevertheless in the posttest they reached better results.

In relation to participants’ point of view and feelings at the moment of facing this variable, they had the following considerations (*in situ*):
Workshop 2:

P6: Fue difícil saber lo del pronombre.

P9: Fue difícil lo de las nociones y los pronombres.

P8: Fue difícil lo de los pronombres ya que me logro confundir mucho.

P12: Se me dificulto colocar a quien pertenece el pronombre.

Workshop 3:

P2: Fue difícil el punto que tenía que hacer los proposiciones y el de los adverbios [chromatizers].

P3: Una de mis dificultades fue sacar las proposiciones de los párrafos [...].

P4: Fue difícil resolver los mentefactos [proposicionales].

P11: se me dificulto extraer los adverbios y adjetivos.

P12: Los ejercicios me han ayudado he mejorado.

Workshop 4:

P2: Fue difícil encontrar el número de párrafos.

P7: La verdad no entendí muy bien el texto, pero los ejercicios me ayudan quando hay que sacar las ideas.

P8: Entendí mejor lo de las nociones [...] adjetivos y adverbios.

P9: Fue difícil hacer el diagrama.

P11: Se me facilitó sacar las proposiciones.

Entiendo y extraigo con más facilidad las ideas principales.

P12: Sacar las ideas principales del texto me hacían entender de qué se trata.

In this point, participants considered Secondary Decoding mechanisms helped them with organizing text ideas and understanding the text, as well as they improved language aspects like adverbs, adjectives, auxiliaries thanks to the use of Chromatization mechanism. Finally, they said that the most difficult was to work with Propositional Inference mechanism and to use the propositional mind-fact in order to modelling the propositions.
3.5 Independent variable 4: Tertiary decoding outcomes

The last independent variable stated in this study was Tertiary Decoding. This type of reading is concerned with inference and the whole meaning of the text. In this sense, participants used the mechanism of *Macro-proposition, Semantics Structure, and Modelling*. The results of the pre and posttest are analyzing by means of the following table:

*Table 6*

*Relative frequency table of the independent variable 4: Tertiary Decoding Pretest - posttest results*

<table>
<thead>
<tr>
<th>INDEPENDENT VARIABLE 4</th>
<th>BINS</th>
<th>PRETEST</th>
<th>POSTTEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tertiary Decoding</td>
<td></td>
<td>ni  fi Ni Fi pi %</td>
<td>ni fi Ni Fi pi %</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>11 0.9 11 0.9 92</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>1 0.1 12 1 8.3</td>
<td>5 0.4 5 0.4 42</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>0 0 12 1 0</td>
<td>7 0.6 12 1 58</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12 1</td>
<td>100</td>
</tr>
<tr>
<td>Macro-proposition</td>
<td></td>
<td>12 1 12 1 100</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>0 0 12 1 0</td>
<td>3 0.3 3 0.3 25</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>0 0 12 1 0</td>
<td>9 0.8 12 1 75</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12 1</td>
<td>100</td>
</tr>
<tr>
<td>Semantics Structure</td>
<td></td>
<td>12 1 12 1 100</td>
<td>1 0.1 1 0.1 8.3</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>0 0 12 1 0</td>
<td>11 0.9 12 1 92</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>0 0 12 1 0</td>
<td>0 0 12 1 0</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12 1</td>
<td>100</td>
</tr>
<tr>
<td>Modelling</td>
<td></td>
<td>12 1 12 1 100</td>
<td>1 0.1 1 0.1 8.3</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>0 0 12 1 0</td>
<td>11 0.9 12 1 92</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>0 0 12 1 0</td>
<td>0 0 12 1 0</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>12 1</td>
<td>100</td>
</tr>
</tbody>
</table>

This independent variable pointed to the inference reading comprehension level by means of *Macro-propositions* (main ideas) and the total understanding of the text (*Semantics Structure*). Therefore, in the pretest results of the table 7, it was evident that participants achieved poor performance in all mechanisms of Tertiary Decoding. Thus, in *Semantics Structure* and *Modelling* mechanisms, all participants of the sample did not do the task related to. Additionally, bearing in mind *Macro-proposition* mechanism, 0.08 of the proportion of participants did a half-
done task. This quantity is actually minimal because of it means just one participant of the sample, i.e. the 8% of the participants; the other 92% of the participants, 11 participants, did not do the task. See figure 18.

Figure 18: Tertiary Decoding independent variable: Pre and Posttest results comparison
In the last independent variable (Tertiary Decoding) the data fluctuation is very different from the previous three. As shown in figure 18, it is demonstrated that the results of the posttest are increasingly different of the pretest ones. According to this independent variable, the mechanism where participants reached the best results was *Semantic Structure* because 9 participants, representing the 75% of the sample, did the task, and 3 participants, the 25% of them, did half-done task. In this mechanism, participants achieved a good performance due to most of them moved their outcomes by completing or half-doing the task in relation to the pretest where all of them did not do the task.

Moreover, in *Macro-proposition* mechanism, the proportion of participants who completed the task was lower in view of the 58% of the participants totally reached the goal. The other 42% of the participants did partially the task. In this manner, participants had troubles at moment to write the macro-propositions of the text by using the propositions extracted before. At this point, they showed fewer issues with the inference reading comprehension level in contrast to the pretest.

However, and in different way, in *Modelling* mechanism, no one participant did completely the task. In this mechanism, 11 participants did uncompleted the task whilst 1 of them did not do it, these outcomes are represented by the 92% and 8% of the participants respectively. In *Modelling* mechanism they achieved a better performance when using the propositional mind-fact than the conceptual one.

As it is noticed, in Tertiary Decoding mechanisms participants had completely different outcomes and it is important to highlight that this type of reading conducts the reader to the inference of the text which it is the meaning of it; in other words “inferential comprehension […] requires the orchestration and manipulation of information from the text” (Rasinski & Brassell,
In this sense, in the implementation of the treatment, workshops 4 and 5 emphasized this type of reading and while this phase participants’ performance were considerably different from the results of the posttest because of in Modelling mechanism was in the activity where most of the participants got better processes. This permits the researchers to infer that in the posttest participants concentrated more on Macro-propositions and Semantics Structure mechanism and less on the Modelling one. However, in the implementation it was clear participants worked on their reading comprehension by means of the application of the three mechanisms.

In the implementation of the 4 and 5 workshops, participants had the following points of view (in situ):

**Workshop 4:**

*P2:* Estos ejercicios me hicieron entender el texto de una manera distinta y más exacta a lo cotidiano.

*P10:* Estos talleres me hicieron dar cuenta de que hay un nuevo concepto de aprendizaje.

**Workshop 5:**

*P2:* Fue fácil el mentefacto.

*P3:* Entendí el uso de los conectores.

*Sacar las proposiciones según los párrafos.*

*Unir las proposiciones usando correctamente los conectores.*

*P6:* Yo entendí el vocabulario, sacar proposiciones y mejorar en hacer la macro estructura.

*P8:* Necesité un poco de ayuda en la parte de hacer las proposiciones, porque todavía las hago muy largas.

*Me fue difícil unir las proposiciones.*

*El tipo de cuadro conceptual al final de la actividad lo comprendí mejor.*

*P10:* [...] Entender el texto.
In their analysis, participants found important aspects such like they acquired easier the propositions and they could manipulate the text in function of their need of it. Also, they recognized with this strategy they learnt how to extract the ideas from the texts and, at the same time, it was a new way to understand texts. In relation to *Semantics Structure* they said that they understood the text structure by connecting the macro-propositions; thus, it was good, because they could foster their paragraph construction. Finally, and bearing in mind that “understanding a situation or object from a technical description involves constructing a representation of that object or situation” (Hegarty, Carpenter, Just, & Pearson, 1996, p. 653), participants considered they comprehended *Modelling* mechanism and its propositional and conceptual mind-facts at the moment of representing the text. Nevertheless, it is already known the posttest results in *Modelling* mechanism aspect according to the previous dissertation.

In relation to researchers’ observation, it was palpable this last two workshops were hard to participants because they got easily tired and sometimes participants had troubles and low-scores in mechanisms where they had had good results before. However, in connection to the objectives of these workshops and taking in mind that “readers’ mental model can be considered an extended set of propositions that include inferences as well as propositions extracted from actual text sentences” (Perfetti et al., 2005, p. 230), participants identified relevant propositions in order to extract the macro-propositions from the text. Besides, in their production, participants got the structure of the text without losing the meaning of the same and they used the mind-facts with the aim of modelling the product of their reading (semantics structure) which allowing them exercised their cognitive processes.

In general terms, this implementation had striking readings with colorful pictures which aroused participants’ interest and curiosity, it was a plus. In addition, another aspect observed
was the use of L1 when participants needed to read the text by themselves, although this positively changed when reading the text for the third or fourth times because after reading it several times, they started to use L2 setting leaving aside translation. Finally, this reading comprehension structure managed participants to manipulate vocabulary by means of the use of suffixes, prefixes, synonyms, antonyms, and chromatizers (adjectives, adverbs). Thus, at the end of the implementation, participants reduced their use of the dictionary because they had acquired and remembered vocabulary by way of the reading comprehension mechanisms proposed in the Theory of the Six Readings. At this point, participants were demanded to exercise their memory in the sense of “reading comprehension requires the interaction of meaning across words, sentences and passages, there are on working memory a) at the individual word level […], b) the sentence level […] and c) text-level.” (Paris & Hamilton, 2009, p. 40). Finally, it was notable that the most challenging mechanisms were Pronominalization and Propositional Inference in Secondary Decoding. However, at the end of the implementation, participants overcame their difficulties about them. It is important to highlight that those mechanisms had relevant relationship with the inference and the meaning of the text specially Pronominalization because it is so significant at the moment of understanding the conection that the sentences –ideas- have in order to give coherense and cohesion in the text.
4 Conclusions

This chapter draws the main findings of the study in concordance to: a) the hypothesis of the study: “The implementation of the decoding mechanisms of the elemental readings, based on the Theory of the Six Readings, promotes the inferential reading comprehension level in English as foreign language”, b) its general objective “Determine to what extend the decoding mechanisms of the elemental readings, based on the Theory of the Six Readings, promote inferential reading comprehension level in English as foreign language with ninth graders at Liceo Femenino Mercedes Nariño”; c) its independent variables: Phonics Reading, Primary Decoding, Secondary Decoding, and Tertiary Decoding; and, lastly its dependent variable: Inferential reading comprehension level.

Accordingly, the first aspect to take into account is Phonics Reading and its influence in the inferential reading comprehension level. First of all, it is worth mentioning here that “[phonics] does not directly deal with meaning but it is necessary conditions that allow readers to focus on comprehension” (Rasinski & Brassell, 2008, p. 19). Thus, in this study it was noticed that Phonics Reading allowed acquiring and recognizing printed words and, as consequence, it is stated that training in Phonics Reading permits that reader pays more attention to understand the reading than to connect the word letters in order to get the whole word.

In this sense, inferential reading comprehension is not only extracting the meaning or hidden messages of the printed words but also includes the cognitive process of attention and concentration where the reader needs to recognize and internalize the words to get a better reading rhythm for linking word patterns and take all his / her notice in the text meaning. On the other hand, it was detected that Phonics Reading becomes a tool for learning the language by
acquiring the pronunciation of language words as the same time that they are included in readers’ lexicon an important aspect to discus in the findings related to Primary Decoding.

Continuing the findings of this study, the second independent variable considered was Primary Decoding in which the vocabulary was the core of the study taking into account that “vocabulary is only one component and it is a necessary, but not a sufficient skill to ensure good comprehension” (Paris & Hamilton, 2009, p. 38).

At this juncture, it is imperative to consider two outcomes which influence the inferential reading comprehension. First, the importance of recognizing words by sight. This allows promoting reading fluency because “once we have learned what the letters are telling us in a word, we can store it in our memory and retrieve more quickly than if we had to work it out” (Bald, 2007, p. 13). In the implementation of the study, it was evident that participants were struggled readers at moment of they did not know the meaning of words or they had to stop in order to find out the meaning of words. Moreover, along the implementation, participants started to recognize much faster the words in the text letting them to have a constantly reading fluidity, text understanding, and better reading comprehension performance.

In relation to the second outcome, Primary Decoding introduces and allows fostering reader's lexicon in English as a foreign language, understanding the meaning of words, and how a word works into the text. Thus, in this type of reading, the mechanisms of Lexical Retrieval, Contextualization, Synonymy, and Word-Formation respectively give opportunities to retrieve vocabulary from memory, use of context to predict the word meaning, comparing the words with its similar or different ones, and improve lexicon by means of familiar words.

In sum, Primary Decoding permits not only managing vocabulary, but also its acquisition and memorizing, becoming to a contribution to the inferential reading comprehension level,
because when reader enhances his / her lexicon, he / she adopts the words in order to give them meaning into the text. In this manner, it is stated that this type of reading encourages inferential reading comprehension level because of lexicon is a necessary element to give meaning to author’s ideas, at the same time, vocabulary promotes reading fluency and increasing reading comprehension by means of enhancing thinking and language communication.

The theory of The Six Readings conducts the inferential reading comprehension level by means of two different reading steps: Secondary and Tertiary Decoding, In such a way, the participants’ performance results in Secondary Decoding, where the focus was the meaning of the text sentences represented by way of the propositions, concluded that participants came near to the inference reading comprehension level because, in this stage, they were faced to extract the meaning of the sentences of the text. This thanks to Punctuation, Pronominalization, Chromatization, and Propositional Inference mechanisms which permit to understand the text and organize the ideas from it. Additionally, both Chromatization and Propositional Inference mechanisms specially carry on the reader to identify the location of the words into the proposition in which the reader establishes the ideas of the meaning of the text.

To measure the extend of Secondary Decoding influence in the inferential reading comprehension level in English as foreign language, it is significant to reflect on “the atoms of meaning are extracted from sentences, aggregated through the reading of other sentences of the text and supplemented by inferences to make the text context” (Perfetti et al., 2005, p. 230). Hence, Secondary Decoding mechanisms encourage the inferential reading comprehension level because they seek the reader extracts the relevant ideas to give meaning to the text while it is established the relationship of the ideas to the context of the text.
As it was said before, in Secondary Decoding, readers come near to inferential reading comprehension level, while in Tertiary Decoding they deepen in the inferential reading comprehension level as well as in the reconstruction of the meaning of the text through the inference extracted by means of Macro-proposition, Semantic Structure and Modelling mechanisms.

Therefore, in the findings of the Tertiary Decoding implementation, it was concluded that participants were conducted to manipulate and decompound the text with the aim of understanding its meaning. For that reason, in this type of reading, the cognitive processes are used to hold the information of the text in which the mental process requires direct analysis taking into account that “comprehension occurs as the reader builds a mental representation of a text message” (Perfetti et al., 2005, p. 228). Thus, Macro-proposition, Semantic Structure, and Modelling mechanisms impact inferential reading comprehension level in English as a foreign language because this model of reading comprehension leads readers to understand and evaluate information from the text along with building its mental representation according to the meaning inferred.

In conclusion, this study sought to determine to what extend the Theory of the six Readings promotes the inferential reading comprehension level in English as foreign language. In this sense, it is concluded that the elemental readings: Phonics Reading, Primary Decoding, Secondary Decoding, and Tertiary Decoding, based on the Theory of the Six Readings, promote the inferential reading comprehension level in English as a foreign language in connection with faster word identification, knowing the meaning of the words of the text –or almost all words-, giving coherent meaning in relation to the text meaning, and modelling the inference of the text. Besides, it is important to recognize that this model of reading is cognitive, taking into account
the cognitive processes of perception, attention, memory, thinking and language; also, it is grammatical and structural because it includes language aspects in order to understand and break down the text. Howbeit, this model encourages facing the inference of the text at the same time that favoring listening and writing skills plus the foreign language acquisition.

Finally, as the Theory of the Six Reading proposes not common terminology (Chromatic words, word formation, proposition, notion, and relation, among others) to the different language aspects, researchers found that they can be an obstacle to participants’ easier understanding of the step-by-step along the use of the Theory.

4.1 Recommendations

Reading comprehension in English as foreign language is a wide field for being studied. In this study, the inferential reading comprehension level was the core of researchers' interests and in this sense, the use of the Theory of the Six Readings in order to promote the inferential reading comprehension is a possible way to train students in reading skill. However, it is important to take into account some considerations at the moment of using this reading comprehension model inside the classroom:

- As this model is cognitive, grammatical and structural, it is recommended to apply it in a didactic way in order to avoid participants’ tiredness and dreariness.

- It is important to use striking readings with the aim of calling participants’ attention.

- As this reading model has been designed in order to be applied since the first school years, it is suggested to apply it since the initial school stage so that students approach to faster word recognition in the future.
Another point to take into account is to give students the option of monitoring their own reading comprehension. It is important to include that aspect in this model since it is its flaw.

Lastly, based on this study, it is imperative that language teachers plan reading comprehension strategies for their students (Holliday & Cain, 2012, p. 27) taking into account those strategies have a relevant impact on students' cognition as well as their academic processes.

4.2 Impact

Although, the Theory of the Six Readings is not the only one method, strategy, or model stated in order to comprehend written texts. However, the impact of this study is directly related to reading comprehension from a cognitive point of view. In this sense, the outcomes of this project showed that the Theory of the Six Readings is a step-by-step didactic tool for promoting inferential reading comprehension in English as a foreign language in spite of this model was designed to reading processes in Spanish as a mother tongue.

The results of this study also consider this strategy impacts not only reading comprehension, what it is its main purpose, but also language acquisition, and the use of listening and writing skills. Finally, The Theory of the Six Readings can be considered an option for solving the lack of participants’ inferential reading comprehension and also the use of this in other academic contexts.
5 References


Annex 1: Diagnostic test

Part 4
Questions 21 – 27

Read the article about the actor Antonio Banderas.

Are sentences 21 – 27 Right (A) or Wrong (B)?

If there is not enough information to answer ‘Right’ (A) or ‘Wrong’ (B), choose ‘Doesn’t say’ (C).

For questions 21 – 27, mark A, B or C.

ANTONIO BANDERAS

Antonio Banderas is a popular actor not only in Spain but all over the world. This is what he told his interviewer.

When did you know you wanted to be an actor?

Well, when I was fourteen years old I bought a ticket to see Hair at the theatre in Malaga – my home town. This show changed my life. I knew then I wanted to act.

Were your parents happy about this?

No, my father, who was a policeman, wasn’t very pleased. How did you start acting?

First I studied for five years at the Malaga School of Dramatic Art. Then I went to Madrid.

Test 3 Reading Part 4

Questions 21 – 25

Read the text and questions below.

For each question, mark the letter nearest to the correct answer – A, B, C or D – on your answer sheet.

Example answer:

Part 4

O’de English-speaking countries, it is easier to find paid work in England, as it is an EU (European) country, than in the US, Australia or Canada, where visa requirements present some restrictions.

The opportunities that exist for work and study in England are many. Jobs are advertised in the classified sections of local newspapers, and there are many positions available in hotels and restaurants. For some of these positions, as well as for jobs in childcare, the level of English required can be low. However, the better you speak the language, the greater your chances are of being hired for a position.

‘Eurocampus’ offers assistance in finding suitable housing and English training. Working Holidays, published by the Central Bureau for Educational Visits and Exchanges and Summer Jobs in Britain, give you valuable information on job opportunities in the fields of tourism, agriculture, business and industry, and language schools. Positions are also available for unpaid volunteer work in work-camps or peace organisations dedicated to urban renewal or nature conservation (volunteers frequently have room and board paid for by the organisation they are serving).

Holidays and Summer Jobs in Britain are available in British Council offices, where the Education Information Department is a great source of information on courses of study.

21 What is the writer trying to do in the text?

A give advice about working and studying in England

B advertise jobs in England

C explain what living in England is like

D warn how difficult it is to get a job in England
Annex 2: Survey

LICEO FEMENINO MERCEDES NARIÑO
SURVEY 1
RESEARCHERS: MÓNICA CORTÉS – DAVID FRANCO

1. Age: _____ 10 – 13 _____ 13 – 16 _____ 17 – 20

2. What is your social stratum?
   _____ 1 _____ 2 _____ 3 _____ 4 _____ 5

3. What is the maximum academic qualification which you aim to achieve?
   _____ Ninth grade _____ Bachelor
   _____ High school _____ Magister
   _____ Technician _____ PhD
   _____ Technologist _____ Postdoctoral

3. You are going out for 15 minutes, what would you take with you? (You can choose several options)
   _____ Mobile _____ Music player (MP3, iPod)
   _____ Lap top _____ Fashion magazines
   _____ Some books _____ Nothing

5. Rank the following activities considering that 1 is what you like most and 9 is what you like least.

   Go to the cinema _______ List to music _______
   Practice some sport _______ Reading _______
   Go to the disco _______ Surf on internet _______
   Hang out with friends _______ Nothing _______
   Watch TV _______

6. Do you like to read? Yes No

7. What kind of readings do you like most?
   _____ Literature
8. It is better to read in Spanish than in English because I understand all words.

9. I get stressed when I read in English because I don’t understand.

10. I avoid to read in English.

11. I use reading strategies when I face a text in English or Spanish.

12. I know reading strategies.

13. When I read in English, I try to understand new vocabulary by means of the context.

14. I read because some teacher ask me to do it.

15. When I read a text I confront it with other authors.

16. When I read a text I give or think about my point of view about the reading.

17. I think reading is boring.

18. If I face an English text, I need to translate it in order to understand it.
Like a machine spitting out fresh, fat popcorn, the ocean spits out penguin after penguin. They burst from the sea and belly flop onto the icy ground. Emperor penguins—the royalty of the Southern Hemisphere—have arrived.

The continent of Antarctica has only two seasons: summer and winter. Every winter, the emperors return to Antarctica from the ocean. At nearly 4 feet tall and tipping the scales at 88 pounds, only emperor penguins are big enough, strong enough, and tough enough to battle winter and raise their families on the open ice of the Antarctic continent.

**Egg Balance**
You may be dodging spring showers in April, but in the Southern Hemisphere it’s the end of summer. Emperor penguins return at this time of year to spend the winter in Antarctica. Summertime in Antarctica is cold enough, but winter is worse. It brings brutal blizzards, 24 hours of darkness, and bone-chilling temperatures. Sounds like the perfect time and place to raise a baby!

As winter looms, the penguins waddle or toboggan on their bellies up to 75 miles across the ice to reach the colony. Then they pair up, and the female lays one egg. She gives the egg to the male and returns to the sea. In order for the egg to survive, it must never touch the icy ground. That’s a challenge. No trees or bushes exist on Antarctica—it’s almost all snow and ice.

To create a nest, an emperor penguin dad uses what he has—his feet. The egg rests on top of the father’s feet, covered with a special fold of skin called a brood patch. Inside, the egg incubates at about 97°F. For the next two months, the egg must always remain on his feet.

**Group Hug**
As you lather on sunscreen by the pool, freezing forces rule the emperors’ lives. Temperatures drop to minus 40°F. Winds can rage up to 124 miles an hour.

When the weather becomes fierce, male emperors once again take advantage of what they have—each other. They crowd together to create a break from the wind and cold, and to capture body heat. The temperature inside a large huddle can reach up to 100°F.

Huddling penguins walk continuously, taking small steps every 30 to 60 seconds. Each bird gets a chance to warm up as the line...
Name: ______________________________________________________

I. **Phonics Reading**

1. Complete the chart with 8 words that have the same sound

<table>
<thead>
<tr>
<th>Ei</th>
<th>Ou</th>
<th>er</th>
<th>ai</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. How many words from the text cannot you pronounce? ______

II. **Primary Decoding**

3. How many words of the text do you know (meaning)? ______

4. According to the test, define the following words:

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>Belly</td>
<td></td>
</tr>
<tr>
<td>Baby</td>
<td></td>
</tr>
</tbody>
</table>

5. Write 2 synonyms and 2 antonyms to each word:

<table>
<thead>
<tr>
<th>Words</th>
<th>Synonyms</th>
<th>Antonyms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Find the suffix and the prefix of each word:

<table>
<thead>
<tr>
<th>Word</th>
<th>Prefix</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nearly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Royalty</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. How many sentences are there in the 5th paragraph? __________

8. According to the 4th paragraph, change the underlined pronouns into their corresponding noun.
   a. their ______________________
   b. they ______________________

9. Number each proposition according to its corresponding paragraph. Use numbers from 1 to 8.
   • The male cares the egg. _____
   • The egg incubates for two months at about 97°F. _____

IV. Tertiary Decoding

10. Write a macro-proposition for each paragraph by using the above propositions.

   Paragraph 1: _______________________________________________________.
   Paragraph 2: _______________________________________________________.
   Paragraph 3: _______________________________________________________.
   Paragraph 4: _______________________________________________________.
   Paragraph 5: _______________________________________________________.
   Paragraph 6: _______________________________________________________.
   Paragraph 7: _______________________________________________________.
   Paragraph 8: _______________________________________________________.

11. By using the linking words of the below chart, write the macro-structure of the text.

<table>
<thead>
<tr>
<th>Adding and connecting ideas</th>
<th>Sequence</th>
<th>To conclude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Again</td>
<td>Because</td>
<td>First</td>
</tr>
<tr>
<td>Also</td>
<td>But</td>
<td>Second</td>
</tr>
<tr>
<td>Besides</td>
<td>For</td>
<td>Thirdly</td>
</tr>
</tbody>
</table>

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

12. Diagram the last semantic structure by using the below model.
Annex 4: Workshop sample

BY DOUGLAS E. RICHARDS

Working outside the International Space Station (ISS), an astronaut is suddenly hit by a piece of space debris that damages his spacesuit. Alarmed, he realizes he’s just seconds from disaster. Moving fast, his prepared robot partner slaps an auto-patch over the tear in his spacesuit. Foam shoots from the patch, fills the gap in the spacesuit, and hardens instantly. Huge sighs of relief fill the ISS. Inside, the astronaut responsible for saving the spacewalker’s life controlled everything the robot avatar did—including rescuing its human partner—while it worked outside the space station.

R2: THE REAL DEAL

A robot companion can come in handy to space travelers, whether they’re as far away as Mars or as close as a space station or moon base. Space-traveling avatars, controlled remotely by humans (like the example above) are still a concept. But earlier this year NASA sent a humanoid robot into space for the first time. It’s called R2—like the droid R2-D2 in the Star Wars movies. Short for Robonaut 2, the robot was delivered by the space shuttle Discovery and will remain on the ISS to be tested.

NASA expects robots like R2 to be a huge help to astronauts. “Our goal is for robots to work side by side with humans,” says NASA’s Matt Ondler. “It’s important that they be shaped like humans so they can use the same tools and fit into the same spaces.” R2 is controlled by humans using laptops. It’s programmed to perform a number of small tasks, such as “find an object.” In most situations, humans are still far better with their hands than robots. But that’s not necessarily true in space, where astronauts must wear bulky spacesuits and heavy gloves. And since they don’t need to eat, breathe, or go to the bathroom, robonauts have the advantage for lengthy jobs.

R2 isn’t ready for spacewalks yet, but NASA hopes that future improvements will make this possible. “Robonauts will help our astronauts with the three D’s: jobs that are dirty, dull, and dangerous,” says Ondler.

Taken from: www.natgeo.com
I. **Phonics reading**

1. Read and listen the text “Space Robots” from the recording.

II. **Primary Decoding**

2. Search the following words in the text and do a sentence per each one
   
a. Damages: ____________________________________________
   
b. Patner: ____________________________________________

3. Search the following sentence and circle the synonym of the underlined word “Our **goal** is for robots to work side by side with humans”
   
   - beginning
   - Stylish
   - Loser
   
   - Objective
   - Manifold
   - Filth

4. Search the following sentence and circle the antonym of the underlined word “Where astronauts must wear **bulky** spacesuits and heavy gloves”
   
   Gentile
   Strong
   Broken
   Light
   Tired
   Spread

III. **Secondary Decoding**

How many paragraphs are there in the text? ______________

5. Write with red color the punctuation marks of this paragraph. Then rewrite the text taking into account the use of capital letters if it’s necessary.

   In most situations humans are still far better with their hands than robots but that’s not necessarily true in space where astronauts must wear bulky spacesuits and heavy gloves and since they don’t need to eat breathe or go to the bathroom robonauts have the advantage for lengthy jobs
A. Robot partners help astronauts in the International Space Station.

D. Robonauts don’t go to the bathroom.
Annex 5: Researchers’ observation

Liceo Femenino Mercedes Nariño
Observation Form
Treatment phase

Student’s name: ___________________________  Date: _____________
Workshop No.: ___________________________  Topic: ________________________

<table>
<thead>
<tr>
<th>Phonics Reading: Word identification</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Student gets distracted while reading the text.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Student follows the reading until the end thereof.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Student pronounces words in order to identify their sounds.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Student distinguishes the different sounds in a word.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary Decoding: Word meaning</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Student asks for help in order to give the meaning of the words.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Student uses dictionary or other resource to understand the unknown vocabulary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Student highlights words in the text.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary Decoding: Identifying Sentences</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Student highlights sentences in the text.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The highlighted aspects are related to proposition or propositions of the text.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Student gets confused when extracting proposition or propositions from the text.</td>
<td></td>
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</tr>
<tr>
<td>4. Student extracts relevant information by means of taking notes.</td>
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</table>

<table>
<thead>
<tr>
<th>Tertiary Decoding: Semantics structure</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Student identifies relevant propositions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. In her production, student gets the semantics structure of the text.</td>
<td></td>
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<tr>
<td>3. Student uses diagrams to model the semantics structure of the text.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Other relevant aspects:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>f</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Student uses L1 in order to complete the task.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Student completes the task by using the mechanisms proposed in the Theory of the Six Readings.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
Annex 6: Questionnaire

Dear participant: Answer the following questions in relation the workshop:

1. What was the most difficult in the workshop?

____________________________________________________________________________________
____________________________________________________________________________________
_________________________________________________________________________________

2. What aspects did you understand better in the workshop?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

3. Did you understand any language aspect that you did not know? Which ones?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

4. How did these exercises help you to understand the text?

____________________________________________________________________________________
____________________________________________________________________________________
Anex 7 Qualitative data tabulation

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>PARTICIPANTS</th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
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