# MAYOR DE SAN ANDRÉS UNIVERSITY

HUMANITIES AND EDUCATIONAL SCIENCES SCHOOL

LINGUISTICS AND LANGUAGES DEPARTMENT

**DEVELOPMENT OF DIRECTED READING THINKING ACTIVITY TO IMPROVE REFERENTIAL AND INFERENTIAL COMPREHENSION ON ENGLISH AS A FOREIGN LANGUAGE STUDENTS**

**(Thesis presented to obtain the "Licenciatura Degree")**

**FORWARDED BY:** SOLEDAD ROSA PARRA PORCEL.

**ADVISOR TEACHER:** M.A. MIRKA RODRIGUEZ BURGOS.

**LA PAZ- BOLIVIA**

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# CHAPTER I

# RESEARCH PROFILE

## 1. INTRODUCTION

Nobody can deny the can deny the fundamental importance that reading comprehension has for academic, professional, personal or social success; that is why, throughout time we have seen methodological investigations concerning to how students can improve their reading abilities; even more, if we talk about the advantage of the internet, students of 21st century have access to get more information than any other student before them. However, in the Bolivian context, we have not seen methodological investigations that focus on the improvement of referential, and even more, on inferential reading comprehension. Therefore, it is considered that all learners who work with English as foreign language at the Linguistics and Languages Department at Mayor San Andrés University need more than ever before to associate their own thinking with the information required, comprehending and learning what is written between and beyond the lines in the text.

English reading comprehension between and beyond the lines requires practice, development of linguistic abilities, effort; and over all, awareness for getting better understanding. Therefore, the proposal of "Directed Reading Thinking Activity" (D.R.T.A) as strategy provides the students with the opportunity to learn more strategically as active readers, rather than, as passive ones. In other words, students will put into practice their strong creativity and critical thinking skills. That is to say, they will be fostered to make predictions, verifications, and judgments, which will be analyzed and understood subsequently.

At this point, it should be clarified; this study attempts to solve explicit and implicit reading comprehension problems. In other words, we are concerned about overcoming Referential and even more Inferential reading comprehension difficulties.

In a very general way, as Salam, A. (2006: 4) mentions, "To understand the cohesive relationship among words, sentences, paragraphs and the whole text is known as Referential comprehension; while Inferential reading is understood as what the reader infers from the text." Therefore, it is thought that applying an instructional method such as D.R.T.A is an effective way to improve reading comprehension difficulties.

Once more, by training students to apply D.R.T.A. we are helping them to develop an awareness about the importance of the process of understanding a text and consequently, they become autonomous and efficient readers, who be able to use the process of reading as a convenient strategy; due to the fact that, they can suit and change it according to their purpose, motivation or interest.

Thus, since our main purpose of this study is teaching to apply the D.R.T.A strategy for overcoming reading comprehension problems on English as foreign language learners, we are going to explain the previously mentioned strategy into five chapters.

Therefore, Chapter I is going to stress the design of the investigation, taking into account the statement of the problem, the research purposes, the justification, the hypothesis and the identification of variables with their respective operativization.

Chapter II will review the related theories, starting from the prior researches on reading comprehension into the Bolivian context until the description and analysis of the development of D.R.T.A theories in order to comprehend and support the importance of the study.

In addition, Chapter III will focus its attention on the field of the investigation, starting with a description of the research design, the population, and the sample. At the same time, the instruments and material for data gathering with their respective stages will be described; and finally, the statistical test for approving or disapproving the hypotheses stated in chapter one will be explained.

Furthermore, Chapter IV will deal with the data analysis in order to determine and examine how the implementation of D.R.T.A contributed to the development of students' reading comprehension skills.

Finally, Chapter V will conclude with the different findings along the investigation; and of course, some pedagogical implications and recommendations for further research are going to be proposed.

## 1.1 STATEMENT OF THE PROBLEM

Reading is very important in our lives for many reasons. For example, reading takes us to worlds or places that we can not visit personally, but we can know them through books and obviously through reading. Also reading takes to a knowledge culture since reading helps us to be informed; and therefore, be able to have a critical view of the information that is presented to us; specially nowadays that through different means of communication such as the internet people are beaten with amounts of information.

In the academic field students need to read fluently and comprehensibly in order to get knowledge according to the major they are doing. Reading constitutes the most important skill at the university level since this skill will enable students to continue their academic studies, but above all, to have academic success.

In spite of the importance of reading in the Bolivian context at the San Andres University, there is a latent problem that the students of fourth level of English have. At this level, students require to get information from different sources such as books, papers, and internet to be successful academically. This implies students' need to have a good reading proficiency. However, students have different problems regarding reading. These problems go from the textual knowledge to specific development of skills.

In relation to textual knowledge, students at this level need to deal with different types of texts for different purposes. For example if they need to look some information, they will be probably require to face and informational texts. However, if they are asked to develop an essay, they will need to know, the structure of an argumentative text or if they are describing process, they will certainly need to make a description. Regarding this

situation, most of the students at Linguistics and Languages department have not developed this kind of textual knowledge, which results in lack of reading comprehension.

On other hand, something that helps to develop reading comprehension is the recognition and use of cohesive connectors such as however, because, thus although, etc. Nevertheless, students at this department have not developed that skill. Thus, this constitutes another problem for better comprehension of a text.

Still, another problem that students have is limited knowledge of vocabulary. For instance, use of synonyms, antonyms, polysemic words, phrasal verbs. This constitutes a problem if we consider that a good reader should have fluency in reading as well.

Finally, another problem for unsuccessful reading comprehension is the lack or well developed reading strategies on the part of the students. Regarding the students at the fourth level are not aware of those strategies because they could not explain which reading strategies they use when they read or they simply point out negative habits they have in reading.

For the reasons exposed above, it is necessary to work on developing students' reading strategies through an innovative reading strategy so that meaningful learning takes place. Therefore, the purpose of this study should be to determine the effect of using Directed Reading Thinking Activity (D.R.T.A) on the improvement of reading comprehension (referential and inferential reading comprehension level) on intermediate EFL students of Linguistics and Languages Department. Those students need the type of reading where they can combine analytical reading strategies with their own thinking skills concerning to the information read for understanding a text between and beyond the lines.

Consequently, this study will focus on the development of Directed Reading Thinking for answering the following question.

> *How can the implementation of Directed Reading Thinking Activity (D.R.T.A) improve Referential and Inferential reading comprehension when students of Intermediate English level from Linguistics and Language Department are dealing with English as a foreign language?*

At the same time, some complementary questions emerge, which permit us to clarify even more the formulation of the problem:

- *What is the intermediate students' reading comprehension level (Referential and inferential level) when they are dealing with English as a foreign language?*

- *What happens in the teaching learning process if TEFL teachers include D.R.T.A in their classes for improving students' reading comprehension level by using different types of texts (Informational, Narrative, and Argumentative texts)?*

- *What are the differences in the effects between the "Experimental Group" and the Control Group regarding the improvement of referential and inferential reading comprehension after using the D.R.T.A?*

In general, the term "English as foreign language" was used in this work due to the fact that in the Bolivian contexts all the population are Spanish speakers (some of us are native speakers). Specifically, talking about the students from Linguistics and Language Department English was identified as foreign language since at the fourth level they are not still acquired the English as their second language at all. In order to understand the meaning of the variables contained in this study, we consider pertinent to conceptualize them in the point number 1.6 for better understanding.

## 1.2 OBJECTIVES

The general and specific objectives are stated as follows:

### 1.2.1 General Objective:

- To determine to what extent the application of "Directed Reading Thinking Activity" could contribute to the improvement of referential and inferential reading comprehension on the fourth level students of English as a foreign language at Linguistics and Language Department.

### 1.2.2 Specific Objectives:

- To describe EFL leaners' experience in relation to reading comprehension.

- To work with informational, narrative, and argumentative texts in order to prove D.R.T.A effectiveness in the improvement of referential and inferential reading comprehension in EFL classes.

- To overcome inferential reading comprehension difficulties by using "Directed Reading Thinking Activity" (D.R.T.A)

- To support that "Directed Reading Thinking Activity" (D.R.T.A) improves referential and inferential reading comprehension on EFL students.

## 1.3 JUSTIFICATION OF THE RESEARCH

Reading constitutes acquisition and actualization of new knowledge; that is why, since a university is a center of higher education, it requires students that will be able to comprehend, interpret and analyse the scientific and technological progress; even more, those students should be able to understand and use a foreign language. However, comments arise that many students at Linguistics and Languages Department do not understand their reading tasks; they fail to identify the thesis statement or the basic author´s proposal, which is the principal function of reading comprehension. It is thought

that this situation happens due to lack of information or maybe the inadequate use of reading comprehension techniques, strategies or methods which becomes an obstacle for students' understanding. Thus, the justification of this research is developed in the following points:

As we know, there are some research concerning to analysing and comparing reading in L1 and in L2; as an example of this, we can mention the work of Lic. Flores, W. (1996) *"Reading Strategies in Spanish L1 and English L2 a comparative study*"; however, we assume the necessity to understand a text beyond a simple decoding process. In other words, we need readers who are able to make judgements, deductions, and reasoning during and after the process of reading; that is why, Directed Reading Thinking Activity is needed for encouraging students to engage actively in the process of new Knowledge acquisition.

On the other hand, students from Linguistics and Languages Department will develop the proposed strategy in a significative learning experience, due to the fact that, this strategy is considered an intelligent way to overcome reading comprehension difficulties. Therefore, students will become autonomous and efficient readers, able to face any kind of text without any fear.

At the same time, at an academic level we need active readers, who can draw inferences, deductions and reasoning through second language as a good way for understanding a text and improving their passive vocabulary. However, this situation does not happen in real life because many students do not go beyond the words on the page and do not actively develop integrated mental representations of what they read. Therefore, those students, who can construct more inferences and verbalize revisions of their prior knowledge, will be better reading comprehends. In other words, if we get good readers, students will tend to draw on background knowledge and make reasonable inferences about any reading passage.

Finally, taking into account that the non-risk taker plays a passive role by failing to go beyond the text to develop a hypothesis. Non-risk takers may look for cues from the examiner, not from the text, and may frequently respond with "I do not know"; that is the reason for fulfilling the students' needs.

## 1.4 HYPOTHESES

In this research, the following hypotheses were formulated in order to understand the problem:

**H1**: Students who work with Directed Reading Thinking Activity will improve their referential and inferential reading comprehension on English as foreign language in comparison to those students who are not working with that strategy.

**H2:** Proved with Directed Reading Thinking Activity students will improve referential and inferential reading comprehension in comparison to those students who are not applying the proposal strategy.

**H3:** The application of Directed Reading Thinking Activity in English Foreign language learners helps to improve reading comprehension levels (Referential and inferential level) of different types of texts (Informational, narrative and argumentative texts)

**Ho**: Through the application of Directed Reading Thinking Activity, students will not improve their referential and inferential English reading comprehension.

As it is stated, this study is descriptive in the first stage because first of all we are going to find out if students from Linguistics and Languages Department at Mayor San Andrés University have difficulties on their reading comprehension. At the same time, we are going to determine the level of understanding written texts through the application of a questionnaire and a diagnosis test. The results will be analyzed through a qualitative analysis.

After that, as a second stage the effectiveness of "Directed Reading Thinking Activity" (D.R.T.A) is going to be proved. This stage consisted on making a comparison related to the scores obtained in the pre and posttest of our groups of study (experimental and control group). In order to understand better the H2, which is related to the effect of D.R.T.A it will be measured and demonstrated by the use of "t student." This proof is used for evaluating if two groups differ significatively between them concerning to their score in the pre and post- reading comprehension tests.

## 1.5 IDENTIFICATION AND CLASSIFICATION OF THE VARIABLES

The variables identified in the hypotheses are stated as independent and dependent ones as follows.

### 1.5.1 Independent Variable

-Training students on the application of "Directed Reading Thinking Activity" as an instructional strategy in English as foreign language learners.

### 1.5.2 Dependent Variable

- Referential and Inferential Reading comprehension levels of informational, narrative, and argumentative texts.

### 1.5.2.1 Classification of the Independent Variable

"Variable Students' Training in D.R.T.A" was classified according to:

- The Characteristic: Categorical Variable.
- The function that keeps in the hypothesis: Independent Variable.
- Measurement of the type of variable: Qualitative Variable.

### 1.5.2.2 Classification of the Dependent Variable

"Referential and Inferential Reading Comprehension Level" were classified according to:

- The Characteristic: Continuous Variable.
- According to the function that keeps in the hypothesis: Dependent Variable.
- Measuring the type of Variable: Quantitative Variable.

## 1.6 CONCEPTUAL DEFINITIONS OF VARIABLES

In order to understand better the research, we will define the variables as follows:

**DIRECT READING THINKING ACTIVITY (D.R.T.A)**

It is a strategy that explicitly teaches students good reading habits. This strategy helps strength reading and critical thinking skills. Thus, Directed Reading Thinking Activity is designed to make students be aware of their own interpretive actions during reading. The D.R.T.A process helps students recognize predictions, judgments, and evidence verification. Research has shown that teaching meta-cognitive strategies, such as D.R.T.A, enhances understanding and comprehension of text. (Stauffer, 1975: 29)

According to Richardson and Morgan (1997: 293) D.R.T.A is a teaching strategy that guides students in making predictions about a text and then reading to confirm or refute their predictions. This strategy encourages students to be active and thoughtful readers, enhancing their comprehension. When implementing D.R.T.A, we should follow these steps:

*Direct*. Direct instruction is an approach to teaching. It is skills-oriented, and the teaching practices it implies are teacher-directed. It emphasizes the use of groups, face-to-face instruction by teachers and aids using carefully articulated lessons in which cognitive skills are broken down into small units, sequenced deliberately, and taught explicitly (Carnine, D. 2000: 5-6). Here, teachers direct and stimulate students' thinking prior to reading a passage by scanning the title, chapter headings, illustrations, and other explanatory materials. Then, teachers should use open-ended questions to direct students as they make predictions about the content or perspective of the text (e.g. given this title, what do you think the passage will be about?). Therefore, students should be encouraged to justify their responses and activate prior knowledge (Traub, J. 1999: 47).

*Reading*. Teachers should have students read up to the first preselected stopping point in the text. Then teacher prompts students with questions about specific information and asks them to evaluate their predictions and refine them if it is necessary. This process should be continuing until students have read each section of the passage. (Stauffer, 1975: 32).

*Thinking:* Into this conception, we take into account the work of Scharer, Pinnell, Lyons, & Fountas (2005: 24) who express that "Reading is thinking cued by written language." Therefore, good thinking involves the use of strategies, metacognition, and knowledge. In this light, we will use think aloud strategies where D.R.A. (Direct Reading Activity) can mold the thinking skills and process into reading comprehension.

**READING COMPREHENSION**

It consists of the mental aptitude that the readers constantly develop, as an interaction with the text, identification of main and secondary ideas and their respective interpretation. At this point, we have to clarify that reading has four levels of understanding: Literal or Referential, Inferential, Creative, and Critical (Collage, 2004: 3), but for this study the first two ones are going to be taken into account, due to the importance that we consider for the viability of our study. Therefore, at this point we have to conceptualize the first two levels of reading comprehension.

**a) REFERENTIAL READING COMPREHENSION**

According to Salam, A. (2006: 4) referential reading comprehension refers to understanding the cohesive relationship among words, sentences, paragraphs, and the whole text. Therefore, referential comprehension is known as literal comprehension that focuses on ideas and information that is explicitly stated in the reading passage.

**b) INFERENTIAL READING COMPREHENSION**

Inferential comprehension refers to what the reader infers from the text starting from the meaning of the rest (Cassany, D. 1998: 218). It includes inferring the main idea and additional details not explicitly stated in the text, inferring the author´s purpose for writing the text and drawing logical conclusions from the reading.

## 1.7 OPERATIONAL DEFINITION OF VARIABLES

### 1.7.1 Operativization of the independent variable

As it was stated before, the independent variable corresponds to students' training on the application of Directed Reading Thinking Activity because overall our major focus is on being productive and significative before, during, and after reading comprehension takes place. Therefore, the dimension and their respective indicators are explained as D.R.T.A operativization as they are described below.

| INDEPENDENT VARIABLE |
| --- |
| **Direct Reading Thinking Activity** |

| OPERATIVIZATION OF THE INDEPENDENT VARIABLE | |
|---|---|
| **Dimension of the Independent Variable.** | **Indicators:** |
| Students using D.R.T.A in informational, narrative and argumentative texts during the experimental study or reading workshops. | • The scores obtained in the variations of the independent variable:<br>- Looking at pictorial clues<br>- predicting,<br>- activating students' background knowledge and<br>- developing higher order thinking skill (logical conclusions) |
| **INSTRUMENTS OF THE INDEPENDENT VARIABLE** | |
| Instructional framework developed in the reading comprehension activities. | |
| **VALUE OF THE INDEPENDENT VARIABLE** | |
| Informational, narrative and argumentative texts were evaluated according to these indicators: Pictorial clues, prediction, background knowledge, and higher order thinking skill which were assigned with 4 points each, giving a total of 16 points. | |

## 1.7.2 Operativization of the Dependent Variable

As it was mentioned before, the dependent variable corresponds to Referential and Inferential Reading Comprehension levels in order to prove the effectiveness of D.R.T.A into the levels mentioned before. Thus, being objective the dependent variable is defined operationally with two dimensions and their correspondent indicators.

| DEPENDENT VARIABLE | |
|---|---|
| Referential and Inferential Reading Comprehension in Informational, Narrative and Argumentative texts. | |
| **OPERATIVIZATION OF THE DEPENDENT VARIABLE** | |
| **1st Dimension.** | **Indicator:** |
| Improvement of reading | •The scores obtained in the pre and |

| | |
|---|---|
| comprehension (Referential and Inferential) in both groups at the beginning and at the end of the experiment. | post reading comprehension tests of both groups (E.G. and C.G) at referential and inferential level. |
| **2nd Dimension**<br>Measure the intermediate students' perceptions towards the improvement of reading comprehension-using D.R.T.A in E.F.L classes. | **Indicators:**<br>• Measure the students' opinions about the use of D.R.T.A (using Liker's Scale) in the Experimental Group. |

**INSTRUMENTS OF THE DEPENDENT VARIABLE**

Pre and post -tests.
Pre and post questionnaires.
Qualitative observation notes during the exposure to D.R.T.A in the experimental group

**VALUE OF THE DEPENDENT VARIABLE**

According to the nature of our study we have:

1. **Pre and Post Reading Comprehension Tests**

   The tests were designed with fifteen questions each; all of them with their correspondent multiple-choice item. That means, each one the pre and post -test was assigned with fifteen points for the E.G and C.G.

2. **Pre questionnaire:**
   - ✓ *Design of the investigation*: The pre questionnaire has fourteen questions (fixed responses) where the students of both groups E.G and C.G have to choose from a multiple-choice only one answer for each question. (See appendix 1 for further details).
   - ✓ *Quantitative description:* Statistical, descriptive, and inferential analysis.
3. **Post Questionnaire**
   - ✓ *Design of the investigation:* The post questionnaire was designed using the "Liker Scale" model, which measures the level of agreement or

disagreement Thus, the post questionnaire contains six statements each of them with their corresponding answers (See appendix 2).

- ✓ *Quantitative description:* A statistical, descriptive, and inferential analysis.

## 1.8 Chapter Summary

In sum, in this chapter a description concerning to the background of the study was given in order to put it in context. The research purposes, the statement of the problem, the identification of variables and their respective operativization were broadly discussed. In the next chapter, we are going to review the related theories and previous research studies in order to comprehend and support the significance of this study.

# CHAPTER II

# THEORETICAL FRAMEWORK

## 2 Introduction

This chapter includes a review of all the literature concerning to our study, starting from a previous antecedent of reading and taking into account the general aspects related to reading comprehension treatment in English foreign language process from different models and approaches. At the same time, we have to take into account the implication that Directed Reading Thinking Activity has for overcoming poor reading comprehension, and in this way, we try to get all the theoretical support that develops the significance of this study.

## 2.1 Prior Researches on Reading Comprehension

## In the Bolivian Context

For a long time, the process of reading has been understood as a passive role rather than as an active one. In other words, the main goal of the reader has been decoding the signs of a text without taking into account that reading implies a complex group of

linguistic, psychological and intellectual process; due to the fact that in its elements it is possible to develop critical, creative and even more metacognitive skills.

Therefore, as Mayor San Andrés University is a high center of education, it requires professionals able to think and live in the continuous scientific progress; however, when we talk about the level of understanding in a foreign language, comments arise which says that students from Linguistics and Languages Department do not understand what they read. So, in order to understand the problem, we looked for researches that make reference to that situation and if anybody did anything to solve this problem. In this way, we found some investigations; the first one "*Reading Strategies in Spanish L1 and English L2 a comparative study*" by Lic. Flores, W was developed in 1996. The researcher´s purpose was to determine the relationship between reading strategies on second and first language understanding. Given the results, the author found out that there was a positive relationship between L1 and L2 reading strategies.

In the previous research, the author was worried about finding out whether there was a relationship between L1 and L2 reading strategies for understanding a text, but she was not concerned about helping students to develop skills in reading and even more on active thinking. In other words, she was not worried about encouraging them to risk taking via predictions.

Another investigation developed in 1999 by Lic. Quina, R. "*Dealing with unknown words when reading guessing strategies*" was a research that had as the main purpose to carry out an experimentation in order to prove the effectiveness of guessing unknown words when students are reading. By the end of the experimentation, the researcher concluded that "The use of guessing strategies when reading and their improvement of their use through a period of training shows us that it is very important to pay attention to what the students should do in order to improve their own way of learning" (1999: 99).

In the previous case, the author was concentrated on guessing unfamiliar words that are frequently found by English learners, but he did not look for a strategy that encouraged his students to be active and thoughtful readers, enhancing their comprehension.

Therefore, regarding the research mentioned, one focused on making a description of the strategies used by learners in their L1 & L2, the other study focused on the micro level of reading. However, none of them took into account providing students with the skills that help them become independent and thoughtful readers. In fact, for all exposed previously we are going to describe and analyse all the theoretical background and related literature about reading as follows in the next pages.

## 2.2. READING

Reading is a very important skill that needs to be learned, at school, at the university or in everyday life. According to Isabel Sole (2000: 17) reading "is the process of interaction between the reader and the text. It implies the presence of an active and efficient reader." The author mentions an active reader because we want readers to be able to analyze and process the information required; consequently, efficient readers because it means using the least effort to obtain satisfactory results from reading process. At this point, we have to mention that one of the requirements for having an active and an efficient reader is to know what students want from reading. In other words, students

have to decide what exactly their purpose for reading is: then they can judge their success or failure according to how well they achieve it.

Similarly, Rosenblatt, L. (1994: 7) describes reading as an interactive process too, but in relation to Sole, the author mentions the terms aesthetic and non-aesthetic reading. The first one refers to the act of reading for enjoyment. Here the writer expresses that is important to foster reading for pleasure because it can promote a life-long habit as an appreciation of reading value. Finally, the last term, non-aesthetic, occurs when the student is reading a text for a specific purpose; it can be employed when the reader reads non-fiction material or analyzes a text in the classroom.

"The distinction between aesthetic and non-aesthetic reading derives ultimately from what the reader does, the stance he adopts and the activities he carries out in relation to the text" (Rosenblatt, L. 1994: 27). At this point, we consider that extracting relevant information from a variety of texts, forms, and formats is essential for academic and personal success.

On the other hand, Huldelson, S. (1994: 130) states that "An individual constructs meaning through a transaction with the written text that has been created by symbols which is represented by using a language." According to Huldelson, the transaction involves the reader´s acting on or interpreting the text, and the interpretation is respectively influenced by the reader´s past experiences, language background and the cultural framework, as well as the reader´s purpose for reading.

From what has been said above, we conclude that reading is the process we use to gather information for some purpose. Grabe and Stoller (2002: 11) classified the purposes as follows:

> *1. - Reading to get general understanding which is the most basic purpose for reading; 2. - Reading to search for information when a reader scans the text for some specific information and skims for a general idea; 3. - Reading to learn when a reader needs to learn a considerable amount of information; and 4. - Reading to investigate information when a reader evaluates and selects information being read.*

From what Grabe & Stoller (2002) mention there are different purposes for reading. If we analyze and compare purpose 3 and 4, we can assume that they are commonly used in academic circles since academic reading is more than just reading for pleasure. It needs the readers' abilities to identify, understand, interpret, analyze, or synthesize the information required.

Turning back toward a definition of reading, we agree with Sole. (2000: 17) on the fact that "Reading is an interactive process between the reader and the text" because the reader should re -construct the information required by him taking into account that both the author and the reader are using the same code (same language) and that the writer has a message that wants to be understood by the reader. Therefore, we can say that in

reading a kind of dialogue occurs between the reader and the writer .At the same time through a review about what reading entails, we can appreciate that reading involves an interactive process where both bottom up and top down skills are accessed by the reader in order to construct meaning.

Finally, based on all the notions mentioned before, it is concluded that reading plays a very important role in our lives. For us, students, or professionals, reading is so much a part of our everyday living that one can hardly imagine a life without it; that is why; students need to be good readers in order to be able to "read to learn." While professionals need to read in order to be updated. Consequently, if they read to learn they can go outside of their scopes, because reading is a ticket to whatever we choose to get, to do and become. In conclusion, reading is a future as well as a past. Therefore, do not be a reader who reads without thinking or who reads without a purpose, be a thoughtful reader with a purpose.

### 2.2.1 Reading Comprehension

For many years, a large number of research all over the world have been investigating many aspects related to comprehension; and of course, they have debated about what reading comprehension entails, how it happens, and how to best facilitate it. As an example of this Smith, F. (1998: 116) stated:

> *"Most people would say that they know what the word comprehension means, at least in a general sense, although it is not a term that occurs often in everyday speech. In fact it is almost exclusively found in the context of reading. In everyday speech we are much more likely to use the term understanding. Therefore, comprehension is a kind of up-market synonym for understanding in discussions that are (or are intended to appear) technical and scientific."*

On the other hand, Harris and Hodges (1995: 35) quoted the following point of view.

> *"Comprehension is a process by which the reader constructs or assigns meaning /.../ through a combination of prior knowledge and previous experiences; information available in the text, the instance taken in relationship to the context, and immediate remembered or anticipated interaction."*

In the same way, Snow, C., also defines comprehension (2002: 7) and says:

> *"Reading comprehension is the simultaneously extracting and constructing meaning through interaction and involvement with written language /…/ which consists of three elements: the reader, the text and the activity or purpose for reading."*

In addition to that, Pang et al (2003: 6) describes reading comprehension as an active process, where the reader has to construct meaning from the text. This process consists of using an interaction between a prior knowledge and drawing inferences from the different words and expressions that the writer uses, in order to comprehend information, ideas, and points of view.

From the perspectives mentioned previously, we assume that reading comprehension is an active process, where the reader´s goal is mainly to identify, to construct and to assign meaning to the text through an interaction between our previous knowledge and experiences with the written text. Consequently, when an individual reads a text, he is actively involved with the information in a way that constructs meaning that is specific to the reader. Therefore, here schema takes place (in a very general sense, schema is understood as the interaction of key factors that affect comprehension process) because it helps to explain the reader the whole written message.

In sum, comprehension is a complex process but with proficiency and perseverance, the reader can magnify this success enriching his learning goals and of course his understanding.

### 2.2.2 Reading Comprehension in a foreign Language

In the age of the Internet and information technologies, reading in a foreign language continues to have an increasingly important role, due to the fact that, it is a priority for millions of learners and professionals around the world.

As Eskey, D. (2005: 563) mentions:

> *"Many English foreign language students rarely need to speak the language in their day to day lives, but many need to read it in order to access the wealth information."*

In fact, in a world that demands competency, the ability to read and even more to get a good comprehension in a foreign language becomes essential for academic success, but at the same time, it becomes a real problem not only for English learners but also for people who work in different areas because they have to develop good reading comprehension skills.

For example, English language learners have to get and work with different theories that come in a foreign language as a result, if they do not have a good foreign reading comprehension, they will be blocked to increase and to get successful results in their academic or professional lives.

On the other hand, Cummins, J. states (1991: 75-89) that reading skills are universal, that is, reading skills in one language can be transferred to reading in a second or foreign language. The result is that if one has weak first language reading skills then second language reading will also be poor.

According to Alderson, J. (2000: 23) poor L2 reading is due to a lack of good reading abilities, skills, and habits in the first language. As we know, reading in general is a complex cognitive skill involving sub skills, processes, and knowledge sources ranging from the basic lower level visual process involved in decoding the print to higher level skills involving syntax, semantics and discourse and even to skills of the text representation and integration of ideas with the reader´s global knowledge, but when it comes to second or foreign language, it becomes more complicated. For instance, reading comprehension is across linguistic process involving more than one language (Koda, K. 2005: 51-64). Furthermore, although L1 and L2 reading has many processes in common, they also have a number of differences, ranging from linguistic and processing differences to experimental, institutional and socio cultural ones (Grabe & Stoller. 2002: 22). These differences have a

depth implication for understanding how L2 reading comprehension works and should be taught.

With respect to students from Linguistics and Languages Department at Mayor San Andrés University, we assume that in their mother language they have relatively well-developed text-processing skills. After all, reading comprehension involves more than just linguistic knowledge; it is linked to more general cognitive processes which our students will have used (and use) routinarily during the twelve or thirteen years of formal schooling they have already completed.

Now, in the following section, we are going to develop what reading comprehension implies and how it happens, in order to develop reading comprehension theories with the main purpose of understanding the importance of this research.

## 2.3 READING COMPREHENSION THEORIES

In this segment of the study, we are going to review the most relevant theories regarding to reading comprehension. (Hunt & Ellis. 2004; Kintsch W. 1992; McKenna & Robinson. 1990; Osterholm, M. 2004; Van Dick & Kintsch. 1983 and Radvansky et al. 2001) which consist of four main aspects: Mental representation, Content literacy, Cognitive, and Metacognitive process each of them with their respective subcategories as they are explained below.

### 2.3.1 Mental representations

In order to understand the concept of mental representation, we are going to mention a particular theory that seems to have a great influence on research based on reading comprehension, which is the work of Kintsch, W. (1998: 143-163). Kintsch's theory is based on the philosophy that text comprehension is a psychological process. In other words, the products of this process are mental representations of the text. In addition, when reading a text, a mental representation of the text is created by the reader, which describes how the reader understands the text.

According to Kintsch, W. (1998: 103) there are three levels, or components, of mental representation, which can be independently distinguished: The surface level, the text base or propositional informational level and situational model level.

Regarding the surface level, Osterholm, M. (2004: 3) says:

> "*When the words and phrases themselves are encoded in the mental representation (possibly together with linguistic relations between them), and not the meaning of the words and phrases, one can talk about a surface component of the mental representation.*"

Therefore, we can say that the surface level refers to the actual words, phrases or the syntactical structure that are used within the text. Here, the reader does not take into account the meaning of the words; he only focuses his attention on the relationship between the words and phrases printed in the text.

On the other hand, according to Kintsch, W. (1998: 103) another component or mental representation is the text base, which refers to:

> *"The meaning of the text, that is, the semantic structure of the text, and it consists of those elements and relations that are directly derived from the text itself /.../ without adding anything that is not explicitly specified in the text"*

A pure text base can be "impoverished and often be even incoherent" (Kintsch 1998: 103) Therefore, if the reader wants to make more sense of the text, he has to use his prior knowledge in order to create a complete and coherent mental representation

From the point of view mentioned by Kintsch (1998) we have to say that text base is like an abstract representation of the text. In other words, if the text base consists of the meaning of the text and at the same time, the meaning can be expressed in different ways; a text base can be created without using the memory of the exact words and phrases from the text. In sum, the construction that integrates the text base and their relevant aspects of the reader's knowledge is called the situational model.

According to Osterholm, M. (2004: 3) the highest level of understanding a text is the situational model, because this model refers to the knowledge that a reader has to build while he is reading the text. In other words, a situational model is what the text is about, instead of the text itself. To this respect, Radvansky et al. (2001: 145) say: "creating an accurate situation model is the main goal of comprehension."

Therefore, in the context of English classroom, we consider that helping students reach an accurate situation model level of Mental Representation of the text should be without doubt the greatest importance for developing reading comprehension.

### 2.3.2 Content literacy

According to McKenna & Robinson (1990: 184 -186) "content literacy refers to the ability to read, understand, and learn from texts from a specific subject area." They also distinguish between three components of content literacy: general literacy skills, content-specific literacy skills, and prior knowledge of content. Both the general and the content-specific literacy skills can be assumed to refer to some more general type of knowledge that is not dependent on the detailed content of a specific text. This type of knowledge is primarily used to create a text base in the mental representation. The third component, prior knowledge of content, refers to knowledge that is connected to the content of a specific text, and it is thus primarily used to create a situation model in the mental representation.

From what has been said above, it is clear that content literacy should be understood as: what the reader understands from a specific subject area. Therefore, readers have to consider this skill in order to match, to understand and even more to get the essence of printed text. All of these activities should be carried out only with the main goal of increasing the readers´ knowledge.

At this instance, to get the essence of printed text seems to be a difficult work, but showing interest, concentration and over all putting effort in everything that we do are very important key factors for getting successful results in our lives.

Now following the next section, we have to define cognition as an underpinning concept for understanding metacognition.

### 2.3.3 The Cognitive Process

When we talk about the cognitive process, we have to mention "cognition" as an important area of psychology. Therefore, we have to consider that the modern study of cognitive psychology is motivated by scientific curiosity, by the desires of practical applications, and by the need to provide a foundation for other fields of social science.

According to Hunt and Ellis, (2004: 2) cognitive psychology is "the study of mental processes such as perceiving, remembering, and reasoning." In addition to these, in all thinking and learning process, there is perception as the individual relates to the world around in some way. Therefore, incoming information has to be thought through and stored in some way so it may be useful on some future occasion.

From Hunt and Ellis's (2004) point of view, we have to understand cognition as a "mental process" due to the fact that one's cognition should be understood as the capacity of reasoning, learning and retaining all or part of the information acquired through reading. Therefore, everyone at varying levels has cognitive abilities.

Another point of view that refers to cognition is mentioned by Reed, S. (1982: 3) and who defined cognition as acquisition of knowledge. More recently, Scharaw et all (2006: 112) mentioned that "cognition includes skills necessary to encode, to memorize and to recall information."

From what has been mentioned above, it is clear that cognition involves acquisition of knowledge. At the same time, it is essential that a reader is able to decode language units and as a result construct a coherent mental representation of the text. Therefore, the reader can access that representation for different purposes like to recall information, to answer questions or to apply his or her knowledge inside other fields of study.

Now, we have to mention that the cognitive process has to do with reading comprehension because all the mental processes such as perceiving, remembering, memorizing, recalling information and so on are involved moment by moment into a complex set of process, which describes how comprehension is happening. Here, we have to mention that some of these processes are quick or effortless to get into the readers mind; while others are slow or effortful to obtain because not every person develops the same thoughts. As a final point, it is considered that everything happens according to how well a reader develops his or her understanding.

## 2.3.4 Metacognitive Process

When we talk about the metacognitive process, we have to mention "metacognition" that has been defined as "thinking about thinking" (Metcalfe, J. 2000: 32). It is a complex form of higher-order thinking. Metacognition involves the ability to think about own cognition, and to know how to analyze, to draw conclusions, to learn from, and to put into practice what has been learned (King K. 1999: 20).

Theorists like Flavell (1976, 1979 a, b) and Brown (1987: 77-165) undertook the earliest work on metacognition in the 1970. That is why, in order to understand an early definition of metacognition, we considered Flavell´s literature, which referred to metacognition as:

> *"One's knowledge concerning one's own cognitive processes and products or anything related to them /.../ Metacognition refers, among other things, to the active monitoring and consequent regulation and orchestration of these processes in relation to the cognitive objects or data on which they bear*." (Flavell, 1976: 232)

It becomes evident that Flavell´s definition emphasizes active monitoring and regulation of cognitive processes. From active monitoring, the author refers to the knowledge about what factors act or interact in what ways to affect the course and outcome of cognitive enterprises (Flavell, 1999: 4). While on the other hand, regulation of cognitive process refers to select the process that permits us to coordinate cognition. According to De Corte et al (2000: 687-726) Self-regulation comprises effective learning problem solving. In other words, it is the ability to use metacognitive knowledge strategically in order to achieve cognitive goals.

In 1995 Schraw & Moshman (351-371) classified metacognitive regulation into three skills: planning, monitoring, and evaluation.

- **Planning**. - Involves the selection of strategies and the allocation of resources. According to Dowling, L. (2000: 241) this stage includes wondering about:

"What is the nature of the task?

What is my goal?

What kind of information and strategies do I need?

How much time will I need?"

**- Monitoring. -** Refers to awareness of comprehension and task performance that allow us to comprehend metacognitive regulation. Here Dowling, L. (2000: 241) enlisted the following questions:

"Do I have a clear understanding?

Am I reaching my goals?

Do I need to make changes?"

**- Evaluation**- Refers to the action of evaluating judgments, transmitting the following questions:

"Have I reached my goals?
What worked?
What did not work?
What would I do differently next time?"

As we can see, metacognition encompassed important skills. Here recognizing and applying those skills are important and necessary for both teachers and students too because it allows us to evaluate our background knowledge and at the same time to establish connections between what is known and what will be known. Therefore, following this assumption, we are going to review metacognition into L2 reading comprehension as follows in the next section.

### 2.3.5 Metacognition in L2 Reading Comprehension

In the case of reading, it is very important to know if a text is being understood or at least, to have an awareness of when a text is not being understood and probably will not be remembered. In this situation, metacognitive knowledge has to work on the reader´s assessment, students' knowledge, and their control of strategies for processing and learning the text. (Schoonen, Hulstijn, and Bossers, 1998: 71-106).

Brown (1980: 475) asserts that metacognition in reading includes the ability to ask and answer the following questions:

- "What do I know about this subject, topic, and issue?
- Do I know what do I need to know?
- Do I know where I can go to get some information?
- How much time will I need to learn this?
- What are some strategies that I can use to learn this?
- Did I understand what I just heard, read or saw?
- How will I know if I am learning at an appropriate rate?
- How can I spot an error if I make one?
- How should I revise my plan if it is not working to my expectations?"

In fact, these questions make us consider that these factors are important in order to get a significative teaching-learning process in L2 reading comprehension. Therefore, if this world demands a competitive reader, we have to start by living this century taking the advantage of the internet and of course use it according to our students' needs, interests and language proficiency.

#### 2.3.5.1 The importance of Metacognition in reading

Metacognition is an important part of human abilities because if learners are not aware of when comprehension is breaking down and what they can do about it, teacher's strategies will fail. In fact, students without metacognitive approaches are learners

without direction to review their progress, accomplishments, and future directions (O'Malley, et al, 1985: 21-36). Therefore, metacognition helps the student to be consciously aware of their learning and their understanding process.

The metacognitive process can improve learning by guiding students' thinking, and by helping the learners to follow a sensible strategy as they think through a problem, make decisions, or attempt to understand a text. Researchers in the North Central Regional Educational Laboratory (1995: 2) are reported to be convinced that those learners who are metacognitively well developed are:

- "Confident that they can learn.
- Make exact judgment of their success in learning.
- Think mistakes occur during tasks.
- Actively expand collection of strategies for learning.
- Match strategies to the learning task and make necessary adjustments.
- Ask for guidance from colleagues or teacher.
- Take time to think about their thinking.
- View themselves as learners and thinkers."

However, there is the possibility that these characteristics merely describe successful learners who are described as "metacognitively well developed." (North Central Regional Educational Laboratory, 1995: 2).

From the discussion above, it may be summed up that metacognition is important as it helps students recognize the need to adapt their learning skills to the demands of the task. It provides learners with the necessary information to design their own learning plans. It shifts the responsibility from teachers to students and produces learners that are more independent. It helps students in developing the ability to monitor and regulate their cognitive activities while learning and performs several other functions.

### 2.3.5.2 Elements of Metacognition

Different researchers have classified elements of metacognition in different ways. For example, Adkins, J. (1997: 2) mentioned four elements of metacognition: Meta-memory, meta-comprehension, self-regulation and schema Training.

a) *Meta-memory*: It refers to learner awareness of strategies used for some tasks. It includes knowledge and information about memory systems and memory strategies. Therefore, meta-memory strategy teaching should focus on specific strategic knowledge. This may include knowing when, where, and how to use specific strategies.

b) *Meta-comprehension*: Effective comprehension monitoring involves knowing when the reader does not understand and knowing how to take corrective action. Therefore, corrective action is more spontaneous when errors are detected in context than being detected in isolation. It requires big effort to master metacognitive strategies; training should be in accordance with age and expert levels of learners.

c) *Self-Regulation:* Self-regulation refers to metacognitive adjustments students make regarding errors. This may be as a result of inherent knowing, trial and error, or hypotheses formulation. Executive control may be transferred to students through modeling.

d) *Schema Training*: It helps learners produce their own cognitive structures for understanding information and experiences. Learners who know about the significance of training and master strategies during training appear to use them independently and continuously.

In sum, it is clear that the coordination of several elements is an essential component of learning to read since learners may be provided with the opportunities to think about how to combine these various stages for improving their reading comprehension; but at the same time, it is very difficult to think that learners could complete all these stages and finally be able to combine all these ideas together.

Now, in the following section we are going to explain the importance of reading models in order to increase our knowledge and support the importance of this topic.

## 2.4 READING COMPREHENSION MODELS AND SCHEMA THEORY

As an introduction to this section, we are going to consider what should be understood by reading comprehension models and its implication for our research.

According to Davies (1995: 57) a model of a reading comprehension process is "a formalized visually represented theory of what goes on in the eyes and the mind when readers are comprehending (or miscomprehending) text." In other words, reading comprehension models should be understood as a theory that represents how something should be understood.

At this point, it is convenient to state that throughout time; many research attempted to create a general understanding of the reading comprehension process by means of some reasonable mental framework. So, we often read about general theories or approaches related to reading. Here general models take place in order to explain the complex process of reading.

The bottom up model, the top down model, the interactive model, and the schema theory of reading are the most important models in the complex process of reading comprehension (Anderson, 1999; Carrell & Eisterhold, 1983; Dechant, 1991; Eskey, 2005; Goodman, 1967; Hudelson, 1981; Roe et al, 2006; Rumelhart, 1980; Ur. P, 1996; Widdowson, 1979; Xie, 2000; and Zecker, 2004). That is why; it is important to describe the four of them particularly in L2 discussions.

## 2.4.1 Bottom up Model

Metaphorically, the bottom up model or data driven processing is viewed as lower level processing. It suggests that all reading follows a mechanical pattern in which the reader creates a piece by piece mental translation of the information in the text, with little interference from the reader's own background knowledge. That is to say, readers assume to decode precisely from letters into words, from words into larger grammatical units, and finally to the understanding of the text. Readers recognize letters, words, sentences, and text structure. In this view, reading is initiated by examining the printed symbols and requires a little input from the reader (Roe et al, 2006: 44).

In addition, as it was mentioned above, readers begin with the lowest level; from which the symbols are identified. Here, the argument could be that without literal comprehension, as fundamental understanding of language, top down processing will not occur. Furthermore, as bottom up model focuses on word recognition skill, it does not receive adequate attention. (Zecker, 2004: 248) In fact, unskilled readers rely a deal on word recognition. Therefore, this traditional model of reading did not help the reader to relate their knowledge and the processing of new information since it comes from early stages where students are taught to read word by word and sometimes aloud.

From the point of view of the bottom up model, we can state that this model weakens the significance of reading comprehension because the focus of it is on the linguistic knowledge; that means, it focuses on how readers extract information from the printed page, claiming that readers only deal with letters and words.

## 2.4.2 Top down Model

Goodman, K. (1967: 126) proposed the top-down model. To this respect he stated the following:

> *"The main goal of this view is to build up meaning in response to text; it requires the interactive use of graphophonic, syntactic, and semantic cues in order to construct the meaning of printed texts."*

As mentioned above, we consider that in the top down model, readers will guide their information by using their individual previous knowledge. Thus, readers do not read word by word, but they are able to see through the text in order to guess the meaning of the words; and consequently, phrases. In simple words, the top down model represents reading as constructing meaning and context, rather than form.

In addition,Ur. P. (1996: 138) mentioned that for top down model, "Reading means reading, and understanding" and according to Anderson, N. (1999: 1):

> *"Reading is not a passive process but an active fluent process which involves the reader and the reading material in building meaning. What is more, meaning of reading materials does not reside on the printed page, due to; it is only in the head of the readers' mind."*

From what has been said above, Anderson (1999) mentions something interesting, he focused on the fact that reading processing in the top down model begins in the mind

of the reader. Here, we assume that the reader could make this assumption by generating hypothesis in relation what to the text is about. In this way, readers engage in lower processes; that is to say, identifying letters and words only to confirm these hypotheses about the meaning of the printed text. From this perspective, in Dechant´s words (1991: 25) "The top down models have been described as concept-driven or hypotheses-testing models."

Top down model is a reaction to the traditional view where the reading process consists of a series of stages beginning with the basic decoding. The main point here is that this model "requires readers to attack the text with expectations of meaning developed before and during the processes of reading, making use of the text information when they need to confirm or extend their expectations" (Eskey, 2005: 97).

Furthermore, to accomplish the sample mentioned above, the reader should direct his eyes to the most likely place in the text to find useful information. The mechanism by which a reader would generate expectations is not clear, but these expectations might be created by a general monitoring mechanism. Inference is a prominent feature of top down model, as it is the importance of a reader's background knowledge.

In conclusion, adopting either type of model (bottom up or top down) depends on a reader's purpose or attitude toward reading. Thus, if a reader needs to have an overview or main idea of a text, top-down is the appropriate and recommended. On the other hand, if he needs to look for details, bottom-up is advisable. Therefore, top-down seems to be whole-to-part reading and bottom-up seems to be part-to-whole reading. Nevertheless, the lack of interaction between the bottom up and top down model is presented and consequently calls for a quick solution.

Thus, the interactive model is presented bringing up an immediate solution offering a strong compromise between these two models. That is why; we consider describing the interactive model in the next point.

### 2.4.3 The Interactive Model

In 1970, the idea that reading was a decoding process or strictly a concept driven process has changed with the appearance of reading as interactive process. In this sense, the interactive model of reading assumes that reading is the process of interaction that combines the information in the text with the information that the readers already possess (Widdowson, H. 1979: 174). According to this view, reading is more than a process of extracting data, it activates knowledge in the human brain in order to improve and explain it. Thus, reading becomes a type of dialogue between the reader and the text.

Later in the 1980´s, Rumelhart (1980: 35-58) proposed a view of reading as an interactive, cognitive psycholinguistic process where both, bottom-up and top-down processes are involved. This was called "the interactive approach" and it considers an interaction between the reader and the text. Specifically, bottom-up processing is evoked by the incoming data from the text, while top-down processing occurs as the reader makes predictions in the light of reader´s background knowledge (Carrell & Eisterhold, 1983: 553-573). In this model, good readers are both, good decoders and good interpreters, their decoding skills become more automatic but no less important as their reading skill develops.

Another reference is mentioned by Shahidullah, M. (1996: 209) who says:

> *"An interactive process requires the use of background knowledge, expectations, context and so on. At the same time, it also incorporates notions of rapid and precise feature recognition for letters and words, spreading actively of lexical forms, and the concept of processing such forms automatically."*

From Shahidullah's (1996) point of view, we can state that a fruitful option in order to improve students' reading comprehension is the use of an interactive process, which requires the ability to relate the textual material to one's own knowledge and at the same time, an understanding about how to go with different types of printed information.

In sum, readers have to use a perceptual process where they will be able to put into practice an interaction between a set of a variety of orthographic, syntactic, lexical, and semantic information until the meaning is reached.

Furthermore, Shahidullah, M. (1996: 230) argues that an interactive reading process has deeper implications for a reading class. His suggestion is:

> *"Reading classes must devote some time for bottom-up concerns such as the rapid and accurate grammatical forms. Even students with proficiency in reading skills in their native language may not be able to read efficiently in a second language context until they have developed a stronger bottom-up foundation of basic identification skills.*
>
> *There must also be some top-down tasks such as reading for global meaning /…/ developing a willingness to take chances, and developing appropriate schemata for the proper interpretation of texts."*

According to these two paragraphs, the author puts his attention on developing readers' processing abilities taking into account extensive reading that can probably be completed through teaching programs, where students have the opportunity to read a lot in order to increase their skills and knowledge significantly. At the same time, the author recommends the use of appropriate materials according to students' needs and interests should match what they are currently reading, and 'they must be ready, willing, and able to read it'.

In sum, all the sources mentioned previously provide us with an understanding of what interactive reading is. At this point, it is important to bear in mind that the interaction between the content of what is being read with the prior knowledge is the central theme of the interactive model of comprehension. At the same time, this model operates with two valid assumptions; since, it takes into account the strength of both bottom-up and top-down models by avoiding the weaknesses attributed to each model. So far, it becomes obvious in all respects that interactive theories are the most preferred approach to the theory of reading process. However, this does not mean that it is free from criticisms.

Another concept that is also related to reading is schema theory that will be developed in the next section.

## 2.4.4 Schema Theory

The research on the field of reading has remarked the importance of learners' prior knowledge as being essential for learning to occur. Talking about Schema Theory, Bartlett (1932, cited in Parviz, A. 2003: 1) proposed the concept of schema. He suggested that memory takes the form of schema, which provides a mental representation or framework for understanding, remembering and applying information. Further, Rumelhart (1980) developed the schema concept and described it as a theory of how knowledge is mentally represented and used in the mind. As Rumelhart (1980: 41) quoted:

> *"Schemata can represent knowledge at all levels-from ideologies and cultural truths to knowledge about the meaning of a particular word, to knowledge about what patterns of excitations are associated with what letters of the alphabet. We have schemata to represent all levels of our experience, at all levels of abstraction. Finally, our schemata are our knowledge. All of our generic knowledge is embedded in schemata."*

According to Rumelhart, schemata are created through experience with the world, and the person's culture, which includes the interactions with people, objects, and events within that culture.

From the discussion above, it should be clear that schema theory is a theory about knowledge, how knowledge is represented, and how that representation enables us to use that knowledge in certain ways. Modern schema theorists like Stott, N. (2001:2) view schema as:

> *"Framework that organizes knowledge in memory by putting information into the correct slots, when new information enters into memory and it is not compatible with one of the slots, but it must actually be entered into the proper slot before comprehension can occur /…/ new knowledge is perceived, it is coded into either pre-existing schema or organized into a new one."*

In a very general sense, from what Stott (2001) states, schemata are data structure consisting of many general ideas stored in our memory, which consist of variables and slots. At the same time, it is well understood that meaning exists neither in oral nor in written language itself but if we appeal to our perception, it is clear that the activation of the reader's mind depends on oneself, because it is difficult to get the control of data driven or concept driven processing at the same time, since each individual has different internal interpretation for the subject matter of a text.

Now, talking about reading comprehension, schema theory regards it as an active event in which prior knowledge is relevant to what is beging read. According to this theory, a reader uses his or her prior knowledge to enter into the transaction with the text, which deals with an understanding and interpretation to him or her. On the other hand, schema theory serves as a reader's background information that can be called prior knowledge. Schema theory is especially helpful in understanding how prior knowledge affects reading comprehension.

In detail, according to Rumelhart (1980, quoted in Xie, 2000: 60) the main function of schemata for reading comprehension is editing and planning. Here, editing is to select,

abbreviate, abstract, arrange, organize, and polish reading materials. While schema selection, abbreviation, and abstracting are the first stage of editing, schema arrangement, organization, and polishing are the second stage of editing. The first stage, editing, accommodates information related to schema and filters the irrelevant. Therefore, schema is the base of planning for retrieval. In reading comprehension, proper schemata need to be activated to search for information in memory and to rebuild representation of memory.

In conclusion, we can state that schemata play an essential role into the reading comprehension process by many reasons mentioned before; but here, the main point is how schemata is related to our work . For this point, we can state that schemata have relation with our research because the major way for learning English is reading. Therefore, schemata play an important role; that means that if the reader wants to get good understanding, he has to work on his awareness; but also in his monitoring process taking into account appropriate actions or strategies.

Here, D.R.T.A takes place because the text itself does not carry meaning; the text only offers guidance to readers in order to find it. We consider that comprehension occurs only when the reader´s background knowledge interacts with the text; that is why; we propose to use this instructional activity, which is D.R.T.A.

Now having explained the relationship of schemata with D.R.T.A, we are going to develop the types of linguistic schemata.

### 2.4.4.1 Types of Schemata

Three types of schemata are identified by research (Carrel, 1983; Li et al, 2007) which without doubt make an illustration of how they occur and work into the process of reading. These three types of schemata are the following:

#### 2.4.4.1.1 Linguistic Schemata

> *"Linguistic Schemata refer to reader's existing language proficiency in terms of vocabulary, grammar, and idioms. They are the foundation of other schemata. The linguistic knowledge plays an essential part in text comprehension. Without linguistic schemata, it is impossible for the reader to interpret and comprehend a text. Therefore, the more linguistic schemata a reader has in his mind, the faster the reader acquires information and the better the reader can understand the message in a text is the best way for acquiring comprehension."* Li et al. (2007: 18-19).

From what has been stated in the previous page, it is clear that linguistic schemata must be understood as the level of language efficiency or proficiency as Li, et al (2007) say if someone has weaknesses in their language proficiency, he or she will be obstaculized to develop their wishes regarding to the use of the language.

Now in the case of reading comprehension, "most of the people rarely need to speak a foreign language every day, but they need to use it in order to get information" (Eskey 2005: 563) but the problem comes when they cannot understand a foreign written material. Studies have indicated that language proficiency affects the level of

comprehension for either foreign or second language (Carrell, 1991; Zerhouni, 1996). ). Anyway, a consideration arises here, that is; is it important to know what the reader would like to do in the process of reading?

For the last question, we consider of great importance to know what the reader wants to do or to know from the process of reading because people read books for variety of reasons. For example: they read to comprehend a text or answer comprehension questions, to do grammar activities, to solve language problems, to improve language ability, to achieve pleasure and information, to know the instruction of using a particular tool, to be familiar with a particular country or place, to decode message from a printed document, to get an idea from the inscription from any objects etc. Doff (1997: 170) states, "We usually have a purpose in reading: there is something we want to find out, some information we want to check or clarify, some opinion we want to match against our own etc."

Therefore, Nuttall, D. (1996: 18) was right when he mentioned that reasons and purposes of reading a text differ from person to person because of their different opinions, backgrounds, experiences and schemata. Thus, in simple words it is concluded that a same text may be a source of many interests depending on the person concerned.

#### 2.4.4.1.2 Formal Schemata

Regarding the Formal Schemata Li et al (2007: 19) mentioned:

> *"Formal Schemata are the organizational forms and rethorical structures of written texts. They include knowledge of different text types and genres, and include the knowledge that different types of texts use, text organization, language structures, vocabulary, grammar and level of formality. Formal schemata are described as abstract, encoded, internalized, coherent patterns of meta-linguistic discourse and textual organization that guide expectation in our attempts to understand a meaning piece of language*."

From the quotation mentioned previously, it should be clear that readers use their schematic representations of the text in order to comprehend the information required. Studies show that the type of knowledge and genre of the text can facilitate reading comprehension because it offers an evidence of any content, since formal schemata help the readers to analyze the text; and consequently, enrich the reader's comprehension. Moreover, explicit training in recognizing and analyzing rethorical organization of texts can facilitate second language student's reading comprehension (Raymond, 2006). In conclusion, we can say that formal schemata contain the logical organization, which the writer has to use in order to understand the meaning of the text.

#### 2.4.4.1.3 Content Schemata

Content Schemata refers to the background knowledge of the content area of a text, or its topic. They include topic familiarity, cultural knowledge, and previous experience in a determined field. Content schemata deal with the knowledge relative to the content domain of the text, which is crucial to understand. Furthermore,

content schemata can make up for the lack of language schemata, to some extent, and thus help learners understand texts by predicting, choosing information, and removing ambiguities. (Li. et al 2007: 19).

Apparently, according to Li et al (2007), Content schemata are related to factual knowledge and cultural conventions which readers are thought to possess and actively use when they are confronting the topic or content of the text. Therefore, schemata dimensions play an important role in the interaction between the text and the reader. That is why, when one or all of schemata dimensions are missing; reading can be problematic or understandable.

In conclusion, from the three perspectives analyzed before, we can state that having linguistic, content or formal schemata related to reading a text does not necessarily mean that a reader would take advantage of his or her prior knowledge to make sense of the reading material. Here, we consider that a successful reading comprehension depends not only on one's ability to apply appropriate schemata, but also on his or her awareness of monitoring the reading process at the right time.

## 2.4.5 Applying Schema Theory to L2 Reading

Regarding the application of Schema Theory to L2 Villanueva (2006: 45) affirms:

> *"The role of the teacher is paramount to activate and build schemata. A first task is to select texts that are relevant to the students' needs, preferences, individual differences, and cultures. The goal is to provide meaningful texts so students understand the message, which entails activating existing schemata and helping build new schemata."*

As Villanueva (2006) stated above, a wide body of research provide us suggestions on how to accomplish this goal (Marzano, 2001). However, something that can be concluded from the quote above is that it is important to select the appropriate reading text according to the students' schemata is something that is also important, is the planning of the experience that is why we are going to describe the most common stages in lesson planning which are the following.

### 2.4.5.1 Lesson Planning Stages

#### 2.4.5.1.1 Pre-reading

According to Marzano (2001: 73):

> *"Some teachers might think that simply telling students about a text is a sufficient pre-reading strategy, but it is incorrect to assume that only a brief lecture about the reading will push struggling readers to engage with the text in their own minds. In fact, to trust on such a practice will only enable struggling*

> *readers to continue to be dependent on the teacher to make meaning of the text."*

In addition, many dependent readers think that comprehension is only answering questions correctly after reading the text without re ally involving with it. This conception is very old because nowadays pre-reading strategies focus on the active engagement with the text that help them to do what good readers do; in others words, applying pre-reading activities, the reader will be able to think and be active all the time while he is reading, not just at the conclusion of the process.

Therefore, we conclude that the purpose of pre-reading is to motivate students to read and of course to prepare them in order to get successful results. However, in student's experience, some teachers currently have the following assumption as pre reading activity: "Tomorrow's reading is really interesting! Read the whole text, pages 23 to 29, and after that, answer the questions stated on page 30." In the last quotation, the teacher assumes that their students know the vocabulary, grammar, and that they are already prepared to read the text, but in certain cases, this does not happen. Consequently, students reject doing reading activities or completing them without a true purpose, which is to get the essence of reading comprehension.

From the situation stated above, we considered some authors (Smith, F. 1994; Swaffar, et al, 1991; Carrell, P., and P. Floyd, 1989; and, Reutzel, 1985) who suggested pre-reading activities like prediction, previewing, and semantic mapping, which are described below.

a) *Prediction.* - Prediction is a pre-reading activity proposed by Smith (1994: 18). He stated the following:

> *"Prediction is the core of reading. All of our schemes, scripts and scenarios /…/our prior knowledge of places and situations, of written discourse, genres, and stories/…/ enable us to predict when we read and thus to comprehend, experience, and enjoy what we read. Prediction brings potential meaning to texts, reducing ambiguity and eliminating in advance irrelevant alternatives."*

In the same way, Nuttall (1996: 13) mentioned that prediction is a kind of sharing presuppositions of the writer, and a reader who shares these presuppositions: therefore, most will be able "to think along with the writer and use his own experience to resolve difficulties" Nuttall (1996).

From these assumptions, it is clear that prediction is a general technique, where knowledge and experience help the reader to predict what the writer wants to communicate. Therefore, as Nuttall (1996: 13) said, "If the reader understands the text, he could predict with a fair chance of success what is likely to be next and what is not." Here, using prediction, schemata are activated, due to the fact that the reader calls into his or her mind any relevant experiences and associated knowledge that he or she already has, and as a result it helps him or her to interpret the text more clearly.

Prediction begins with the title of a textbook and continues throughout the whole process of reading. Sometimes prediction may be wrong, yet it makes the

readers think about the topic and so on, because prediction, according to Nuttall (1996: 119) does not need to be "successful" all the time, the most important is "to be useful."

b) *Previewing.* – Unlike predicting, previewing is a very specific reading skill. It consists on finding out where the required information is likely to be. (Grellet. F, 1996: 17 -18).

Swaffar et al (1991: 17) point out the benefits of previewing techniques asserting that it allows the students to formulate hypotheses about the text. By taking advantage of contextual clues /…/ titles, headings, pictures, etc. students are encouraged to draw inferences prior to reading.

In the same way, Chia, H. (2001: 27) quoted the following:

> "*The aim of previewing is to help the readers predict or make some educated guesses about what is in the text and thus activate effective top-down processing for reading comprehension. /…/ several stimuli in a text, such as the title, photographs, illustrations, or subtitles, are usually closely connected to the author's ideas and content*."

From the discussion above, we consider that any of these conceptions mentioned by Grellet. F, Swarff or Chia are important techniques that allow the students to make predictions about the content of the text. Therefore, this skill is useful for students in many ways because it not only leads the students towards intended and specific information, but also saves their valuable time.

c) *Semantic Mapping*. - Carrell, P., and Floyd, P. (1989: 88) described Semantic Mapping as a useful way to pre-teach vocabulary and to "provide the teacher with an assessment of the students' prior knowledge or schema availability on the topic." While, Raymond C. Jones (2006: 21) added that Semantic mapping is known as a graphic representation which gives the main idea of a certain topic and how it is connected. Here, maps are useful tools in order to help students to learn about how they structure knowledge while supporting the process of knowledge construction or Meta knowledge.

From what is mentioned above, we conclude that reading is an active process between the reader, writer, and the text. Most readers agree that in order to obtain comprehension, readers should bring their background knowledge and experience to construct the meaning, besides their linguistic knowledge, and this could be possible by using a strategy such as semantic mapping.

In sum, it is suitable for the teachers to prepare students by helping them build background knowledge on the topic prior to reading through appropriate pre-reading activities like predicting, previewing, or semantic mapping. Furthermore, generally speaking, we consider that pre reading activities motivate students before the actual reading takes place; thus, they allow an understanding where linguistic, content, or formal schemata are activated; and consequently, they create an interest providing opportunities for reflection and insight into reading comprehension class.

### 2.4.5.1.2 During or While Reading

Generally speaking, in this stage, many students begin reading the words printed in the written material, but they do not understand the meaning of them. As Guthrie et al., (2004) affirmed that students who are engaged in monitoring their comprehension increase their understanding. While on the other side, Aebersold and Field (1997: 95) argued, "Teachers are responsible for helping their students to use every possible strategy and ability available to them during the reading act." Therefore, taking into account the conception mentioned above **"**This stage requires the teacher to guide and monitor the interaction between the reader and the text" (Villanueva. 2006: 11)**.** Thus, in this way; reading students should be required to continually practice and apply the comprehension strategies that good readers employ almost subconsciously, such as making connections, monitoring understanding, and stopping to summarize, asking questions, etc.

Here, we have four during-reading activities that encourage active reading skills and help students make sense of a text. Aebersold & Field (1997); Beers, K. (2003); Dubale. L. (1990) and Harvey et al (2004) proposed these activities; of course, this list is by no means exhaustive, but rather is meant to develop and build good readers. That is why, in order to understand this, we are going to develop them as follows:

#### 2.4.5.1.2.1 Guessing Meanings

Aebersold and Field (1997: 141) stated that, "readers need to know how to employ strategies to deal with unknown words when they are reading." In this way, teachers need to have knowledge of the strategies available to help students develop their skills to deal with unfamiliar words in the classroom in order to enhance their students' comprehension. For example, if the unknown word appears several times and the student cannot get the general idea without it he or

she has to be trained how to arrive at the meaning using word attack-skills such as guessing word meaning from context and using knowledge of word-building or word-formation process.

In this light, we consider that it is a good idea to use meaning from context and using one's prior knowledge while a student is reading. Aebersold and Field (1997) proposed these activities. That is why; we consider describing each of them as follows:

a) **Guessing meaning from context**. - As a personal opinion, when we talk about guessing the meaning from context we understand deducing the meaning of unknown words using surrounding words that appear into the context. As Aebersold and Field (1997: 140) state, "context gives a framework of meaning within which readers grasp and remember words. The framework and all the associations that the readers have of the word within the context help them guess the word." In other words, it involves words such as synonyms, and antonyms in the same sentence or paragraphs to deduce the possible meaning of the unfamiliar dictions of the text.

b) **Guessing Meaning from one's Prior Knowledge.**

According to Dubale. L. (1990: 27) guessing unfamiliar words in a text focuses on analysis of internal morphological features like prefixes, suffixes, and root words is what we call guessing meaning from one's prior knowledge. Here, the ability to look at multi-syllabic word and see its meaningful parts is very beneficial to students when they are trying to understand words they do not know.

In that situation, we consider that foreign language learners need to have the knowledge of word analysis skills as the teaching of the skill of analyzing word parts can be integrated into the classroom discussions that happen while reading a text. To this end, "teachers may ask the students to look at certain words and

divide them into their component parts and work out their meanings and their grammatical category" (Mei-yun 1994: 35).

**2.4.5.1.2.2 Coding Text .-** It involves teaching students a method of margin marking that helps them practice the metacognitive processes that happen naturally for independent readers. Here, the teacher might teach to students to place a question mark next to an underlined statement they do not understand, an exclamation point next to something that surprised them and a double-headed arrow and brief statement next to something that prompts them to make a connection to something they already are familiar with (Harvey et al 2004: 115).

**2.4.5.1.2.3 Encouraging Student-To-Student Conversation.** - At this stage, classroom talks during or after reading. Traditionally, it involves teachers posing comprehension questions and students responding (or not responding) in a form of verbal ping- pong, which does little to build comprehension. Instead, students need to be encouraged to talk about the content of their reading while they are reading, and they need to be taught a structure for doing so. Because students need all the practice they can get applying comprehension skills, their conversations should not simply focus on plot development, sequence of events, or key concepts, but instead on predicting what will happen next, asking questions, making connections, etc.

**2.4.5.1.2.4 Re-Reading.-** At this stage, Beers (2003: 110) gives us a common situation between a teacher and one of her students in the process of reading:

Teacher: "What's wrong, Carla?

Carla: I did not get the story.

Teacher: Did you re-read the parts you did not get?

Carla: Why?

Teacher: To help you understand them.

Carla: Why would reading the same stuff again help me get it?"

In the previous conversation, according to Beers (2003), Carla illustrates the viewpoint of many struggling readers: "Why would reading the same stuff again help me get it?" However, independent readers often stop to re-read sentences and passages that do not initially make sense. When we re-read, we move at a slower pace and reflect on what we have read in our effort to make meaning of the

text. In addition, it is considered that struggling readers need their misconceptions about the value of re-reading broken down; therefore, a great opportunity to reinforce the value that "hard work leads to success" is that struggling readers need during-reading phase.

In sum, as the name suggests, during or while reading is employed when the reader is currently reading a text. In addition, teachers can use various activities to train the students on how information in the passage is organized. Meanwhile, taking into account our personal opinion, we consider that this phase of reading is a bit more problematic to implement with students, as it is hard to monitor what a learner is currently doing while reading. For example, if we consider those students who are reading a text but they are not sure about the meaning, they will spend their time trying to decipher the meaning of a word using their bilingual dictionary; consequently, they miss the comprehension process. Now, assuming the previous conception, we consider that the purposes of these approaches are not to obstruct the optimum reading and it is not to take the reader's focus on any text as whole, because this strategy looks for an interaction between the reader and the text.

#### 2.4.5.1.3 Post-reading

According to Dubin and Bycina (1991: 38) this phase is intended to review the content of the passage and to consolidate what the students have read and at the same time to relate the textual information to the learners' knowledge, interest and opinions. On the other hand, Aebersold and Field (1997: 117) argue that "one of the most frequent activities of post reading stage is the use of comprehension questions in order to revise the information in the text." Therefore, we consider that comprehension questions explore the different aspects of the reading passage such as the main ideas, some specific details, etc.

Therefore, summarizing this point, we can say that a post reading activity focuses on a wide range of questions that allow for different interpretations. At the

same time, it permits a deep analysis of a printed page and wants students to share their experiences, in order to enrich their comprehension.

In short, from what has been said about pre, while and after reading comprehension activities, we can conclude that as the main purpose of teaching reading is to help students in comprehending the text, teachers should select the most useful activities which are suitable to the students' needs taking into account their background knowledge and of course their comprehension level.

## 2.5 READING COMPREHENSION LEVELS

As we know, reading comprehension is one of the skills that should be mastered and understood by foreign language learners because it is a complex task. According to some researchers (Cassany. D, 1998; Hansen, 1981; Hielman, et al 1981; Kamsiah. A, 1998; Majed. F, 2010; Mccormick, S., & Hill, D. S, 2001; Nina, L, 2008; Poswa. M, 1992; Richards & Anderson, 2003; Rosenshine, 1980 and Smith. F. 1982), we have four levels of reading comprehension. These levels are Literal, Inferential, Critical, and Creative. According to them, these levels should be used in order to get better comprehension; that is why; we are going to explain each of them as follows.

### 2.5.1 Literal Comprehension Level

Regarding Literal Comprehension Hielman et al (1981: 4) quoted:

> *"Literal comprehension focuses on ideas and information that are explicitly stated in the reading passage. Furthermore, /…/ at this level, the text purpose is to elicit responses starting from the simple to complex range. In the same way, /…/ the simple task in literal reading is the recognition and recall of single facts or incident stated in the text."*

In the same way, Majed, F. (2010: 241) described literal comprehension as "information on the lines." Here, generally speaking, this level is considered to be as guided reading process because the reader has to work with the information assigned in the text. Furthermore, if the reader has difficulties for understanding a text, it could be, because he does not know the meaning of a word, which is difficult for him. (Contreras, E. 2001: 18).

Another conception stated by Salam, A. (2006: 4) refers to literal level as referential comprehension where the reader should understand the cohesive relationship among words, sentences, paragraphs and the whole text.

Therefore, in this attempt, we have to say that referential comprehension is the basis for all the types of reading comprehension process because if the reader is able to recall facts or events that are directly stated in the text, he will be able to pass to the next level (inferential, critical and creative levels).

In sum, we can understand that literal level refers to the ability to obtain a low type of understanding by using information explicitly stated into the text. Although literal reading comprehension is considered to be a low-level type of thinking, it should not be concluded that reaching for details to gain facts is unimportant in the process of understanding because a foundation of knowledge is important and necessary for starting with higher-level thinking.

### 2.5.1.1Literal Comprehension Training

Being understood the concept of literal comprehension; this research focuses its attention on the improvement of literal or referential reading comprehension through the application of D.R.T.A reason for which this research is looking for training students in literal comprehension, which consists of using two types of tasks: recognition tasks and recall tasks.

> *"Recognition tasks require students to identify the main points in the reading selection or in exercises that use the explicit content of the reading selection. Recall tasks, on the other hand, demand that students produce from memory explicit statements from selections. Such tasks are often in the form of questions that teachers pose to students after reading the text. The difficulty level of these two tasks depends on different conditions, such as the students' linguistic abilities or needs and the number of events or incidents to be recalled"* (Nina, N. 2008: 527).

From the two aspects mentioned by Nina (2008), we can state that recognition and recall tasks are important factors in the process of literal comprehension training; due to the fact that, without these tasks students do not develop their abilities. We know that training students in recognition task requires students to identify the main points in reading selection that use the explicit content of a reading selection, while recall task requires an active thinking reading activity, because it demands the production of memory after reading a text.

Now, having understood the concept of literal comprehension level, we are going to develop the next reading comprehension level.

## 2.5.2 Inferential Comprehension Level

Twenty years ago, there was little scientific investigation about inferences in text comprehension but as the time was changing; research focused their attention on this field. As an example of this, Cassany. D. (199: 8) developed the following definition:

> *"Inference is the ability to understand certain aspect of the text starting from the meaning of the rest. /…/ furthermore, making inferences, students overcome gaps, which appear for diverse reasons in the process of understanding /…/ as inference is important, it makes them to acquire autonomy in their reading processes."*

From what Cassany (1998) states above, we can understand that inference is the ability to use two or more pieces of information from a text in order to arrive at a third piece of information that is not implicitly stated in the text.

Another reference concerning to inferential level is the one that Mccormick, S., & Hill, D. S. (2001: 219-226) have:

> *"Inference is a skill that is used in everyday life as well as in the educational setting. The ability to draw inferences requires the reader to expand on what it is stated into the text. Here the reader must use his or her prior knowledge concerning to his or her different experience and situation in combination with clues found in the text in order to get reach conclusions that are important in understanding the underlying meaning of read material."*

In the previous quotation, Mccormick refers to drawing inferences as "to expand on what it is stated in the text." with this point of view, making inference requires students to draw conclusions about the text by "reading between the lines" or inferring meaning from something that is not directly stated in the written material. Therefore, when we make inferences, we combine our background knowledge with clues from the text in order to fill information that the author is not directly telling us. In this light, it can be assumed that inference is "the central to the overall process of comprehension" (Anderson & Pearson, 1984: 269).

It is important to bear in mind what Trehearne, M. (2006: 42) asserts:

> *"Inferential thinking involves going beyond the literal meaning of the text, gaining deeper insights by connecting what is read, seen, or heard in a text with one's background knowledge and experiences."*

Now, it is convenient to analyze the relationship between background knowledge and inference ability; that is why, reviewing and searching many books related to reading comprehension and background knowledge, we comprehend that students bring diverse backgrounds to the educational setting. These backgrounds, when used in connection with reading, help students make meaningful connections to text.

As Graesser et al. (1994: 371) mention:

> *"Readers are successful at comprehending when they construct multi-level representations of text while making connections between the text and their background knowledge."*

Given the above discussion, it is clear that when readers make associations to prior knowledge in the text they are reading, they make inferences necessary to understand the text (McKoon & Ratcliff, 1992: 440). Therefore, as readers make necessary connections to their background knowledge they will make meaning from the text.

In the same way, Pressley and Wharton-McDonald (1997: 448) support comprehension as:

> *"To be at the high of understanding if the reader has an extensive knowledge associated with the ideas in the text. However, if the knowledge is low then there is risk that the comprehension level will be low."*

In fact, from what was mentioned above, it is considered that students will become more successful when making inferences during reading if they are able to connect what they already know to the text. In sum, readers need to build links between knowledge they bring to the reading in order to make the necessary connections between their prior knowledge and the text.

In a very general sense, it is clear that inference plays an important role into the context of reading since, it is a strategic process where somebody generates assumptions, makes predictions, and comes to conclusions based on the given information (Richards & Anderson, 2005: 290). Therefore, without the ability to draw inferences, the readers may fall behind their peers. These students do not grasp the concept of using prior knowledge to figure out what the text implies. Students have difficulty throughout their educational experience when inference abilities are not fully developed. Students are unable to answer questions that require further thought and imagination than what the text implicitly states (Hansen, 1981: 665-669).

### 2.5.2.1 Inferential Comprehension Training

Reviewing and searching many books, we consider that inference comprehension is not a difficult task, since students routinely use inferential thinking during non-school activities, for example; when deducing similarities and differences between new and familiar events, but classroom activities do not often provide opportunities for using such skills and less into foreign language learning process. Instead of being taught to learn textual information by relating it to something they already know, students are often taught to learn new information by simply remembering it. That is the reason why we consider using inferential comprehension training into reading comprehension.

In this section of the study, we are going to work with two theories (constructionist theory and the framework of Van den Broek ) developed in the field of cognitive psychology in order to generate and develop some insights in the field of inference generation during and after the reading comprehension process. Therefore, we are going to clarify that these types of inferences were selected because they seem to be more comprehensible than other theories.

**a) Constructionist Theory**. - The constructionist theory developed the search after meaning principle, which has the following three assumptions: The readers' goal assumption, the coherence assumption and the explanation assumption (Graesser et al. 1994: 145). Summarizing these points, the readers' goal assumption states that readers attempt to construct meaning representation in accordance with their goals of reading; the coherence assumption states that readers attempt to construct meaning representation which are locally and

globally coherent; and the explanation assumption states that readers attempt to construct meaning representation in the text.

Based on these assumptions, the constructionist theory determines which inferences should be on line inferences and which should be off line inferences. On line inferences are defined as inferences which are generated during the course of comprehension, where as off line inferences are defined as inferences which are generated later, not during reading task.

Furthermore, according to Graesser et al. (1994: 371) we have five types of knowledge-based inferences that we can develop in reading comprehension, which are described in the following table.

| **TYPE OF INFERENCE** | **BRIEF DESCRIPTION** | **EXAMPLE** |
|---|---|---|
| Causal antecedent | The inference is in the causal chain (bridge) between the current explicit action, event, or state and the previous page context. | In reading … *In his haste and the stuck a pickle fork into his right eye*. A reader processes the part as the man was careless and miss aimed |
| Thematic | This is the main point or moral of the text. | A reader processes the entire passage as haste makes waste. |
| Character emotional reaction | Inference is an emotion experience by a character caused by or response to an event or action. | In reading … *the needless outlay reduced him to poverty*. A reader processes the part as the man became sad. |
| Reader emotion | The inference is the emotion that the reader experiences when reading a text. | In reading…(on removing the fork the eye come with it) a reader processes that part as the reader is disgusted. |
| Author intent | The inference is the author´s attitude or motive in writing. | A reader processes the entire passage as bierse (the author of the passage wants to lambaste |

| | | |
|---|---|---|
| | | workaholics) |

Note: This table was extracted from Graesser et al (1994: 375).

As it can be seen, we recognize that various types of inferences are included in knowledge-based inferences. We predict that the first four inferences are on line inferences because inferences are generated during the course of comprehension while the following are off line inferences because inferences are generated later. In sum, we consider that this theory and the inference types must yield important insights in L2 reading researches.

**b)** Van den Broek et al (1993: 170) provide us a useful framework in order to explain the mechanism of inference generation during reading activity. Therefore, we found two types of inferences generation which are described in the following table.

| **TYPE OF INFERENCE** | **DEFINITION** | **DIRECTION** | **EXAMPLE** |
|---|---|---|---|
| Backward elaboration | Inferences which draw heavily on the readers general background knowledge in connecting the focal statements | backward | Perhaps the face looked fanny. ( at the sentence: *Then the baby smiled*) |
| Forward elaboration | Inferences which anticipate information that is implied by and coexistent with the information in the focal statement. | Knowledge | He is going to go down there. (At the sentence: *The man stuck out his tongue*) (Horriba, 1996: 471) |

Note: This table is based on the protocols obtained by Horriba's (1993, 1996) Think aloud technique.

From the previous table, we consider that once applying inferential reading comprehension students have to use their previous knowledge, experience, intuition; and consequently, they will be able to make conjectures about the information printed into the text. In this way, students will put in practice their active thinking skill more than ever before.

In the following point, we are going to describe the third level that is critical reading comprehension. At this point, we have to clarify that as our principal concern are literal and inferential reading, we are not going to describe creative and

critical reading comprehension level because our focus of interest is in the first two levels.

## 2.5.3 Critical Comprehension level

According to Poswa, M. (199: 13):

> "*Critical Reading is a higher level of reading because it involves evaluation, the making of a personal judgment on the accuracy, value and truthfulness of what is read. To be able to make judgments, a reader must be able to collect, interpret, apply and synthesize the information. Critical reading includes such skills as the ability to differentiate between fantasy and reality and the ability to discern propaganda techniques."*

From what Poswa, M. (1992) states, we consider that when someone enters into critical reading, we have to be confident that they are able to read their textbooks with comfort, we must be sure that they are able to answer the text with questions and consequently they can answer critically. Sometimes, students complain that they have been given questions for which they cannot locate the answers. Unfortunately, much of the time they are correct, because most of the students recognize only one type of question; the textually explicit question that is found easily in one place in the text. However, we also expect that students will be able to ascend in the hierarchy of thought and answer questions that are textually implicit (inferential comprehension).

Another point of view is mentioned by Smith. F. (1982, quoted in Kamsiah. A. 1998: 32) who said, "Critical comprehension level is defined as the ability to obtain a higher level of interpretation needed for literal comprehension." In other words, literal reading understands the denotations of words, ideas, and sentences that are explicitly stated in the text, while critical reading goes beyond the words.

Synthetizing the previous point of view, we can say that critical reading refers to a careful, active and analytical reading, which involves reflecting on the validity of what the reader read.

In sum, we can state that critical reading does not mean to get a negative point of view about the text, like people who criticize others. On the contrary, when we think of critical reading; we have to consider a deep analysis, where the reader can accept or refuse the writer's ideas activating his or her conscious thought, because at this level the reader has to work on his thinking beyond the obvious representation in the text.

## 2.5.4 Creative Comprehension Level

As a manner of introduction, we know that we read for a variety of reasons, which differ from person to person. Here as students or professionals, we have to say that reading seems to be and will be part of all our life because it is tied to most of our day to day activities, reason for which research have developed differences into reading comprehension as it happens with creative reading.

> *"Creative comprehension reading uses divergent thinking skills to go beyond literal comprehension, interpretation and critical reading levels. In creative reading, the reader tries to come up with new or alternative solutions to those presented by the writer." (Poswa. M. 1992: 13)*

In the case of creative comprehension level, we consider that reading creatively is not an individual fact because if the readers use a set of context and inputs in order to produce something new, they will read creatively. Stimulation, enjoyment, experimentation in groups provides a creative process. At the same time, we consider that certain places help them to read creatively where the reader will be able to comprehend and analyze the information required.

In sum, we have identified four reading comprehension levels, which are Literal, Inferential, Creative, and Critical reading. Researchers (Cassany. D, 1998; Hansen, 1981; Hielman, et al 1981; Kamsiah. A, 1998; Majed. F, 2010; Mccormick, S., & Hill, D. S, 2001; Nina, L, 2008; Poswa. M, 1992; Richards & Anderson, 2003; Rosenshine, 1980 and Smith. F. 1982) mentioned that these levels are extremely beneficial in order to improve comprehension, due to the fact that reading is highly complex requiring construction between the reader and text. Therefore, in certain cases it is not easy to fulfill all these levels because teachers have to complete a curricular program that is not into discussion between the intuition's rules and the teachers.

## 2.6 METHODS FOR TEACHING METACOGNITIVE KNOWLEDGE

Many research recommend that students, especially poor readers, get instruction in reading strategies, including metacognitive ones (Cohen, 1998; Gersten et al 1998; and Nunan, D. 1997). The underlying premise of strategy instruction is that such instruction helps students to monitor their own learning. As Cohen (1998: 67) stated "Strategy training /.../ encourages students to find their own pathways to success, and thus it promotes learner autonomy and self-direction." These reading instructions are detached from reading and embedded in reading. As our major concern in this study is to apply "Direct Reading Thinking Activity" (D.R.T.A) we have to describe it into embedded reading while detached from reading will be briefly summarized for comprehension purposes only.

### 2.6.1 Detached Strategy Instruction

Some theoreticians (Casazza, M. 1993: 202-208 and Hock et al, 1995: 45) recommend teaching reading strategies in isolation from authentic context. The steps involved in using this method are the following:

a) The what step: In this step the teacher identifies the strategy by naming, defining, and describing it.

b) The how step: In this step the teacher explains the procedure of implementing the strategy.

c) The when step: This step is intended to help students understand when they hold use the strategy. In this step, the teacher illustrates to the students under what conditions (types of written texts, purposes for reading, and so forth) the reading strategy should be used.

d) The why step: This last step is intended to help students understand why the strategy is important and why it will help them become better readers. As mentioned previously, detached strategy instruction includes declarative (what), procedural (how), and conditional (when and why) knowledge about strategies.

In sum, we can say that detached strategy claims that this method directs students' attention to the strategy they are learning; thereby, leading them to become more aware of it. However, opponents of this method argue that teaching a strategy in a meaningful context is more effective than teaching it in isolation.

## 2.6.2 Embedded Strategy Instruction

Some researchers (e.g., Carrell et al., 1998, and Hattie et al., 1996) recommended embedded strategy instruction in the context of reading. As Hattie et al. (1996: 101) stated:

> *"If strategy training is carried out in a metacognitive, self-regulative context, in connection with specific content rather than generalized skills /.../ positive results are much more likely."*

In this respect, reciprocal teaching and directed reading thinking activity are taken into account.

### a) Reciprocal Teaching

Some educators claim that reciprocal teaching is a useful technique for integrating strategy instruction with reading comprehension instruction. This technique focuses on four comprehension strategies believed to be used by expert readers: predicting, generating questions, clarifying and summarizing. In this technique, the teacher and a group of students take turns leading a dialogue concerning a section of the text they are jointly attempting to read and understand.

This procedure is stated by Palincsar et al. (1991: 46) as follows:

> *"In reciprocal teaching, teachers and students take turns leading a dialogue about the meaning of the text with which they are working. The discussion focuses on generating questions from the text, summarizing the text, clarifying portions that impair understanding and predicting upcoming content"*

The major advantages of reciprocal teaching are developing comprehension through reading strategies, modeling comprehension strategies in authentic contexts, activating relevant background knowledge, and enhancing students' responsibility for comprehending what they read.

### b) Directed Reading-Thinking Activity (D.R.T.A)

The Directed Reading Thinking Activity (D.R.T.A) is another instructional technique for integrating strategy instruction with reading comprehension instruction (Weaver, 1993: 87-106).

This strategy derives from the interactive model of reading comprehension, since; it assumes two aspects from the teaching and learning perspective. According to Jurado and Bustamante (1998: 68): "A methodological proposal begins from the interaction of teacher- student and the object of knowledge (a written text)" That is why; we are going to take into account these aspects in order to describe this instructional strategy for improving reading comprehension in foreign language learners.

## 2.7 THEORETICAL BASES OF DIRECTED READING THINKING ACTIVITY (D.R.T.A)

A lot of information has been written about the Directed Reading Thinking Activity and its importance for improving reading comprehension. According to Stauffer (1975, quoted in Dougherty et al 2003: 359), D.R.T.A is:

> *"An instructional procedure that views reading as a problem-solving process best accomplished in a social context. As students work through a piece of text, the divergent thinking of students tends to converge, as more information from the text should be encountered. However, the influence of individual's prior knowledge causes the outcomes of the reading experience to be slightly different for each reader."*

As it was quoted by Dougherty et al (2003) D.R.T.A is "an instructional procedure that views reading as a problem-solving". Here, to talk about reading as problem solving is not an easy task because above all reading is a complex process where the reader has to construct and extract meaning from the interaction with the text.

In the same way, Tierney et al (1995: 45) describe D.R.T.A "as a strategy for building independent readers." In this attempt, they add that this strategy has the potential to equip readers with the abilities to determine purposes for reading, examine reading materials based on the established purposes, making judgments and decisions based upon information acquired from text.

At the same time, Richardson, and Morgan (1997: 42) expressed that:

> *"The Direct Reading Thinking Activity engages students in higher order thinking skills and that these skills include making connections between interrelated elements of the text, justifying thought process and drawing logical conclusions."*

Jennings and Shepherd (1998: 24) state that D.R.T.A "helps students become aware of the reading strategies, understanding the reading process, and developing prediction skills." Therefore, as it was mentioned before, this strategy stimulates students' thinking about what they read. At the same time, using these strategy students can develop their reading comprehension skills as well as their higher order thinking skills.

Adding more support to D.R.T.A, Abisamara, N. (2006: 32) mentioned:

> *"The D.R.T.A is an effective strategy for teaching reading comprehension because it helps students set reading purposes by making predictions, read more actively and enthusiastically, /…/ and through the application of this strategy, students could remember more information from what they have read before"*

Summarizing these points, we have to say that D.R.T.A is an instructional method that helps strengthen reading and critical thinking skills. That means, using the D.R.T.A, students can develop their thinking abilities in order to read critically and effectively. Furthermore, to equip readers with the ability to determine the purpose of reading, the ability to extract, comprehend and assimilate information based on the analysis of their reading materials are the procedures of D.R.T.A, which allows the reader to be an active and thoughtful reader rather than a passive one.

The following sections will explain the importance of developing this research; that means to understand D.R.T.A from different perspectives taking into account what the authors above mentioned above with the main goal of supporting the significance of this research.

### 2.7.1 Direct Thinking Activity into Instructional Reading

What needs to be conceptualized foremost is what is meant by direct or instruction in reading. The literature presents many definitions and interpretations of the term 'direct instruction or strategy' for example, Berliner, D. (1981: 203) explained:

> *"Direct instruction consists of a conflux of conditions and teacher's behavior that have been associated with effective classroom instruction. This involves content coverage, opportunity to learn, academic engaged time, and allocated time."*

Similarly, Duffy and Roehler (1982: 35) also stress, "direct instruction relates to teacher variables and not task variables." For Duffy and Roehler, this means academic focus and careful teacher monitoring of students' learning. Therefore, at the heart of direct instruction lies the teacher, a reality that may not be favorably accepted by the constructivists and learner- centred theorists. Nonetheless, a recognized researcher called Baumann, J. (1993: 287) reinforces this idea by stating the following:

> *"In direct reading instruction, the teacher, in a face-to-face, reasonably formal manner, tells, shows, models, demonstrates and teaches the skill to be learned. The key word here is teacher, for it is the teacher who is in command of the learning situation and leads the lesson, as opposed to having instruction directed by a worksheet, kit, learning centre, or workbook."*

Duffy. G. (2002: 30) claims that, explicit instruction like D.R.T.A differs from traditional approaches to comprehension instruction. He explains, "It uses strategies to mean a technique that readers learn to control as a means to better comprehension." Another assumption made by Duffy. G. (2002: 39) is that explicit instruction in intentional and clear information about how strategies work will allow struggling readers to have

control over their comprehension. In this explanation, the teacher does not control the strategy; rather, it is the reader.

Therefore, direct instruction into Direct Reading Thinking Activity concerns the explicit or direct teaching of comprehension strategies. These strategies must be made clear to the readers through clear explanations from the teacher or through modeling to the point where the readers are in control of the strategy, can work independently; and at the same time, monitor their comprehension.

### 2.7.2 Direct Reading Thinking Activity as Predicting View

Foremost, we need to conceptualize what we understand by prediction. The literature presents many definitions and interpretations of the term 'prediction.' Smith, F. (1998: 19) explains the following:

> *"Readers think about what will happen next as a story unfolds; they develop an anticipatory attitude toward text and learn to predict their way through the text. Therefore, prediction means asking questions, and comprehension means being able to get some of the questions answered."*

In the last quotation, we can conclude that readers should use textual knowledge in combination with prior knowledge and experience in order to make predictions. As the text unfolds and readers encounter new information, they confirm, revise, or reject initial predictions.

In our case, an instructional strategy for reading comprehension that involves predicting is the D.R.T.A. In this technique, students predict what the reading will be about, verify the accuracy of their predictions as they read, and then modify other predictions, as they understand more about the book (Roe & Ross, 2006: 42). While there is disagreement about whether the D.R.T.A is appropriate for expository books (Tompkins, G. 2007: 44), this technique remains useful to enhancing reading comprehension skills because it strengthens students' ability to predict and question during reading. In addition, D.R.T.A helps students engage thinking skills that are part of the higher levels of Bloom's Taxonomy, such as analysis, synthesis, and evaluation. As a reading comprehension strategy, the D.R.T.A is a useful method for facilitating understanding and involves students in what they read, helping them to be constantly aware of new information as it is presented in the text.

### 2.7.3 The Procedural Steps for Developing Directed Reading Thinking Activities Method

Stauffer (1975), the father of D.R.T.A, conducted a large scale of quantitative studies into the effectiveness of language experience approach, which involved the D.R.T.A. At this stage, we have to describe the eight steps as they followed them.

### 2.7.3.1 Making predictions before reading

As described previously, predicting is a technique which most of the researchers focused on becuase it is considered an essential part of reading that must be used by students in order to achieve comprehension. Smith (1994) is one of those researchers who stressed the importance of predicting, and who claimed that it is the core of reading comprehension.

For making predictions, students have to use their prior knowledge about the topic, and combine it with the new material in the text; i.e, readers use what they know before, and relate it with the material at hand. In the D.R.T.A method predicting has the main goal to activate students' mind in order to get interest in reading comprehension activities.

Therefore, predicting is a very effective technique to promote readers' activation of their prior knowledge because as Nuttall, C. (1996: 119) said, making prediction does not need to be "successful" all the time; the most important thinking is "to be useful."

### 2.7.3.2 Activating Prior knowledge

Education Oasis (2006) defined prior knowledge as knowledge which the reader has prior to engaging in the reading activity, sometimes referred to as schema. It is important to activate prior knowledge because it allows students to connect what they are learning or reading with what they already know.

Furthermore, according to Kujawa & Huske (1995: 4) Activating Prior knowledge can be explained as:

> *"A combination of the learners' preexisting attitudes (beliefs about ourselves), experiences (Everyday activities that relate to reading, events in our lives that provide background understanding), and knowledge (Of the reading process itself)."*

Cosequently, the activation of prior knowledge can develop readers' understanding by helping them to see links between what they already know and the new information they are encountering. Therefore, it allows students to connect what they are learning or reading with what they are already supposed to know.

### 2.7.3.3 Setting purposes for reading

According to Dougherty, K. 2003: 10).

> *"At this stage, a teacher should make all the possible for initiating a discussion on probable purposes for reading the text. Attention is drawn to background experience and clues in the text. Students might discuss the title, illustrations, text headings, and as reading progresses, the previously read text. Purposes are often stated publicly as predictions. Purposes for reading may be established by the group or individuals. The teacher may also initiate a discussion on matching reading rates to reading purposes at this time."*

As mentioned by Dougherty, (2003) setting purpose before reading comprehension takes place is fundamental for comprehension because it allows the students to be more aware about their reading comprehension process; and consequently, get successful results.

### 2.7.3.4 Reading the text

Before reading, the teacher segments the text into meaningful sections with stopping points for discussion. Students read a section of text independently. The teacher monitors and assists students' reading as needed (Dougherty, K. 2003: 10).

In the previous point, Stauffer (1975) asserts that the youngest readers can engage in reading as an independent, problem-solving process when teachers have selected texts into the instructional reading level.

### 2.7.3.5 Developing comprehension through think aloud

According to Dougherty 2003: 12:

> *"The teacher facilitates a discussion that requires the students to verify or revise their predictions based on an evaluation of text and prior experience. Students are held accountable for using evidence to support their claims in their discussion with the group. This process continues with each section of text through the use of think aloud."*

From the above quote, it is clear that the teacher´s role is essential when readers require understanding a text because they help their students to understand the direction of learning, establishing goals and providing a feedback according to how well students can process and fulfill their goals.

### 2.7.3.6 Making verifications

Here, readers have to make verifications about what they predict before reading. At the same time, they have to verify if their reading purposes were or were not carried out before and during reading (Kujawa & Huske 1995: 23).

### 2.7.3.7 Making judgments

At this stage, when we talk about making judgments, the readers make judgments and form opinions about characters, decisions, and actions. In this phase, we have three stages; the first one is asking questions. At this stage, readers have to look at the whole situation and decide or question whether the actions are good or bad. The second step corresponds to making connections, here the readers should think about their own experiences as they read. Furthermore, readers think about what they would have done in the same situation. Finally, the last stage is forming an opinion, where the readers have to support their decision by considering the entire situation, evaluating their pros, cons, and finally incorporating their personal experiences or beliefs (Dougherty 2003: 13).

### 2.7.3.8 Making Extensions

In order to make extensions, students have to describe if their reading activity has become a higher level of comprehension because when readers enter into this level, they are be able to analyze what comprehension implies in their increase of knowledge and of course in their understanding (Arianti, N. 2013: 48). In sum, we can state that making extensions involves reflecting on the validity of what the readers read describing, analyzing and using it for useful purposes.

In this light, following the stages mentioned previously we consider that, D.R.TA should be an effective strategy because it contains several characteristics that make it relevant today. In many ways, Stauffer (1969) was a visionary for applying this instructional method; and therefore, it seems to be important not to forget this practice because it is a tool for increasing reading comprehension levels into the development of foreign language.

## 2.8 Chapter Summary

In order to conclude this section of the study, we have to mention that this chapter has focused on three main points. Firstly, it has reviewed the previous research into foreign reading comprehension in our context. Then, we have mentioned, described

and analyzed theories of reading and reading comprehension including definitions, approaches and models. Finally, we have presented definitions and characteristics of D.R.T.A as an instructional strategy, in order to support the significance of our study. The proceeding chapter will explain the methodology used for this study, including details about the sample population, the instruments used to carry out this experiment, the treatment used with the intervention group, along with the procedures of the study.

# CHAPTER III

# RESEARCH METHODOLOGY

## 3. Introduction

When teachers work with English as a foreign language, they always look for better methodological options to improve it, with the main purpose of obtaining successful results for both, teachers and learners. Therefore, in this study was necessary to design and propose a methodological program with the main goal to improve any kind of limitations concerning the treatment of reading comprehension in a foreign language, making use of D.R.T.A as an instructional method. At the same time, it was required the most relevant information in order to support the methodological point proposed here.

Thus, this chapter initially started describing the research design, the population, and the sampling. At the same time, the instruments and the materials for data gathering with their respective stages were described. Finally, the statistical test for approving or disapproving the hypotheses stated in chapter one was also described.

## 3.1 Research Design

As researchers, it is known that a good investigation needs an appropriate design since it requires a main strategy for getting all the information. Thus, the research design used for this study is mainly experimental; that means, we manipulated our independent variable (D.R.T.A) in order to see the effects and relationships with the dependent variable (Reading comprehension levels). The independent variable of our hypothesis was "D.R.T.A." It was manipulated by using pictorial clues, predicting, activating students' background knowledge and developing higher order thinking skill.

Furthermore, in order to obtain the control or the internal validity for this study, we took into account two equivalent groups of comparison. These groups were named Experimental Group (E.G) and Control Group (C.G). Therefore, according to the object of

this study, it was more convenient to work with the students of fourth English level from Linguistics and Languages Department as part of this study. The way in which we selected two homogeneous groups was by simple random registration. That is to say, in order to have an equivalent E.G and C.G we decided to invite freely to all the intermediate students who want to improve their reading comprehension. As a result of that, 50 participants were registered randomly in the order they come to the reading workshop. So, the registration consisted in registering combining one participant to the control group and another to the experimental group until we fulfilled the Twenty-five participants per each group.

These groups were necessary because a pre-test and a pre-questionnaire were used for both groups (E.G. and C.G.) before starting the training sessions or what we called reading workshops. In this regard, once we got the results from these groups, a descriptive and inferential technique were used in order to describe the results.

Now, talking about the final stage, a post-test and post questionnaire were applied. The post-test was used for both groups (E.G and C.G) while the post questionnaire was applied only to E.G in order to see the effectiveness of our conventional method. (See point 3.3.1 Instruments for identifying reading comprehension difficulties and improvements for further details, p.77). Thus, taking into account the description made in the paragraphs above, our research follows this outline proposed by Hernandez, S. and others (2003: 227).

| | | | | |
|---|---|---|---|---|
| | **$G_e$** | **$O_1$** | **X** | **$O_2$** |
| | **$G_c$** | **$O_3$** | -- | **$O_4$** |

Where:

**E.G** = Experimental Group (25 Students).

**C.G** = Control Group (25 Students).

**O**1 = Pre-test for experimental group.

**O**2 **=** Post-test for experimental group.

**O3 =** Pre-test for Control group.

**O**4 **=** Post-test for Control group.

**X =** Independent Variable (D.R.T.A)

**- =** No treatment.

In order to have a wide panorama about the treatment, the research was performed in La Paz city, at Mayor San Andres University specifically at Linguistics and Languages Department, which is the part of the Humanities and Educational Sciences School.

The application of D.R.T.A to improve Referential and Inferential reading comprehension on English as foreign language students took place at the *"Monoblok Central de la UMSA"* on the ninth floor classroom "A." The place was very appropriate since it was available for intermediate students and obviously for us.

Talking about the implementation of this research, it demanded around three months of training sessions, which was the time required for the application of the experimental stage. In other words, we decided to work with two sessions per week; that is to say, on Tuesdays and Thursdays, each session demanded three hours a week, which gave us twenty-six sessions during the whole experience.

Now, in the following section the subjects of this study and their respective characteristics are described.

## 3.2 Population and Sampling

In this part of the research, we started describing how the population was established. At the same time, an explanation about the probabilistic sampling was given.

### 3.2.1 Population

According to Urdan, T (2010: 1) population is the individual or group that represents all the members of the certain group or category of interest. Therefore, population is a group to which a research wants to generalize the sample result (Chrestensen, L. 2000: 158); that is why, in the development of this study, our population focuses on foreign language learners. According to the "Computing office at Linguistics and Languages Department," our population is supposed to consist of 71 students because those students belong to the fourth level of English.

As general criteria about our population, they have the following characteristics:

- All the students of fourth English level are Spanish speakers but a few numbers of them have a native language as their mother tongue, which is Aymara language.
- All the students of fourth English level have the same level of English that means; all of them are in the intermediate English level.
- All those students are graduated in humanities at high school. In other words, they have completed twelve years of schooling.
- They come from intermediate socio-economical level.
- They are between 19 to 25 years old.
- They have never taken any training or workshop sessions in relation to the improvement of E.F.L as a part of their academic life.

Once we contextualized the population, it is time to describe the sample used in this study as follows in the next page.

### 3.2.2 Sample

After reviewing many books, we understand that "sample is the science of finding out a lot from a little" (Hague and Harris 1994: 57). In other words, sample is a part of the whole population that is going to be investigated and whose data will be collected. Therefore, the sample for this study corresponded to a simple random assignation of the students who belong to the intermediate English level, more specifically the fourth level of the English program at Linguistics and Languages Department. This means that the students at this level have already been exposed to the English language for four semesters and the students were just finishing the English program at the Linguistics and Languages Department. So, they were ready for taking English as specialty.

We have to clarify that during the research we found three groups of the fourth level. Since we could not work with the three groups because they had different schedules in the subjects they were taking, we decided to invite all the intermediate students who wanted to improve their reading comprehension and be part of the reading workshops. On the first meeting, we decided to assign the students to the Control Group and the Experimental Group by simple random sampling registration, until we reached the twenty-five students per each group.

From what has been indicated above, we obtained two groups. The first one is called "The Experimental Group" (The E.G received the manipulation of the independent variable) and the other "The Control Group" (The C.G did not receive the manipulation of the independent variable but it performed the same activities, received the same content as the experimental group). We established 25 participants per each study group, in order to guarantee the reliability and the internal validity of our experiment. Therefore, we have the following size:

| CONTROL GROUP | EXPERIMENTAL GROUP |
|---|---|
| 25 | 25 PARTICIPANTS |

As the sampling was described, it is the time to talk about the instruments for data gathering as they are mentioned in the next point.

## 3.3 Instruments for data Gathering

For this study and according to the objectives stated in Chapter I, we worked with the following instruments.

### 3.3.1 Instruments for identifying reading comprehension difficulties and improvements during the exposure to D.R.TA

In order to understand better the instruments for identifying reading comprehension difficulties and improvements we used a table. It contains six columns where the instruments, the objectives, the descriptions, the participants, and some comments are described.

| N | Instrument | Objective | Description | Participants | Comments |
|---|---|---|---|---|---|
| 1 | **Pre Questionnaire** (See appendix 1 for further details). | - To find out the students' position towards reading comprehension.<br>- To describe if learners recognize their reading comprehension difficulties. | The pre questionnaire was designed with fourteen questions (fixed responses) where the student had to choose only one answer out of four possibilities. | Both groups: Experimental and Control Group | The pre questionnaire did not score students' answers we just described statistically the students' preferences and difficulties in reading.<br>The type of questions permitted to get useful information for data analysis in a short period. |
| 2 | **Post Questionnaire** (See appendix 2, for details). | To have a feedback from participants' experience after they have been exposed to D.R.T.A experimentation. | In order to describe the students' position towards D.R.T.A, "The Likert Scale" was used. It consisted of six statements that had their respective answers.<br>The Likert Scale measures the level of agreement or disagreement towards a topic. Therefore, we assigned a numerical value for each item that went from four (strongly agree) to one (strongly disagree) | Only the Experimental group answered the post questionnaire. | The Likert Scale attempted to score the students' position towards D.RT.A. strategy.<br>The application of Likert Scale in the post questionnaire creates a comfortable situation in order to avoid any kind of ambiguity, pressure, or uncomfortable situation since they only have to choose out of four possibilities to show their agreement or disagreement . |

In the table above, the characteristics of the instruments used for identifying reading comprehension difficulties and improvements after the intervention were depicted. Below the instruments for evaluating students' reading comprehension are described.

## 3.3.2 Instruments for evaluating reading comprehension before and after D.R.T.A

According to the nature of our study, a pre and a post-test before and after conducting the experiment were applied to test the students' improvement in reading comprehension. At the same time, an explanation about the types of texts (Informational, narrative and argumentative) used along the experimentation is given.

During the process of intervention, those types of texts were used and students were evaluated in order to measure with which type of texts they had improved the most regarding the different variations of the independent variable.

Therefore, the main characteristics of the instruments are described first as it is detailed in the following table.

| N | Instruments | Objective | Description | Participants | Comments |
|---|---|---|---|---|---|
| 1 | **Pre- Post Reading Comprehension Test** (See appendix 3 for further details). | -To score students' reading comprehension at referential and inferential level before and after conducting the experimentation. | The reading comprehension test had 15 questions. From question number 1-to 11 tested referential comprehensions. However, items 5 and 10 required a justification for the answer selected.<br><br>While items 12 to 15 were related to inferential questions | Experimental and Control Group were tested before and after conducting the experimental study. | The variables that were evaluated in the Pre and Posttests were the dependent variable (referential and inferential reading comprehension level) in order to see the effectiveness of D.R.T.A strategy. The way they were evaluated was using 15 questions. Therefore, one point was assigned to each question, which gave us a total of 15 points.<br>An informational article entitled; "Peering through the smoke screen" written by Ian Mundel (1993, Oct.9) was used as pre and post reading comprehension |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | tests. We chose this text because it allows the reader to comprehend the scientific problems, analyzing, inferring, and of course increasing students' knowledge without domain or specialized language about it.<br>It was used the same article in the pre and post test because it permitted us to compare the students' improvement specially at the level of inferential reading. |
| 2 | **Informational, narrative, and argumentative texts.**<br>(See appendixes 4, 5 and 6 for details) | To score the different variations of the independent variable by:<br><br>-Looking at pictorial clues<br><br>-predicting,<br>-activating students' background knowledge and<br>-developing higher order thinking skill (logical conclusions) | The students' reading comprehension of Informational, narrative, and argumentative texts was evaluated according to these indicators: Pictorial clues, prediction, background knowledge, and higher order thinking skill (logical conclusions). | The Experimental and Control Group were evaluated. | The types of texts were useful because they allowed students to recognize the characteristics of each type of texts and find out the type of text that represented a problem for them. |

Now it is time to describe the steps of D.R.T.A in order to work with the main study.

### 3.3.3 The experiment (D.R.T.A)

In order to develop the experimental stage, the procedures were the following:

- Teaching the importance of reading comprehension in a foreign language classroom.
- Describing the reading comprehension levels and techniques.
- Modelig the instructional method: (using the steps of D.R.T.A).
- Treatment Materials: (Reading workshops based on the application of D.R.T.A into the reading comprehension levels).
- Reading comprehension texts on the different genres: They are based on informational, narrative, and argumentative texts).
- A survey questionnaire about the use of D.R.T.A

Generally speaking, it is important to increase an awareness and of course an improvement of reading comprehension difficulties in order to acquire significative results. In the next section, the procedures of D.R.T.A are described as follows.

## 3.4 The application of the instrument

For applying the methodological program D.R.T.A, we considered to develop it into three main stages as they are described below.

### 3.4.1 Preliminary Stage (Preamble)

In this stage, students of intermediate level were evaluated and informed about the experimental study by the researcher. After that, students were tested by using a pre-reading comprehension test (Peering through the smoke screen, written by Ian Mundell) and immediately a pre-questionnaire was applied. For these activities, we spent forty-five minutes. After we got the results, we focused our interest on the experimental stage as it is described in the next point.

### 3.4.2 Experimental Stage (Applying D.R.T.A)

D.R.T.A was developed in three months of training sessions, (two sessions per week) which makes us twenty-four sessions. We took into account this number of sessions in three months because we only need to simulate an E.F.L. class based on reading comprehension with the main purpose of determining if there is a

change or an improvement on students' reading comprehension when they work with Informational, Narrative, and Argumentative texts. Therefore, D.R.T.A was instrumented, where Referential and inferential reading comprehension level were scored in order to determine the students' reading comprehension level.

Talking about the time, each session demanded ninety minutes because it was the time required for developing the study. In this light, the following schedule gives an explanation about the activities that students worked with during the experimental stage.

#### 3.4.2.1 Schedule.

In order to apply the experimental stage, we described the number of sessions, the activities, and their objectives as follows in the next page.

**TABLE: 1**

DEVELOPING THE EXPERIMENTAL STAGE

(D.R.T.A)

| WEEK | Number of Session | ACTIVITIES | OBJECTIVES | OBSERVATIONS |
|---|---|---|---|---|
| Last Week of July (First Week of Quasi-experimental stage) | Session 1 | • Get students from fourth English Level and apply a pre reading comprehension test entitled "Peering through the smoke screen written by Ian Mundel." (See Appendix: 3 for further details). | • Inform the participants that they will be an important part of the study.<br>• Test the participants' reading comprehension levels through the application of reading comprehension questions used as evaluation in the development of E.F.L.<br>• Identify the students' reading comprehension difficulties. | • Good number of participants in D.R.T.A sessions (25 students).<br>• Ambiguous reactions at reading comprehension test. |
| | | • Apply a pre questionnaire for E.G and C.G. | • Find out the use of students' reading comprehension strategies.<br>• Describe the most useful strategy that students use when they are dealing with English as foreign language. | • There is a good Students' acceptability of the pre-questionnaire. |
| | Session 2 | • Give a lecture about Reading Comprehension for E.G.<br>• Present reading, reading comprehension levels (Literal, Inferential, Critical, and Creative) into the use of English as a foreign language.<br>• Emphasize in depth inferential reading comprehension. | • Describe the most relevant aspect concerning to reading, reading comprehension theories and approaches.<br>• Describe the different types of reading.<br>• Describe reading comprehension levels and analyze them by using short reading comprehension passages.<br>• Students get knowledge about understanding beyond the written words using examples extracted from short reading comprehension passages. | • There is a neutral students' awareness about the elements of reading.<br>• There is an excellent Students' acceptability to the different types of reading.<br>• There is a good Students' acceptability for developing critical and higher order |

| | | | | |
|---|---|---|---|---|
| | | | | thinking skill (H.O.T.S). |

| | | | | |
|---|---|---|---|---|
| First Week of Au<br>Gust ( Second Week of Quasi-experimental stage) | Session 3<br><br>Session 4 | • Teach all the types of Cognitive and Metacognitive Strategies for developing reading comprehension in E.F.L.<br><br>• Emphasize Metacognitive Reading comprehension in order to introduce D.R.T.A as instructional reading comprehension method.<br><br>• Model D.R.T.A developing the following stages:<br><br>*Before Reading*<br>➢ Making Predictions (using Inference through Explicit and implicit clues)<br>➢ Activating students' prior- knowledge generating new discussion questions.<br>➢ Setting Purposes for reading.<br><br>During Reading<br>➢ Read Aloud (looking for: main and secondary ideas, coherence, co-hesion, and supporting sentences).<br>➢ Think Aloud (developing higher order thinking Skill generating inferences from implicit to explicit | • Describe in detail all the Cognitive and Metacognitive strategies.<br>• Create awareness about the Cognitive and Metacognitive strategies.<br><br>• Give an overview about the instructional method (D.R.T.A) explaining:<br>- What is Directed Reading?<br>- Thinking Activity (D.R.T.A.)<br>- Describe the stages of D.R.T.A.<br>• Give reasons of using D.R.T.A.<br>• Describe the benefits of using D.R.TA.<br>• How far D.R.T.A promotes reading comprehension. | • There is a surprise in the students' attitudes towards metacognitive strategies.<br><br>• There is a surprise when for first time students get knowledge about Metacognitive Method, which is D.R.T.A.<br>• There is good Students' acceptability to D.R.T.A as most useful method for E.F.L. reading comprehension. |

| | | | | |
|---|---|---|---|---|
| Second Week of August.<br>( Third Week of Cuasi-experimental Stage) | Session 5 | ➢ Make Verifications.<br>Make Judgments.<br>*After Reading* Make Extensions.<br>• Giving a masterful class about the types of written texts in order to introduce and work with " Informational Text" giving information about:<br>- The main concept.<br>- Characteristics.<br>- Advantages.<br>- Disadvantages.<br>For better understanding, students' have to work with short reading passages developing the following points:<br>- Have a clear vision of effective comprehension of informational text.<br>- Explicitly teach strategies for reading and comprehending informational texts.<br>- Foster rich talk with and about informational text.<br>- Make reading-writing connections with informational text.<br>- Increase attention to the unique and challenging characteristics of informational text.<br>10. Promote use of informational text for authentic purposes as much as possible<br>Have a clear idea | • Teach a new type of text, which is "Informational Text."<br>• Develop active learners through the use of situations where students interact with the development of "Informational texts."<br>• Become competent learners at the moment of developing an informational text. | • There is a good students' reaction to Informational Text (surprise and enjoyment for reading this type of text)<br>Students developed good abilities at the moment of identifying informational text. |

| | | | | |
|---|---|---|---|---|
| Third Week of August.<br>(From fourth to Sixth Week of Quasi-experimental Stage) | Session 6-11 | • Guide D.R.T.A: Explaining the type of text that students are going to work with during the training sessions. In this attempt, from session number 6 to 10 we are going to work with informational texts, these are:<br>- "Are We Addicted to Facebook or Are We Just Addicted to Ourselves? Written by: Dr. Judson Brewer.<br>- Sky pods: Are gondolas the next big thing in urban transport? by Eoghan Macguire, for CNN.<br>- Eating Disorders written by D.r. Michael, Robert." (See appendix 5 for further details).<br>In this attempt, the first four days, informational texts have to be worked by the interaction of the researcher and students. While on the other hand, the last days, students are going to be tested in the use of D.R.TA. In this light, an Informational text will be applied in order to score students' improvement in their reading comprehension. (See appendix 5) | • Put into practice the D.R.T.A. method for improving students' reading comprehension using Informational text.<br>• Encourage students to be active readers using D.R.T.A.<br>• Get students' interest through the different proposal topics.<br>• Develop the feeling of trust and acceptance to D.R.T.A.<br>• Become competent reader through the development of reading comprehension.<br>• Find out how well students' develop their reading comprehension through using D.R.T.A. | • Students' acceptability to D.R.T.A method.<br>• Students participate actively on D.R.T.A.<br>• Students are interested and there is a good acceptability to D.R.T.A while they are using informational reading comprehension text.<br>• Students' behavior to D.R.T.A. and<br>• Students are trusted in the process of reading comprehension while they are using of D.R.T.A method. |

| | | | | |
|---|---|---|---|---|
| First Week of September.<br>(Sixth Week of Quasi-experimental Stage) | Session 12 | • Give all the theoretical support about the new type of text, which is "Narrative Text."<br>For better understanding, students' have to work with short reading comprehension passages in order to understand the elements of narrative text such as:<br>- Characters.<br>- Setting.<br>- Plot.<br>- Mood.<br>- Style.<br>- Theme.<br>Getting previous knowledge about Narrative Text Students can develop more easily the topics proposed subsequently using D.R.T.A. | • Develop a new type of text, which is "Narrative Text."<br>• Develop active learners through use of narrative elements in the development of Narrative Text.<br>• Become competent learner at the moment of developing narrative text. | • Students put in practice their previous knowledge about narrative text.<br>• Students presented a little difficult in understanding Narrative text. |
| | | • Guide the steps of D.R.T.A in the development of narrative reading comprehension. Therefore, Narrative text will be described and analyzed in pre, during, and after reading comprehension. | • Put into practice D.R.T.A. using a Narrative Text.<br>• Find out the possible problems in students' understanding of narrative texts.<br>• Develop an awareness of narrative texts; connecting the topics to the students' lives. | • Little students' response to D.R.T.A when they are dealing with Narrative texts. |

| | | | | |
|---|---|---|---|---|
| From First to Third Week of September. ( Sixth Week of Quasi-experimental Stage) | Session 13-16 | In this attempt; A sad, Sad Story written by Palmer Jennifer, A Lavender extracted by Kenya Materials; and finally, a reading comprehension passage will be used for developing the D.R.T.A. method. (See appendix 6 for more details)<br>As we have described above, three narrative texts will be analyzed by the interaction of researcher – students. While on the other hand, the next last day students will be tested in order to measure the students' improvement after using D.R.T.A. | • Work with Character, Setting, Plot, Theme and Style as the elements of narrative texts.<br>• Evaluate an adequate use of D.R.T.A in order to create struggle readers.<br>• Find out students' acceptability for using D.R.T.A in narrative texts. | |
| Fourth Week of September. (Seventh Week of Quasi-experimental Stage) | Session 17 | • Give all the theoretical support about "Argumentative Text" giving an explanation about its elements such as:<br>- Introduction.<br>- Thesis Statement.<br>- Supporting evidence 1.<br>- Supporting Evidence 2.<br>- Contra Argument.<br>- Concluding Paragraph. | • Work a new type of text, which is "Argumentative Text."<br>• Develop active learners through use of Argumentative text. | • Students put in practice their previous knowledge about argumentative text.<br>• Students present difficulties in understanding argumentative texts. |

| | | | | |
|---|---|---|---|---|
| From the Fourth Week of September to Second Week of October.<br>From Seventh to twelfth Week of Quasi-experimental Stage. | Session 18-22 | • Guide in D.R.T.A: In this stage, students are going to be explained about the use of Argumentative text. In this light; Euthanasia, extracted from: Read theory; Is the prison the right place for criminals, written by Barone, Maria R.; and finally Human Trafficking, written by Sher, Julian. (2012) are going to be used for developing the D.R.T.A method (See appendix 7 for further details).<br>Therefore, the three texts mentioned above will be analyzed by the active interaction of the researcher and the students. While on the other hand, the next last days students have to prepare D.R.T.A based on one argumentative text.<br>• In the last point, we have to clarify that students will be tested with and argumentative text, where the effectiveness of D.R.T.A will be described. | • Put into practice D.R.T.A. using Argumentative Text.<br>• Find out the possible problems students regarding argumentative texts.<br>• Develop awareness about the use of argumentative texts.<br>• Work with supporting evidences as main elements of argumentative text.<br>• Evaluate the correct use of D.R.T.A method in order to create struggle readers.<br>• Find out students' acceptability for using D.R.T.A in Argumentative texts. | |
| Third Week of October<br>Twelfth Week of October. | | • A post-test will be applied for both groups E.G and C.G.<br>• The Post-questionnaire will be administered only for E.G. | • Test the participants' reading comprehension progress through the application of Post Reading Comprehension Test in order to conclude with the quasi-experimental stage.<br>• Get feedback about students' experience in the development of D.R.T.A to improve reading comprehension. | • Good Number of participants at the end of D.R.T.A. program.<br>• Good students' reactions at reading comprehension tests, and the post questionnaire. |

For all the activities mentioned in table number one, it is the turn to talk about the final stage in the next point.

### 3.4.3 Final Stage.

The final stage comprehended the administration of post-reading comprehension test for both groups E.G and C.G in order to verify the effectiveness of D.R.T.A method. At the same time, a post-questionnaire was applied only for E.G finding out the students' experience towards D.R.T.A method (See appendix 2 for more details).

## 3.5 Treatment, Measurement, and Statistic Analysis for data gathering

Being objective, it is important to measure the outputs, the outcomes, and of course the impacts of D.R.T.A in E.F.L. students' reading comprehension. In other words, the instruments of this study are going to measure what we expect to get from this study following the smart goals as a tendency of trust.

Based on what has been mentioned above, we used the pre-post reading comprehension tests and pre-post questionnaires. Talking about the pre-post reading comprehension test, they were measured by using the central tendency of measurements, which is the mean (X), in order to find out the results obtained before and after conducting the experimental stage. Thus, we have the following formula:

$$\overline{X} = \frac{\sum_{i=1}^{n} x_i}{n}$$

Alvarez, E. & Huayta , E. (2000: 26) showed the formula mentioned above, where *"x"* represents the symbol of the scores and "*n*" the symbol of total scores. At the same time, we have to remark that this study used the standard deviation.

It indicated the variability of measurements concerning to the dispersion of data scores.

This is the average of standard deviation concerning to the mean. As a major dispersion, major is the deviation standard. The formula is the following.

$$s = \sqrt{\frac{\sum \left(x_i - \bar{x}\right)^2}{n-1}}$$

The standard deviation (SD) from each score corresponds to the mean that is squared, then it is added up at squared and divided between the total number of scores and from this deviation, the square root is squared.

Furthermore, talking about the hypotheses prove, stated in chapter one of this study, we are going to work with the statistic proof called "T Student." This proof is used for evaluating if two groups differ significatively between them concerning to their scores. The "T Student" is represented by the following formula.

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

As a description of "T student," we have:

$X_1$: Is the mean of a group.

$X_2$: Is the mean of another group.

$S_1^2$: Corresponds to the standard deviation of the first squared group.

$n_1$: Is the size of the first group.

$S_2^2$: Is the standard deviation of the second group and it should be squared.

$n_2$: Is the size of the second group.

In order to know the value of "T" we have to apply the formula and the free down degrees. The "T" proof is based on the distribution of sampling; this distribution is identified by the free down degrees, which consists of the number of ways that varies in a freeway. All of these are determinants, which indicate the value expected from "T." Therefore, it depends on the size of both groups that will be compared. Finally, if we have major degrees of free down, major is the normal distribution of "T" student. (Wiersman, W. 1999, mentioned in Sampieri H. 2003: 540) Therefore, the degrees of free down are worked out as:

$$G.l \quad (n_1 + n_2) - 2$$

$n_1$ and $n_2$ are the size of groups that will be compared. Once we compare the value of "t" and its free down degree, we have to choose the significance level and it should be compared with the value obtained by "t student". (See appendix: 14) If the value worked out is the same as or major than the table, we have to accept the hypothesis, but if it is less, we have to accept the null hypothesis.

Finally, talking about the application of pre-post questioners, they will be applied at the beginning (pre-questionnaire for E.G and C.G.) and another at the end of the experiment (post-questionnaire for E.G.). In order to analyze them, we are going to use the quantitative, descriptive and inferential technique with their respective statistical graphics for better understanding.

## 3.6 Chapter Summary

This chapter has given an account of the methodology of our study. We started with the research design, the population and sampling. At the same time, we described the instruments for data gathering before and at the end of the methodological treatment. Furthermore, the experimental design was outlined and finally, the treatment of the data gathering and their statistical analysis were described. In the proceeding chapter, it is described and analyzed the piloting data and of course, the results obtained after the experimental stage.

# CHAPTER IV

# DATA ANALYSIS

## 4. Introduction.

This chapter provides a data analysis according the research questions stated in Chapter I. Therefore, a broad description about the results obtained in the experimental stage was described. The experimental study was described into three main sections. In the first section, the results of the pre-questionnaire and the pre- test of both groups (E.G and C.G) were described and analyzed by using the descriptive, inferential, and statistical technique. Consequently, in the second section the different variations of the independent variable by using Informational, Narrative, and Argumentative texts were analyzed. Finally, in the last section a comparison between the pre and post reading comprehension test of both groups and the post questionnaire were discussed followed by the hypotheses prove in order to demonstrate the effectiveness of our study.

## 4.1 The Piloting Study.

Prior to the main study, a piloting research was conducted in order to try out and improve some weakness regarding the instruments of this study. Therefore, this gives us the opportunity to test them as well as to describe the data analysis; all of them with the main goal of measuring the accuracy level of both variables the independent and the dependent one.

The piloting study was carried out during three reading comprehension sessions of ninety minutes per day at the end of the first semester (2014) in the Mayor San Andres University. The participants were selected on the basis of our convenience and availability; that means, we asked volunteers of the fourth English level at Linguistics and Language Department who really want to be a part of the research with the main purpose of improving students' reading comprehension. As a result, 18 students decided to be a part of the study.

In general, piloting study was useful for us because it permitted us to evaluate the instruments used in this study and the variation of the independent variable. At the same time, we found that they were built in a good way because they measured what they wanted. After that, we just adjusted some detail of them in order to pass to the main study.

## 4.2 The Experimental Study

This section of the research intended to find out the extent of D.R.T.A in the improvement of Referential and even more on Inferential reading comprehension. As we mentioned previously, this study was divided into three major sections. In the first section, the results of the pre questionnaire and Pre- test of both groups (E.G and C.G) were analyzed in detail by using descriptive, inferential, and statistical technique. Consequently, in the second section, the different variations of the independent variable were described by using Informational, Narrative, and Argumentative texts. Finally, in the last section comparisons between the pre- posttests of both groups were detailed followed by the hypotheses' prove in order to demonstrate the effectiveness of our study. In addition, the post questionnaire was described as well.

Once more, describing this study, we can say that it just took three months of training sessions, which means thirteen weeks. In this study, the Experimental Group (E.G) worked with twenty-four sessions; while on the other hand, the Control Group (C.G) just nineteen. The reason why the C.G worked with nineteen sessions and not twenty-four was because our objective was not to instruct those participants into D.R.T.A or improve their reading comprehension; they were just a group to be compared with once we applied D.R.T.A.

Therefore, for all the exposed above, this stage was performed following the next steps:

a) As this study is mainly experimental, we assigned at randomly the distribution of the participants. That means 25 students for E.G and 25 students for C.G. All the participants come from Linguistics and Languages Department.
b) Once we obtained the setting for developing the training sessions or what we called reading workshops, the next step was to inform the participants of both groups that they were part of the study.
c) E.G and C.G were evaluated with the pre questionnaire and pre- test as well.
d) The activities carried out before, during, and after the training sessions were detailed in the Schedule. (See page 82).
e) The E.G and The C.G were evaluated with Post- Test but only the E.G took the post questionnaire.
f) The experimentation started in the last week of July (2014), and concluded in the third week of October (2014).

The experimental students' worked with three types of texts: Informational, Narrative and Argumentative three texts for each group (see appendixes from number 4 to 6). The reason for working with these types of texts was that we wanted to identify in which type of text students had more problems of comprehension; and to determine if D.R.T.A was advisable for them.

### 4.2.1 First section of the Main Study- Quantified Analysis of the Pre questionnaire from E.G and C.G

In order to achieve our first specific objective, we applied a pre questionnaire (See appendix 1 for further details) for both groups (E.G and C.G). Once more, the purpose of this questionnaire was to know the students' positions towards reading comprehension. Furthermore, we wanted to know if

English language learners recognized some difficulties in relation to their reading comprehension considering that they are at the intermediate level. In general, we wanted to describe the English language learners experience related to reading comprehension skills.

Therefore, once we got the results from both groups, we described them by using a frequency table, a graphic, and their respective statistical, descriptive, and inferential analysis for each question all of them with the main purpose of enriching all the data.

Talking about the Frequency Table, it described the results obtained from the application of the pre questionnaire from both groups (E.G. and C.G). The table: 1 contains seven columns. On the first column, the options for each question are stated while on the second and fourth, the numbers of frequency are detailed. Furthermore, on the third and fifth columns the percentages of each group are described. Moreover, on the sixth column, the differences from E.G and C.G frequency are detected and finally the total average form E.G F and C.G.F are found.

From question number 1 to 5, we addressed the students' position concerning to the treatment and development of English as a foreign language. Therefore, on the first question students were required to choose one of the three options which were "yes, no and sometimes" to describe their position towards English. Now, to be more specific, two graphics were developed where both groups are compared in relation to the first question.

**TABLE: 1**

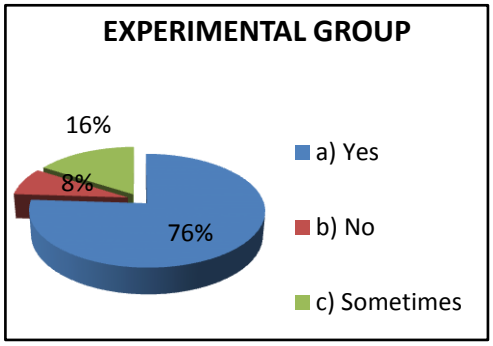
**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH QUANTIFIED ANSWERS OF BOTH GROUPS**

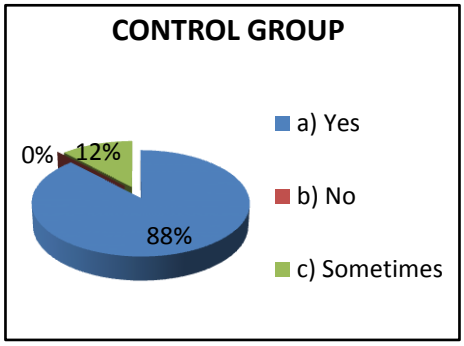
1. *Do you like to learn English as foreign language?*

| | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| **OPTIONS** | **EXPERIMENTAL FREQUENCY** | **%** | **CONTROL FREQUENCY** | **%** | **DIFFERENCES** | **AVERAGE %** |
| a) Yes | 19 | 76 | 22 | 88 | 3 | 82 |
| b) No | 2 | 8 | 0 | - | -2 | 4 |
| c) Sometimes | 4 | 16 | 3 | 12 | -1 | 14 |
| **TOTAL** | **25** | **100** | **25** | **100** | | **100%** |

**GRAPHIC: 1**

**COMPARATIVE GRAPHICS RELATED TO QUESTION N: 1 QUANTIFIED ANSWERS OF BOTH GROUPS**




Therefore, according to the data obtained, without doubt, the item "a" (Yes) was the highest percentage for the E.G with a 76% and the C.G with an 88% group; which gave us a total average of 82%. However, the item "c" (Sometimes) was the second option for E.G. (16%) and C.G (12%). Just 14% was considered as the average of this item. On the other hand, the item "b" (No) indicated a negative position towards English learning, but it was only for the E.G with 8%, which was on the third place with 0% over 100%.

In order to conclude the results stated above, we have to say that students from both groups had positive attitudes towards English learning process because they expressed high motivation to traveling to USA, working as a teacher or maybe as translators. On the other hand, a few number of them do not like English because there are many grammatical rules, which make difficult or confusing learning English easily.

Table number two presents the data results for the second question from the students' response. Therefore, on the second question students were required to choose one of the four options to describe their preferences for English class activities. Being more specific two graphics were stated for both groups in order to be compared.

**TABLE: 2**

**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH QUANTIFIED ANSWERS OF BOTH GROUPS (E.G and C.G)**

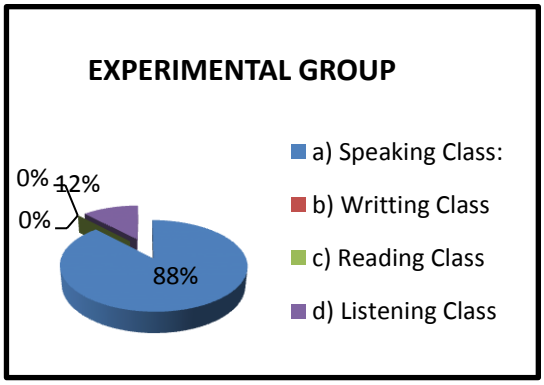
*2. If you had to choose for one option as your favorite class, which of them would you prefer?*

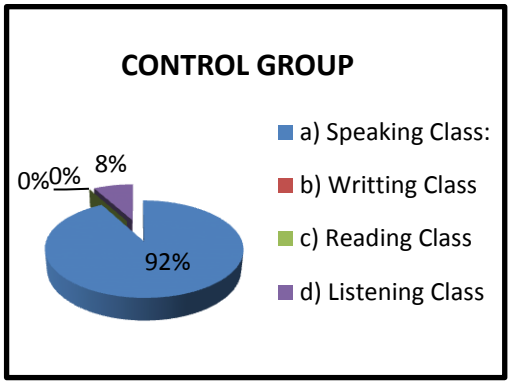
| OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| | EXPERIMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE % |

| | | | | | | |
|---|---|---|---|---|---|---|
| a) Speaking Class: | 22 | 88 | 23 | 92 | 1 | 96 |
| b) Writting Class | 0 | - | 0 | - | 0 | - |
| c) Reading Class | 0 | - | 0 | - | 0 | - |
| d) Listening Class | 3 | 12 | 2 | 8 | -1 | 4 |
| **TOTAL** | **25** | **100** | **25** | **100** | | **100** |

**GRAPHIC: 2**

**COMPARATIVE GRAPHICS RELATED TO QUESTION N: 2 QUANTIFIED ANSWERS OF BOTH GROUPS**




In this light, it can be assumed that the highest percentage in this question was item "a" (Speaking Class) for the E.G (88%) and for C.G 92% which gave us a total amount of 96%. However, item "d" (Listening Class) was the second option for E.G (12%) and for C.G (8%) group with an average of 4%. On the other hand, items "b (Writing Class) and c (Reading Class)" did not have any percentage as they are expressed in the graphics above.

From the results stated in the previous above, we can conclude that lot of students prefer to practice their speaking ability rather than listening, writing or reading. This may happen because according to the experimental group, we have few chances to speak with native speakers and that is why we have advantage of developing this skill into the English's classes one way or another.

**TABLE: 3**

**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH QUANTIFIED ANSWERS OF BOTH GROUPS (E.G and C.G)**

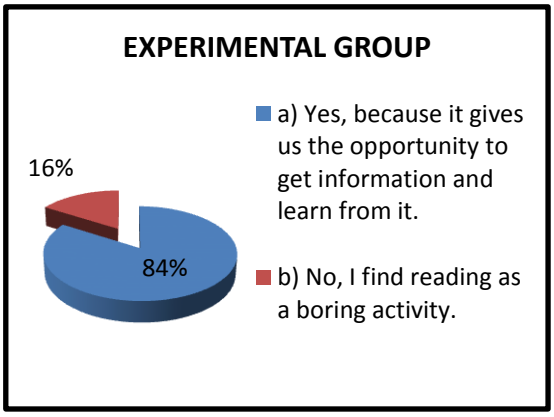
*3. Do you consider that reading is an important part in your academic or professional life?*

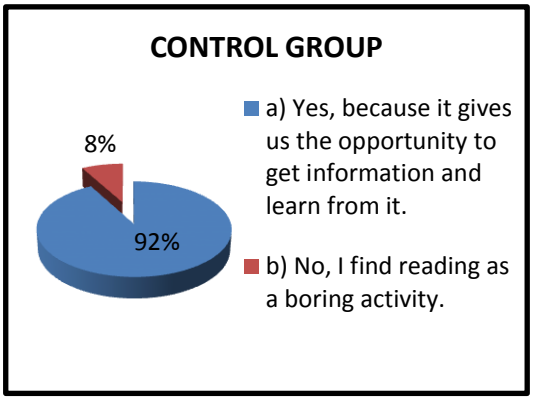
| OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| | EXPERIMENTAL | % | CONTROL | % | DIF. | AVERAGE |

| | FREQUENCY | | FREQUENCY | | | % |
|---|---|---|---|---|---|---|
| a) Yes, because it gives us the opportunity to get information and learn from it. | 21 | 84 | 23 | 92 | 2 | 88 |
| b) No, I find reading as boring activity. | 4 | 16 | 2 | 8 | -2 | 12 |
| **TOTAL** | **25** | **100** | **25** | **100** | | 100 |

**GRAPHIC: 3**

**COMPARATIVE GRAPHICS RELATED TO QUESTIONNAIRE N: 3 QUANTIFIED ANSWERS OF BOTH GROUPS**




Clearly, the comparative frequency table and the graphics presented in the previous above described that the highest percentage in this question was item “a” for E.G with an 84% and C.G with an 92% which gave us an average of 88%. However, item “b” was the second option for E.G with a 16% and for C.G 8% group with a total amount of 12% over 100%.

Most of the students considered reading as an important activity. In order to be objective, we considered using the content analysis because it is a way of categorizing the concepts and opinions that a person expressed. That is the reason why we enrolled the three most repeated concepts below:

- First of all, reading is an important activity because through it we can increase knowledge about old or new facts.
- Second, reading is very important because we can increase and develop our passive language in order to turn it as an active one.

- And Third, reading is the king of problem solving where readers have to activate their minds in order to understand the information required.

From the results stated above, we concluded that most of the students were aware about the importance of the role of reading comprehension. This may happens because rationally thinking reading opens new avenues of knowledge.

**TABLE: 4**

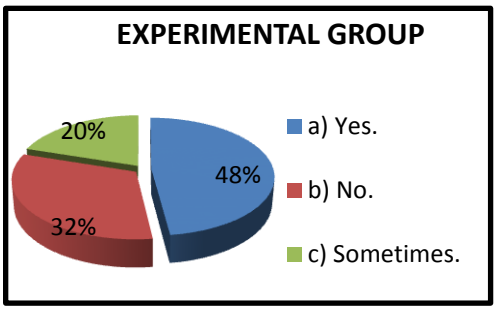
**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH QUANTIFIED ANSWERS OF BOTH GROUPS (E.G and C.G)**

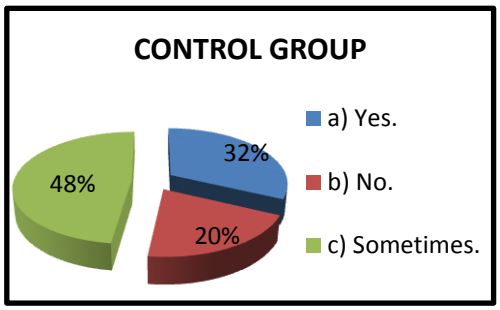
*4. Do you think you are a good reader?*

| OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| | EXPERIMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE % |
| a) Yes. | 12 | 48 | 8 | 32 | -4 | 40,000% |
| b) No. | 8 | 32 | 5 | 20 | -3 | 26 |
| c) Sometimes. | 5 | 20 | 12 | 48 | 7 | 34 |
| **TOTAL** | **25** | **100** | **25** | **100** | | **100** |

**GRAPHIC: 4**

**COMPARATIVE GRAPHICS RELATED TO QUESTION N: 4 QUANTIFIED ANSWERS OF BOTH GROUPS**




Question number four was intended to know if students considered themselves being a good reader. Therefore, they were required to choose one of the three options, (a_ Yes, b_No and c_Sometimes) where according to the results obtained from the control frequency table and the graphics detailed above, we appreciate a clear difference from both groups because the students E.G with a 48% are considered to be a good readers. On the other hand, the C.G only with a 32% had a positive attitude. The difference between one and the other group is 16%.

On the other hand, if we talk about the negative item, which was option “b,” 32% of the E.G students chose that item, while 20% of the C.G selected this option. Making a difference from the quantified percentage, clearly we found a 12% of difference. Finally, in the last item, which was the

option “c” we found a clear difference between the E.G (20%) and C.G. (48%) because 28% was the quantified percentage.

From all the statistical description stated above, we have to say that students in the E.G were considered to be good readers because they knew that they would be part of the study; and therefore, they wanted to demonstrate their reading ability, but the results found in the Pre reading comprehension test demonstrate the contrary results. Making an inferential description about the results stated from C.G, we have to say that they were really sincere when they answered the question because some of the students said that after reading the text some answers were not stated in the text and even more the written text was confusing for them.

**TABLE: 5**

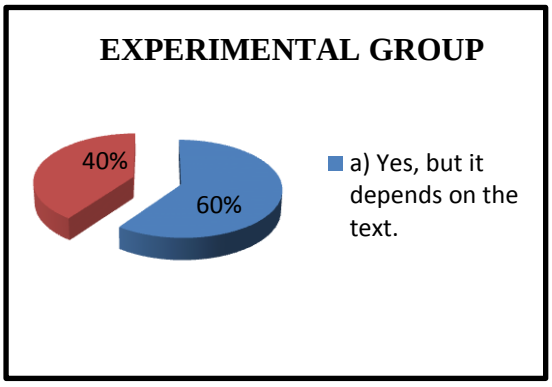
**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH QUANTIFIED ANSWERS OF BOTH GROUPS**

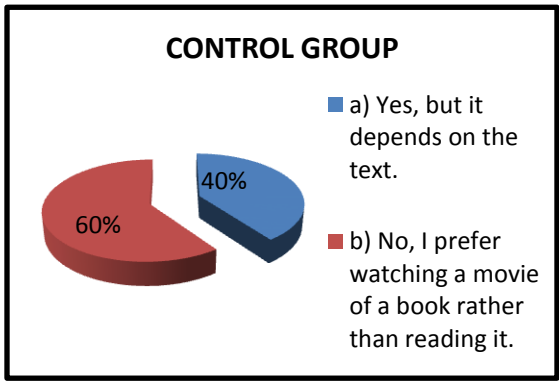
*5. Do you like to read texts written in English language?*

| GRAPHIC: 5 OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| | EXPERIMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE % |
| a) Yes, but it depends on the text. | 15 | 20 | 10 | 40 | -5 | 50 |
| b) No, I prefer watching a movie of a book rather than reading it. | 10 | 40 | 15 | 60 | 0 | 50 |
| **TOTALS** | **25** | **100** | **25** | **100** | | **100** |

COMPARATIVE

**GRAPHICS RELATED TO QUESTION N: 5 QUANTIFIED ANSWERS OF BOTH GROUPS**




Through question number five, we want to find out students’ answers related to likes or dislikes when they are reading written English materials. In addition to that, students were required to choose one of the two options (a_ Yes, but it depends on the text and b_ No, I prefer watching a movie…). Therefore, once more the results showed a clear difference between both groups because E.G with a 60% indicated they like written materials but a few percentage of C.G. with a 40% had the same answer as the first group. Therefore, the difference of average between the E.G and C.G. was the 20% in relation

to the first item. Talking about the second option, without doubt the highest percentage was for the C.G with a 60% in comparison to the E.G with a 40%. Once more, the difference between both groups was 20 over 100%. According the students in the C.G., they did not like written material because they considered it as a boring activity. Making inferences from the students' answer, we have to say that the C.G do not like to read written materials because nowadays with the advantage of the internet everybody can download freely any types of text from any country.

### 4.2.1.1 Interpretation of the results from question number 1 to 5

As it has been described in chapter III, questions from number 1 to 5 have as main objective to know the students' position towards reading comprehension. Therefore, we started raising students' awareness about their English learning process. In addition, 82% of the students have a high motivation for learning English because they expressed a great expectation such as traveling to the USA, working as a teacher, a tour guide or in an embassy. Those are reasons why most of them are worried about practicing as much as possible their speaking ability because the in Bolivian context Spanish, Aymara or/and Quechua are the predominant languages and this is a great disadvantage for foreign language learners creating a few or null opportunities to practice it. Now talking about 12% of the students, they just study English because the Linguistics and Languages Department has as pre requisite to approve a foreign or native language in order to be part of one of the five major specialties.

On one hand, the quantified data permitted to understand the students' position about reading, which was important for them (88%). According to the students' opinions, reading creates avenues access for a reader to know the feelings and thoughts of a writer but a few number of them (12%) consider reading as a boring activity because nowadays with the advantage of the internet they prefer to watch a movie rather than reading a written material. Indeed, in the students' mind the conception is that reading is a type of consuming time, which demands a certain king of concentration. Finally, in order to raise the students' awareness, we formulated a question, which asked if they considered themselves to be good readers. The answers had a negative effect because according to them to be a good reader means and requires a high level of concentration and it is very difficult when someone else is dealing with a foreign language. However, a few number of the students stated that being a good reader means decoding as well as possible the text or perhaps reading aloud which can increase listening comprehension skills and vocabulary as well.

**TABLE: 6**

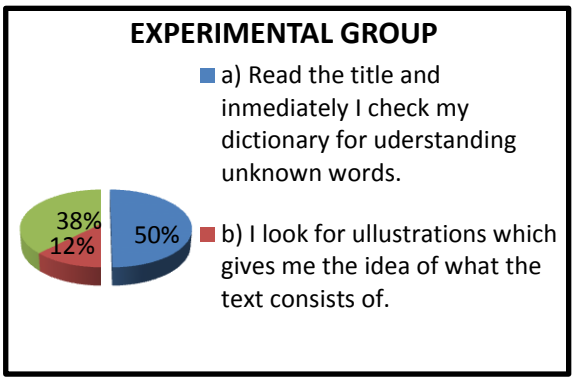
**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH QUANTIFIED ANSWERS OF BOTH GROUPS (E.G and C.G)**

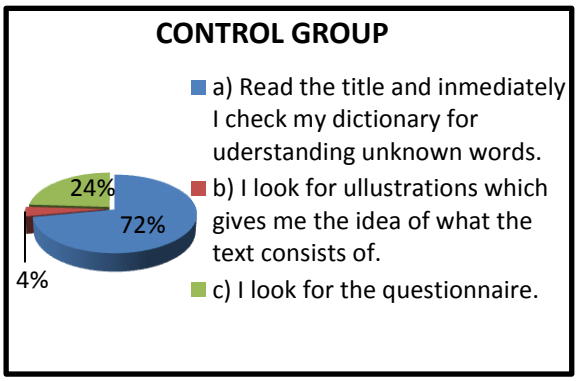
*6. Once you have a text, what do you do before starting reading?*

| OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| | EXPERIMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE |
| a) Read the title and inmediately I check my dictionary for uderstanding unknown words. | 12 | 80 | 18 | 72 | 6 | 60 |
| b) I look for ullustrations which gives me the idea of what the text consists of. | 3 | 4 | 1 | 4 | -2 | 8 |
| c) I look for the questionnaire. | 9 | 16 | 6 | 24 | -3 | 30 |
| **TOTAL** | **24** | **100** | **25** | **100** | | **100** |

**GRAPHIC: 6**

**COMPARATIVE GRAPHICS RELATED TO QUESTION N: 6 QUANTIFIED ANSWERS OF BOTH GROUPS**




In question number six, it was required to know what the students do before reading. Therefore, students were asked to choose one of the three options where according to the results obtained from the comparative frequency table and the graphics presented above, we appreciate the highest percentage in item “a” for both groups: E.G (72%) and C.G (88%) giving an average of 80%. While on the second item, we found a clear difference between E.G (16%) and C.G (8%) group having a difference of 12% and finally, E.G (12%) and C.G (4%) obtained the lowest average related to the item letter “c.” From the statistical description stated above, we have to say that most of the students check their dictionary even before reading because as one students said “it is really important to get the meaning of the words because it is the main essence for understanding.”

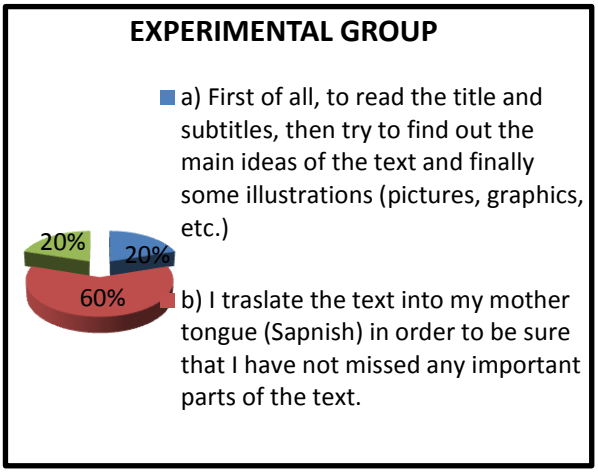
**TABLE: 7**

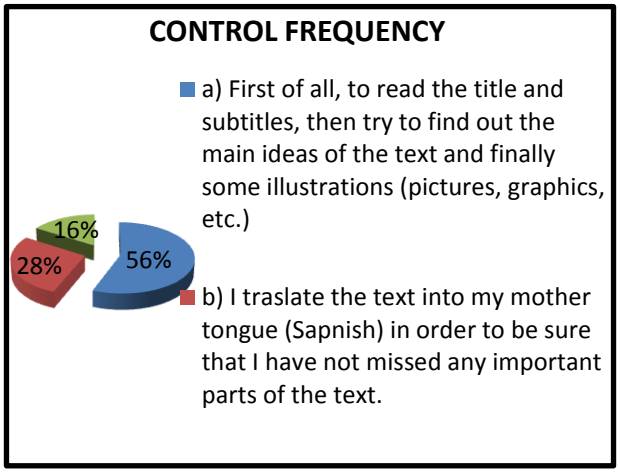
**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH QUANTIFIED ANSWERS OF BOTH GROUPS (E.G and C.G)**

*7. As a reader, what do you consider you need for better comprehension?*

| GRAPHIC: 7 | OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|---|
| | | EXPERIMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE % |
| | a) First of all, to read the title and subtitles, then try to find out the main ideas of the text and finally some illustrations (pictures, graphics, etc.) | 5 | 20 | 14 | 56 | 9 | 38 |
| | b) I traslate the text into my mother tongue (Sapnish) in order to be sure that I have not missed any important parts of the text. | 15 | 60 | 7 | 28 | -8 | 44 |
| | c) I have an expert person next to me for clarification. | 5 | 20 | 4 | 16 | -1 | 14 |
| | **TOTAL** | **25** | **100** | **25** | **100** | | 100 |

**COMPARATIVE GRAPHICS RELATED TO THE QUESTION N: 7 QUANTIFIED ANSWERS OF BOTH GROUPS**




The purpose of question number seven, was to know what the students need for better comprehension. Therefore, students were required to choose one of the four options from letter "a" to "c." In order to understand better, we describe each of them as follows:

In option "a," we appreciate a clear difference of (38%) both groups because the E.G. obtained 20% and the C.G. 56%. In addition, in item "b" the C.G had 8% while the other group 0%. Finally, item "c," obtained 68%, which was the highest percentage in relation to the C.G that had 28%. In a very general sense, we can infer that most of the students do not feel sure about their reading

comprehension because according to the data they required to translate or an expert person next to them in order to get better understanding of a text.

**TABLE: 8**

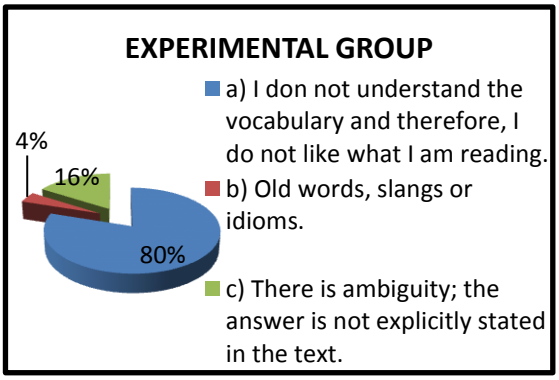
**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH THE QUANTIFIED ANSWERS OF BOTH GROUPS**

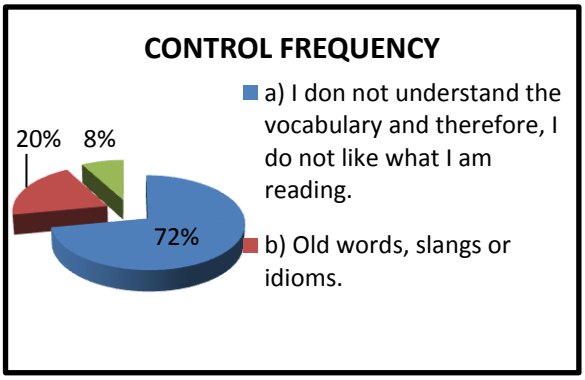
*8. What is the main problem you find when you read in English?*

| OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| | EXPERIMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE % |
| a) I do not understand the vocabulary and therefore, I do not like what I am reading. | 20 | 80 | 18 | 72 | -2 | 76 |
| b) Old words, slangs or idioms. | 1 | 4 | 5 | 20 | 4 | 12 |
| d) There is ambiguity; the answer is not explicitly stated in the text. | 4 | 16 | 2 | 8 | -2 | 12 |
| **TOTAL** | **25** | **100** | **25** | **100** | | **100** |

**GRAPHIC: 8**

**COMPARATIVE GRAPHICS RELATED TO QUESTION N: 8 QUANTIFIED ANSWERS OF BOTH GROUPS**

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Question number eight was stated to find out the main problems that students have when they are reading. Therefore, students were required to choose one of three options from letter "a to c" in order to analyze the answers in detail we pass to describe each of them.

In option "a," we appreciate the highest percentage in both groups. The E.G with a 80% and the C.G with a 72%. Then, in letter "b" we found a clear difference between the E.G with a 20%) and the C.G with a 4%. Finally, item "c" had the lowest percentage in both groups because the E.G obtained a 8% and the C.G with a 16%. As a conclusion, we have to say that the main problem for reading comprehension is the misunderstanding of new words. That is why, most of the students look for their bilingual dictionary, translator machine or look for help of advanced students for further explanation. Here for the researcher was so clear that students do not look for teachers' help because as one student said: "I do not look for teachers' help because they bother when we ask for the meaning of a word."

**TABLE: 9**

**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH THE QUANTIFIED ANSWERS OF BOTH GROUPS**

*9. What do you do if you have to answer a question where the information is not stated in the text?*

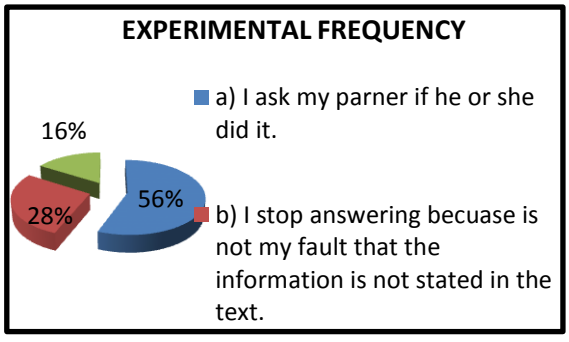
| OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| | EXPERIMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE |
| a) I ask my partner if he or she did it. | 14 | 56 | 17 | 68 | 3 | 31 |
| b) I stop answering because is not my fault that the information is not stated in the text. | 7 | 28 | 7 | 28 | 0 | 41 |
| c) I try to read once more or infer it . | 4 | 16 | 1 | 4 | -3 | 28 |
| **TOTAL** | **25** | **100** | **25** | **100** | | **100** |

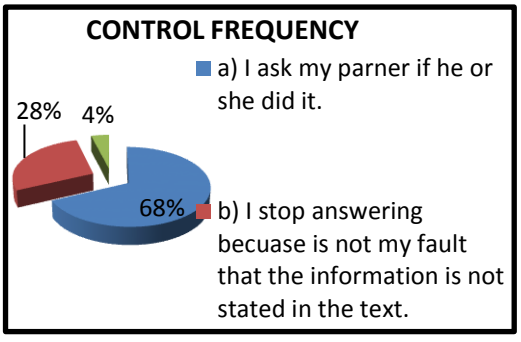
GRAPHIC:

**PHIC:9**

**QUANTIFIED ANSWERS OF BOTH GROUPS**

**COMPARATIVE GRAPHICS RELATED TO QUESTION N: 9**



In the question number nine, was necessary to find out what the students do if they have to answer a question where the information is not stated in the text. Therefore, students were required to choose one of the three options, which were: a_I asked my partner if he or she did it, b_ I stop answering because is not my fault that the information is not stated in the text, and c_ I try to read once more or infer the answer.

In option "a" we appreciated the highest percentage in both groups; for example, the E.G got 56% and the C.G got 68%. Then, in item "b," we found the same percentage for both groups E.G and C.G with a 7%. Finally, in item "c" we found a clear difference between the E.G with 4% and the C.G with 1%. From all the data obtained above, it can be assumed that most of the students ask their partner or stop answering a question where the information is not clearly written in the text.

**TABLE: 10**

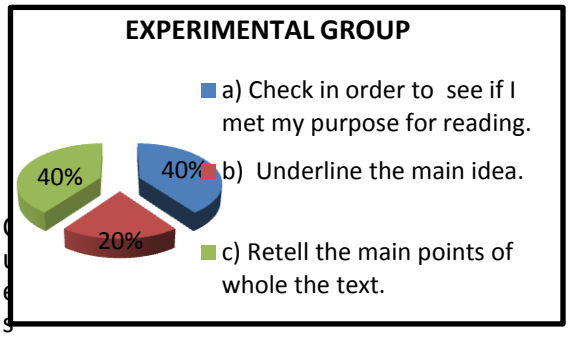
**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH THE QUANTIFIED ANSWERS OF BOTH GROUPS**

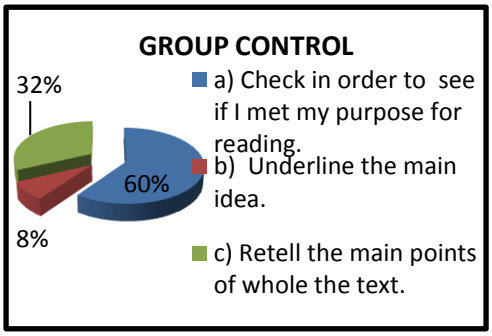
*10. Once you have finished your reading material, What do you consider is the best idea to do?*

| | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| OPTIONS | EXPERIMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE % |
| a) Check in order to see if I met my purpose for reading. | 10 | 40 | 15 | 60 | | 50 |
| b) Underline the main idea. | 5 | 20 | 2 | 8 | 0 | 14 |
| c) Retell the main points of whole the text . | 10 | 40 | 8 | 32 | -2 | 36 |
| **TOTALS** | **25** | **100** | **25** | **100** | | **100** |

**GRAPHIC: 10**

**COMPARATIVE GRAPHICS RELATED TO QUESTION N: 10 QUANTIFIED ANSWERS OF BOTH GROUPS**



tion number ten, was related to what students do after reading the text. In addition, students were required to choose one of the three options, which are: "a_ Check in order to see if I met my purpose for reading, b_ Underline the main idea, and c_ Retell the points of the whole the text" in order to analyze the answers in detail we pass to describe each of them.

In the option "a" the E.G got 40% and the C.G 60%. Then, in the item "b," we found a clear difference between the E.G with a 20% and the C.G with an 8%. Finally, item "c" was the last item in which the E.G obtained 40% and the C.G 32%.

Making inferences from the students' answer and taking students' opinions we have to say that they want to retell the main point of the text in order to understand and answer the possible written questions. In addition, misunderstanding of new words plays an important role because students are worried about getting the meaning; consequently, this creates a dependence of their dictionary because as one of the students said: "a linguistics student is not a student without his dictionary."

**TABLE: 11**

**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH THE QUANTIFIED ANSWERS OF BOTH GROUPS**

*11. Does your teacher ask you any questions in order to get your interest related to your reading material?*

| OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| | EXPERIMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE % |
| a) Never | 6 | 24 | 3 | 12 | -4 | 18 |
| b) Sometimes | 12 | 48 | 18 | 72 | 6 | 60 |
| c) Always | 7 | 28 | 4 | 16 | -3 | 22 |
| **TOTALS** | **25** | | **25** | **100** | | **100** |

**GR**

**GGR**

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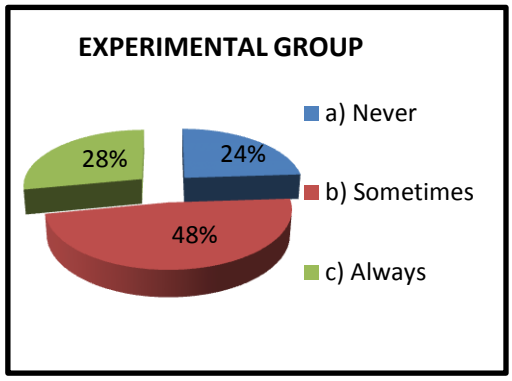
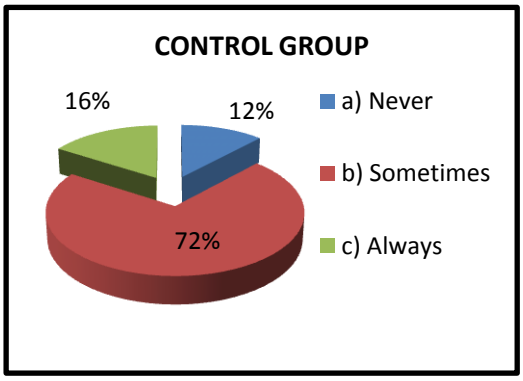
**PHIC: 11**

**COMPARATIVE GRAPHICS RELATED TO QUESTION N: 11**

**QUANTIFIED ANSWERS OF BOTH GROUPS**




Question number eleven had the purpose of determining if English teachers activate students' previous knowledge when they are dealing with students' reading comprehension. Therefore, participants were required to choose one of three options, which were: "a_Never, b_ Sometimes, and c_ Always" each of them are described as follows.

In the option "a," we appreciate a lowest percentage in both groups the E.G with a 24% and the C.G with a 12%. Then, item "b" got the highest percentage in both groups, the E.G with a 48% and the C.G with 72%. Finally, in letter "c" we found the intermediate percentage in both groups the E.G with a 28% and the C.G with a 16%.

As a conclusion from the previous paragraph and based on the students' answer "sometimes" teachers spend their time to activate students' previous knowledge because as some students mentioned "teachers most of the time just say: the next activity will be really interesting, for tomorrow red the reading comprehension article and answer the questions on pages…"

**TABLE: 12**

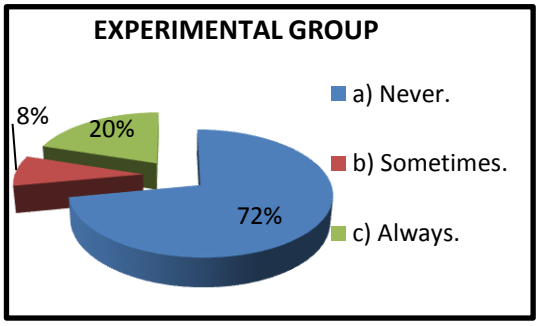
**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH THE QUANTIFIED ANSWERS BOTH GROUPS**

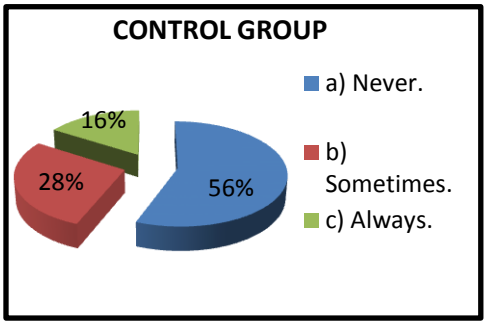
*12. Does your teacher teach you making inferences, setting purposes or interpreting skills in order to get better comprehension?*

| OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| | EXPERIMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE % |
| a) Never. | 18 | 28 | 14 | 56 | 1 | 64 |
| b) Sometimes. | 2 | 8 | 7 | 28 | 4 | 18 |
| c) Always. | 5 | 20 | 4 | 16 | -1 | 18 |
| **TOTALS** | **25** | **56** | **25** | **100** | | **100** |

**GRAPHIC: 12**

**COMPARATIVE GRAPHICS RELATED TO QUESTION N: 12 QUANTIFIED ANSWERS OF BOTH GROUPS**




Question number twelve has the purpose of finding out the frequency students are prompted to use inferences, setting purposes or interpreting skills by the intermediate teachers. For that objective, students were required to choose one of the three options, which were "a_Never, b_ Sometimes, and c_ Always." According to the results stated in the graphics, we observe that the highest option is item "a" for both groups; the E.G with 72% and the C.G with 56%. Taking about the second option, which was the letter "b" the E.G supported it with an 8% and the C.G supported it with 28% these two groups chose that option. Finally, in the last item "c" both groups the E.G with 20%. As we described above, it was clear that most of the students do not practice inferences, setting purposes or interpreting skills as one of the many strategies for improving reading comprehension when they work with English as foreign language.

**TABLE: 13**

**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH QUANTIFIED ANSWERS OF BOTH GROUPS**

*13. What do you understand by reading strategies?*

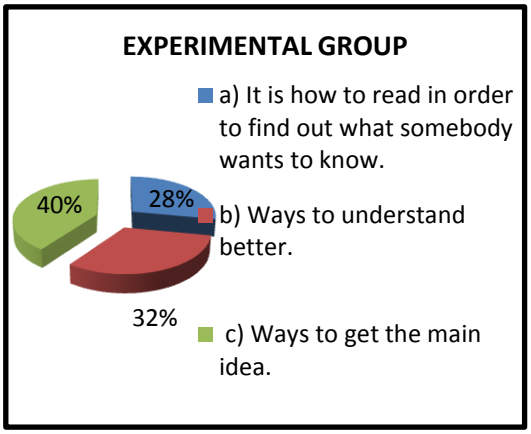
| OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| | EXPERIMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE % |
| a) How to read in order to find out what somebody wants to know. | 7 | 28 | 8 | 32 | | 31 |
| b) Ways to understand better. | 8 | 32 | 12 | 48 | 4 | 41 |

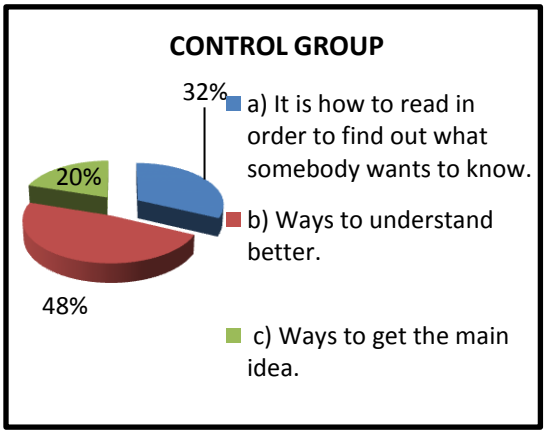
| | | | | | | |
|---|---|---|---|---|---|---|
| c) Ways to get the main idea. | 10 | 40 | 5 | 20 | -5 | 28 |
| **TOTAL** | **25** | **100** | **25** | **100** | | **100** |

**GRAPHIC: 13**

**COMPARATIVE GRAPHICS RELATED TO QUESTION N: 13 QUANTIFIED ANSWERS OF BOTH GROUPS**

Question number thirteen, required information about what students understand by "reading comprehension" Therefore, students were required to choose one of the three options which are: "a_




How to read in order to find out what somebody wants to know, b_ Ways to understand better, and c_ Ways to get the main idea." In order to analyze the answers, we pass to describe each of them.

In option "a" we appreciate a clear difference from both groups because the E.G got 28% and the C.G got 32%. In addition, in the option "b" the E.G obtained 32% and the C.G obtained 48%. Finally, item "c" the E.G got 40% and the C.G 20%. Generally speaking, most of the students have a good understanding about what reading comprehension strategies implies but not all of them have knowledge about the kinds of reading comprehension strategies do we have.

**TABLE: 14**

**COMPARATIVE FREQUENCY TABLE OF THE PRE-QUESTIONNAIRE WITH QUANTIFIED ANSWERS OF BOTH GROUPS**

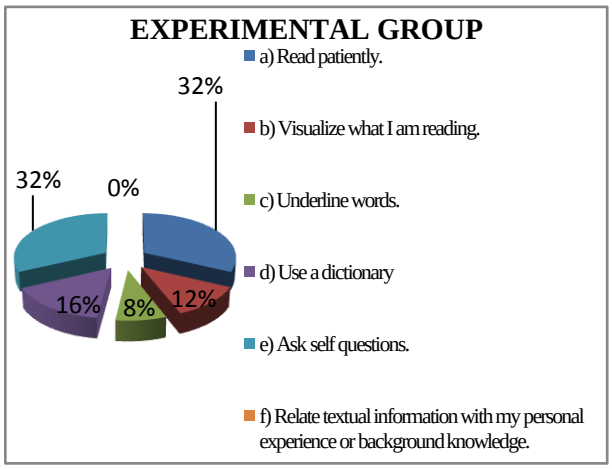
*14. Mark all the reading strategies that you consider are the best for better reading comprehension*

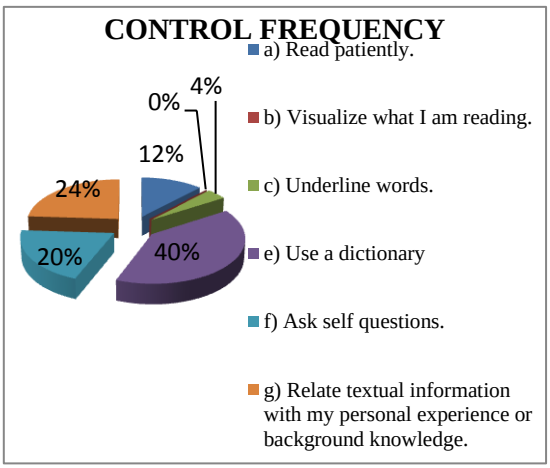
| OPTIONS | GROUPS | | | | | |
|---|---|---|---|---|---|---|
| | EXPEREMENTAL FREQUENCY | % | CONTROL FREQUENCY | % | DIF. | AVERAGE |
| a) Read patiently | 8 | 32 | 3 | 12 | -5 | 22 |

| | | | | | | |
|---|---|---|---|---|---|---|
| b) Visualize what I am reading. | 3 | 12 | 0 | 0 | -3 | 6 |
| c) Underline words | 2 | 8 | 1 | 4 | -1 | 6 |
| d) Use a dictionary | 4 | 16 | 10 | 40 | 6 | 28 |
| e) Ask self questions | 8 | 32 | 5 | 20 | -3 | 26 |
| f) Relate textual information with my personal experience or background knowledge. | 0 | 0 | 6 | 24 | 6 | 12 |
| **TOTAL** | **25** | **100** | **25** | **100** | | **100** |

**GRAPHIC: 14**

**COMPARATIVE GRAPHICS RELATED TO QUESTION N: 14**




The last question required information about the most useful reading comprehension strategies. In this ligh six options were stated . In order to understand the answers we pass to describe each of them starting from the highest to lowest position.

The three highest percentages in this item were the options “d,” (the E.G with 16% and the C.G with 40%) “e,” (the E.G with 32% and C.G with 20%) and “a” (the E.G with 32% and C.G with 12%). Then, the intermediate percentage was the item “g” the E.G got 0% and the C.G. got 24%. Finally, the lowest percentage were the items “b and c” the E.G and the C.G obtained 6%.

## 4.2.1.2 Interpretation of the results from question number 6 to 14

Once more, as we described in chapter III questions from number 6 to 14 have as main objective to know the students’ difficulties when they are dealing with English as foreign language. At the same time, we want to know the kind of strategies they are currently using for better understanding. Generally speaking we can say that most of the students have vocabulary misunderstanding as a major difficulty for comprehension because according to their answers three elements are necessary in this process such as a teacher for further explanation, an expert person next to them or a bilingual dictionary.

Now generally speaking, when students are faced with reading comprehension skill they feel an imperious need0 to know the meaning of unknown words because according to them if they do not have the meaning of the idea they can lose the essence of the text. That is the reason why most of the students have at hand a bilingual dictionary in order to solve any doubt.

On the other hand, concerning teachers' attitudes towards students' comprehension, most of the students agreed that "sometimes teachers spend their time to improve students' comprehension" because as they are lot of students it is so difficult for teachers to control intermediate students' comprehension and even more their improvement. Finally, talking about the students' understanding related to reading strategies they use a bilingual dictionary, re read or read patiently in order to comprehend. Indeed, the last elements were not considered as the best conceptions of reading strategies but for students are the best tools. Therefore, according to the last students' utterance, we are more decided to apply D.R.T.A in order to get successful results and so overcome students' reading comprehension problems.

### 4.2.1.3 Pre - Test with Quantified Answers from the E.G and the C.G.

As it was mentioned before in Section 3.3.2, p. 78-79, the Pre and Post Reading comprehension Tests were employed to evaluate students' reading comprehension level before the pedagogical intervention took place. Therefore, the finding of the pre-test was used for comparison in order to interpret the findings, particularly if any improvement or differences occurred at the end of the experiment.

The test was designed with fifteen questions; all of them with their respective multiple-choice item. In addition, fifteen points were assigned to the test. The correct answer was given one point and no point was given to the incorrect answer or unanswered item. The Pre-test was carried out during the first reading workshop class. A quantified, statistical, and descriptive analysis was employed to get an overview of the students' performance on the pre-test.

Therefore, in order to understand the results of the Pre-test, table 15 shows six columns. On the first column, the scores of the pre reading comprehension test are stated while on the second and fourth column the frequency of each scores are described and finally, the percentage of the total frequencies are described as well. (See appendix: 9a for further details about the students' score)

**TABLE 15**

**Comparative Chart- Scores Obtained in the Pre-Test from the E.G and the C.G**

| PRE- READING COMPREHENSION TEST | | | | | |
|---|---|---|---|---|---|
| EXPERIMENTAL GROUP | | | CONTROL GROUP | | |
| Total | Frequency | % | Frequency | % | Differences |

| Scores | | | | | |
|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 |
| 2 | 1 | 4 | 0 | 0 | -1 |
| 3 | 1 | 4 | 4 | 16 | 3 |
| 4 | 4 | 16 | 5 | 20 | 1 |
| 5 | 7 | 28 | 7 | 28 | 0 |
| 6 | 9 | 36 | 5 | 20 | -4 |
| 7 | 3 | 12 | 4 | 16 | 1 |
| 8 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL** | **25** | **100** | **25** | **100** | |

According the data obtained from the Pre-test, it is convenient to state a graphic to understand better. That is why, we introduced a lineal graphic, where the frequency, the number of students' scores and the scores are properly described by a comparison between both groups (E.G and C.G).

**GRAPHIC: 15**

**COMPARATIVE GRAPHIC OF STUDENTS' SCORES IN THE PRE-TEST FROM THE E.G and C.G**


If we analyze the table number 15 and the graphic 15 respectively, we found similarities regarding the results of the pretest in the Control and the Experimental Group. For example in the case of the **Experimental Group**, 6 tendencies in the results of **the pretest** were found. First, the highest score corresponded to 7 points over 15, which was obtained by 3 students representing the 12%. Second, 6 points was the next high score, it was got by 9 students which denotes the 36% of the participants. Third, 5 points were got by 7 students giving us 28%. Fourth, the intermediate score was 4 points acquired by 4 students that implies 16%. Finally, the lowest score corresponded to 3 and 2 points obtained by 1 student each one that corresponds to 8% over 100% of the students' frequency. From the results described above, in terms of passing or failing the pre reading comprehension test,

50% of the students answered correctly 50 % of the answers, that is to say, they did not pass the test because they did not achieve the 51% required for passing the test.

Regarding the results of **the posttest** in **the Control Group**, five tendencies were found. First, the highest score corresponded to 7 points, which was only got by 4 students that become to represents the 16% over the total of 100% of participants. The second high score was 6 points that was obtained by 5 students representing the 20%. Then, the intermediate score corresponded to 5 and 4 points that was got by 7 and 5 students respectively giving us the 28 and 20% of the participants. Finally, 3 points corresponded to the lowest score obtained by 4 students of the C.G which denoted the 16% of the students' frequency. The results obtained in the pretest regarding the C.G shows that 50% of the students answered correctly the pretest. That is to say, students did not pass the reading comprehension test because they did not achieve the 51% that was the minimum percentage required for passing the test.

If we compare the results of the pretest in the Control and Experimental Group, both of them failed the test because they only got the 50% of the 100 % assigned to the test.

From the description stated above, it was necessary to obtain the students' average, the standard deviation and the differences of those averages in order to get a specific data about the students reading comprehension level. That is why, in table number 16 a comparative chart was stated where the data previously mentioned is described.

**TABLE: 16**

**A COMPARATIVE CHART OF PRE- TEST**

**STUDENTS' READING COMPREHENSION LEVEL OF BOTH GROUPS (E.G and C.G)**

| PRE TEST | Students Average Obtained in the Pre Reading Comprehension Test | |
|---|---|---|
| | EXPERIMENTAL GROUP | CONTROL GROUP |
| Students' Average | 5 | 5.2 |
| Std. Deviation. | 1.2 | 1.3 |
| Dif. Of Averages | -0.2 | |

A comparative chart related the students' average was presented above. According to the data, the E.G obtained 5.2 points as the students' average related to the students' reading comprehension level with a standard deviation of 1.2, while on the other hand, the C.G obtained 6 points, which means the Control Group's average with a standard deviation of 1.3. The difference between the E.G and the C.G was -.0.2.

In spite of the fact that both groups obtained just a similar average, It does not mean they have a good reading comprehension level because neither of them obtained 51% which would be a certain kind of acceptable reading comprehension level.

Now talking about the students' reading comprehension difficulties, we can observe that most of them face a variety of difficulties such as poor reading skills, lack of vocabulary, lack of schemata, and so on. According the students' opinion lack of interest is another major cause of their failure because regarding students' point of view, reading seems to be a passive and boring activity

performed constantly in isolation and perhaps associated with skills which they feel they do not possess; That is why, we feel the imperious necessity to carry out the experimental stage.

## 4.2.2 Second Section of the Main Study- Quantified Results of D.R.T.A in the E.G

In order to continue with the next step, the values of variability of the independent variable are presented. These values correspond to the work that participants performed during the experimental sessions where the D.R.T.A was instrumented. Students varied their work starting from pictorial clues, prediction, activating students' background knowledge and continuing with developing higher order thinking skills (logical conclusions). Therefore, in the three next sub- points a quantified data gathering are explained.

### 4.2.2.1 Students' Quantified Average using D.R.T.A in Informational Texts

In this section of the study, the variations of the independent variable were controlled by assessing 4 points for each variable (Pictorial Clues, Prediction, Background Knowledge and Higher Order thinking Skill), which give us 16 points. Therefore, Informational, Narrative, and Argumentative texts were applied in order to test students' reading comprehension during D.R.T.A instrumentation and at the same time to find out which kind of text are more advisable for students' reading comprehension while they are using D.R.T.A.

In the table below, students' scores were described by using D.R.T.A in Informational text. Thus, in the first column the number of students was enlisted. While, from the second to the fifth column D.R.T.A variables in the development of Informational text were stated. Each variable was assigned with 4 points. Finally, the last column described the participants' total scores, which was the total sum from Picture Clues to Higher order thinking skills as they were showed in the table.

**TABLE 17**

| STUDENTS' READING COMPREHENSION SCORES BY USING D.R.T.A IN INFORMATIONAL TEXT. | | | | | |
|---|---|---|---|---|---|
| Nº of Students | Pict. Cl. | Prediction | Background Knowledge | Higher Order thinking skill | TOTAL SCORES |
| 1 | 4 | 4 | 4 | 4 | 16 |
| 2 | 3 | 4 | 4 | 3 | 14 |
| 3 | 4 | 3 | 3 | 3 | 13 |
| 4 | 4 | 3 | 4 | 2 | 13 |
| 5 | 3 | 4 | 3 | 2 | 12 |
| 6 | 4 | 3 | 3 | 3 | 13 |
| 7 | 3 | 4 | 4 | 4 | 15 |
| 8 | 3 | 3 | 4 | 3 | 13 |
| 9 | 4 | 4 | 3 | 2 | 13 |
| 10 | 4 | 4 | 4 | 2 | 14 |

| | | | | | |
|---|---|---|---|---|---|
| 11 | 4 | 3 | 4 | 2 | 13 |
| 12 | 4 | 4 | 3 | 4 | 15 |
| 13 | 4 | 3 | 4 | 2 | 13 |
| 14 | 3 | 3 | 4 | 2 | 12 |
| 15 | 4 | 4 | 4 | 3 | 15 |
| 16 | 4 | 3 | 3 | 3 | 13 |
| 17 | 4 | 3 | 3 | 4 | 14 |
| 18 | 3 | 4 | 4 | 4 | 15 |
| 19 | 4 | 3 | 3 | 2 | 12 |
| 20 | 3 | 4 | 3 | 3 | 13 |
| 21 | 3 | 3 | 4 | 3 | 13 |
| 22 | 4 | 4 | 3 | 2 | 13 |
| 23 | 3 | 3 | 4 | 3 | 13 |
| 24 | 3 | 3 | 4 | 4 | 14 |
| 25 | 3 | 4 | 4 | 2 | 13 |
| **AVERAGE** | **3,6** | **3,5** | **3,6** | **2,8** | **13,5** |
| **Std. Dev.** | **0,5** | **0,5** | **0,5** | **0,8** | **1,0** |

In order to understand all the data gathering, the graphic below shows the D.R.T.A variables in which the students' average, the total amount, and the independent variables were described.

**GRAPHIC: 16**


According to the graphic presented above, the students' average was acceptable since they obtained 3 points over 4. Describing the highest scores, the Pictorial clues, and Background Knowledge got 3.6 points. Then, the intermediate score was obtained by Prediction with 3.5 points. Finally, Higher Order Thinking Skill obtained the lowest average with 2.8 points in this type of text.

Students' average by using D.R.T.A in informational text was acceptable since they felt more comfortable appealing to their background knowledge from real situation of everyday life. Dealing with this kind of text offers and gets students' interest because at the beginning they had the conception of reading as a boring activity but after D.R.T.A was instrumented students' opinion changed in radical way.

## 4.2.2.2 Students' Quantified Average using D.R.T.A in Narrative Texts (E.G.)

The reasons for choosing this type of texts was because narrative texts tell us about the story and experience that can make the students enjoy the class and feel the story. Therefore, D.R.T.A was instrumented in order to find out if this type of text is more advisable for students' reading comprehension.

**TABLE 18**

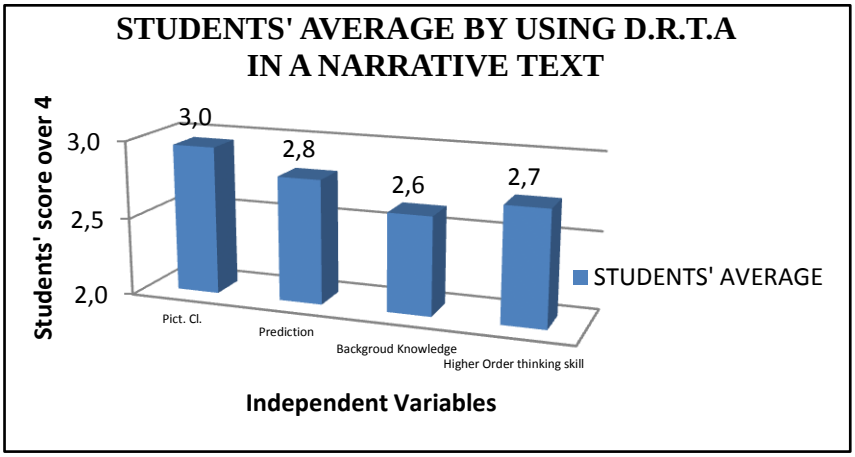
| **STUDENTS' READING COMPREHENSION SCORE BY USING D.R.T.A IN A NARRATIVE TEXT** |
|---|

| Nª of Students | Pict. Cl. | Prediction | Backgroud Knowledge | Higher Order thinking skill | TOTAL SCORES |
|---|---|---|---|---|---|
| 1 | 3 | 3 | 2 | 4 | 12 |
| 2 | 3 | 4 | 3 | 2 | 12 |
| 3 | 4 | 3 | 4 | 3 | 14 |
| 4 | 2 | 2 | 1 | 1 | 6 |
| 5 | 4 | 4 | 3 | 3 | 14 |
| 6 | 3 | 3 | 2 | 3 | 11 |
| 7 | 4 | 4 | 3 | 4 | 15 |
| 8 | 1 | 2 | 1 | 1 | 5 |
| 9 | 3 | 4 | 3 | 3 | 13 |
| 10 | 3 | 4 | 4 | 3 | 14 |
| 11 | 4 | 3 | 3 | 3 | 13 |
| 12 | 3 | 4 | 4 | 4 | 15 |
| 13 | 4 | 2 | 3 | 3 | 12 |
| 14 | 4 | 4 | 3 | 3 | 14 |
| 15 | 3 | 3 | 3 | 3 | 12 |
| 16 | 4 | 3 | 2 | 4 | 13 |
| 17 | 1 | 1 | 1 | 1 | 4 |
| 18 | 4 | 3 | 3 | 3 | 13 |
| 19 | 3 | 4 | 3 | 3 | 13 |
| 20 | 3 | 3 | 2 | 3 | 11 |
| 21 | 1 | 1 | 1 | 1 | 4 |
| 22 | 3 | 3 | 3 | 3 | 12 |
| 23 | 4 | 4 | 3 | 3 | 14 |
| 24 | 3 | 1 | 3 | 4 | 11 |
| 25 | 4 | 3 | 4 | 3 | 14 |

| | | | | | |
|---|---|---|---|---|---|
| **Students' Average** | **3,1** | **3,0** | **2,7** | **2,8** | **11,6** |
| **Std. Dev.** | **1,0** | **1,0** | **0,9** | **0,9** | **3,3** |

In the table presented above, the students' score was detailed by using D.R.T.A. For better understanding, the graphic number 17 described the D.R.T.A variables in which the students' average, the total amount, and the independent variables were described.

**GRAPHIC: 17**




According to the graphic above, students' average was acceptable because they obtained 3 points over 4. In this light, "Pictorial Clues" obtained the highest score (3 points). Then, "Prediction (2.8) and HOST (2.7) was the second and finally, "Background Knowledge" (2.6) was the last lowest score.

Students' average using D.R.T.A in Narrative texts ran well. As matter of fact, the use of D.R.T.A in guided reading made the students interested in learning reading and they were motivated to perform themselves their reading skill. Thus, the students' learning can be improved by implementing D.R.T.A in class; the students were able to predict, to think in a higher order.

## 4.2.2.3 Students' Quantified Average by using D.R.T.A in Argumentative Texts (E.G)

The reason for choosing this type of text was that an Argumentative text permits the students to think critically because as this type of text has arguments and contra arguments students can activate their background knowledge in order to be active and thoughtful readers.

**TABLE: 19**

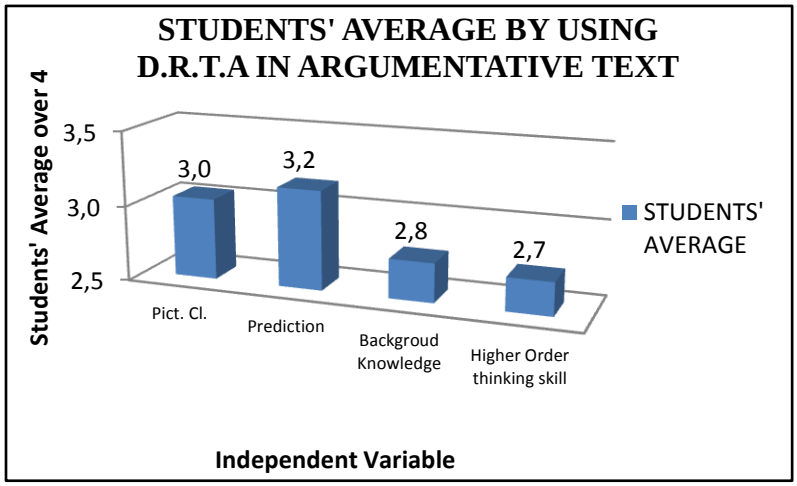
| **STUDENTS' READING COMPREHENSION SCORE BY USING D.R.TA IN ARGUMENTATIVE TEXT** |
|---|

| Nª of tudents | Pict. Cl. | Prediction | Backgroud Knowledge | Higher Order thinking skill | TOTAL SCORES |
|---|---|---|---|---|---|
| 1 | 4 | 4 | 3 | 3 | 14 |
| 2 | 3 | 4 | 3 | 2 | 12 |
| 3 | 3 | 3 | 3 | 2 | 11 |
| 4 | 1 | 1 | 1 | 1 | 4 |
| 5 | 4 | 3 | 2 | 3 | 12 |
| 6 | 4 | 4 | 3 | 2 | 13 |
| 7 | 3 | 4 | 3 | 4 | 14 |
| 8 | 1 | 1 | 1 | 1 | 4 |
| 9 | 4 | 4 | 3 | 3 | 14 |
| 10 | 3 | 4 | 3 | 2 | 12 |
| 11 | 3 | 4 | 3 | 3 | 13 |
| 12 | 4 | 4 | 4 | 4 | 16 |
| 13 | 3 | 3 | 3 | 2 | 11 |
| 14 | 3 | 3 | 4 | 3 | 13 |
| 15 | 3 | 4 | 3 | 4 | 14 |
| 16 | 3 | 3 | 2 | 3 | 11 |
| 17 | 1 | 1 | 1 | 1 | 4 |
| 18 | 3 | 4 | 2 | 3 | 12 |
| 19 | 3 | 3 | 4 | 4 | 14 |
| 20 | 4 | 3 | 3 | 3 | 13 |
| 21 | 1 | 1 | 1 | 1 | 4 |
| 22 | 4 | 4 | 3 | 4 | 15 |
| 23 | 3 | 3 | 4 | 3 | 13 |
| 24 | 4 | 4 | 3 | 4 | 15 |
| 25 | 4 | 3 | 4 | 3 | 14 |

| | | | | | |
|---|---|---|---|---|---|
| **Students' Average** | **3,0** | **3,2** | **2,8** | **2,7** | **11,7** |
| **Stad. Desv.** | **1,0** | **1,1** | **1,0** | **1,0** | **3,6** |

According to the graphic above, students' average was acceptable because they obtained 2.9 points over 4. In this light, "Prediction" (3.2) obtained the highest score. Then, "Pictorial Clues" (3) was the second, then Background Knowledge (2.8) was the third and finally, HOST (2.7) was the lowest average.

**GRAPHIC: 17**




According to the results described in the previous page, we conclude that students increased their knowledge about what narrative text is because D.R.T.A had positive impact in teaching reading narrative texts. Therefore, D.R.T.A can increase participants' ability in reading and it can be one of the solutions to teach reading more actively since the students felt happy and interested in a method that has never been used by their teachers before.

## 4.2.2.4 Comparative Quantified Results of Informational, Narrative and Argumentative text in the D.R.T.A

Results of D.R.T.A instrumentations are presented for each of the three types of text during E.F.L reading comprehension workshops. Table 24 presents a general students' average, standard deviation by treatment group.

**COMPARATIVE STUDENTS' AVERAGE USING D.R.T.A IN INFORMATIONAL, NARRATIVE AND ARGUMENTATIVE READING COMPREHENSION TEXTS.**

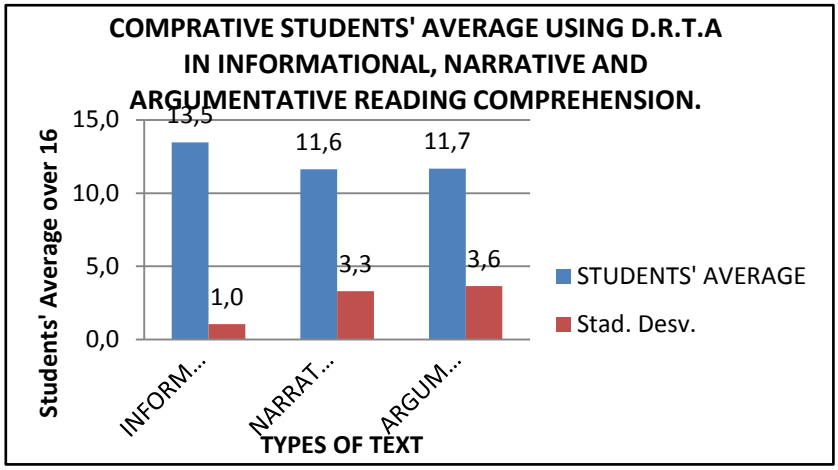
**TABLE: 20**

| | Informational text | Narrative Text | Argumentative Text |
|---|---|---|---|
| Students' Average | 13.5 | 11.6 | 11.7 |
| Stad. Desv. | 1.0 | 3.3 | 3.6 |

As it is observed in the table above, the highest average in the development of D.R.T.A in E.F.L was obtained by Informational text with 13.5 and a Standard Deviation of 1.0. Then, the Argumentative text was the second highest average; that means, this type of text obtained 11.7 with a Standard Deviation of 3.6. Finally, the Narrative Text was the lowest average; that is to say, 11.6 points with a Standard Deviation of 3.6.

According to the data obtained, important findings were found. First, there were significant effects in the improvement of Reading comprehension while students were using D.R.T.A as it is demonstrated in the graphic.

**GRAPHIC: 18**




Informational text obtained the highest average (See graphic: 18, p. 128) when students worked with this type of text; they felt more comfortable because the topics were real information that was currently happening in our society. That is the reason why participants assimilated, increased and activated their previous knowledge. Pictorial clues played an important role because with the advantage of the internet we got easier lot of pictures where the participants guessed or predicted what the text could be about. Therefore, they feel more motivated to find out if their predictions were true or false giving as a result active and creative readers.

Talking about the Narrative text, it obtained the second place with 11.6 over 15 points. From the experience during D.R.T.A, it was observed positive influences during the reading of narrative texts since D.R.T.A permitted the students to be active and thoughtful readers. By using pictures students felt more enthuastic. However, in some cases we did not find an appropriate picture for narrative material that is why we decided to be more creative and active finding the pictures in many different sources both electronic and mass media. For all the exposed previously, it was concluded

that D.R.T.A can increase students' ability in reading and it can be one of the solutions to teach reading more actively.

Finally, in the case of argumentative texts D.R.T.A found good effects since argument means to think in order to prove or contrast a hypothesis and D.R.T.A had a deep connection between these kinds of texts. Therefore, it was considered that D.R.T.A is a very good approach in comprehending Informational, Narrative, and Argumentative.

## 4.2.3 Third Section of the Main Study

This part of the study represents the end of the research. The quantified results of the Post-test from the C.G and the E.G are described. At the same time, a comparison between the pre-post tests of both groups are discussed followed by the hypotheses prove in order to demonstrate the effectiveness of our study. In addition to that, the post questionnaire is described as well.

### 4.2.3.1Quantified Results of the Post Reading Comprehension Test from the C.G. & the E.G.

The post reading comprehension test was administrated to our participants at the end of the experimental stage at the same time in both groups (the E.G & the C.G). The posttest was used to measure the effects of the pedagogical intervention on the students' reading comprehension. The same reading comprehension test was used for the pre and posttest. Scoring of the assessments was also conformed to the same criteria employed for the pretest (See appendix: 9b for detailed students' score). Therefore, in order to understand the results of the Post-test, table 21 contained six columns.

In the first column, the scores were described, starting from 1 to 15 points. On the second and fourth column, the frequencies of each score were described for The E.G and C.G. Finally; on the third and sixth columns, the percentages of the total frequencies were described below.

**TABLE: 21**

**COMPARATIVE STUDENTS' SCORES IN THE POST TEST**

**FROM THE C.G. & THE E.G**

| STUDENTS' SCORES IN THE POST- READING COMPREHENSION TEST FROM C.G & E.G | | | | | |
|---|---|---|---|---|---|
| CONTROL GROUP | | | EXPERIMENTAL GROUP | | |
| Total Scores | Frequency | Percentage | frequency | Percentage | Differences |
| 1 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 |
| 5 | 8 | 32 | 0 | 0 | -8 |
| 6 | 9 | 36 | 0 | 0 | -9 |
| 7 | 7 | 28 | 0 | 0 | -7 |
| 8 | 0 | 0 | 0 | 0 | 0 |

| | | | | | |
|---|---|---|---|---|---|
| 9 | 1 | 4 | 0 | 0 | -1 |
| 10 | 0 | 0 | 3 | 12 | 3 |
| 11 | 0 | 0 | 5 | 20 | 5 |
| 12 | 0 | 0 | 5 | 20 | 5 |
| 13 | 0 | 0 | 7 | 28 | 7 |
| 14 | 0 | 0 | 4 | 16 | 4 |
| 15 | 0 | 0 | 1 | 4 | 1 |
| **TOTAL** | **25** | **100** | **25** | **100** | |

Now, we describe the results obtained after the application of the Post Reading Comprehension test in both groups (C.G & E.G). Before analyzing the results, it is necessary to know the acceptable or expected score after applying D.R.T.A in the E.G, which is 7 or 8 points that means the fifty one percent. In order to analyze the students' scores in detail we pass to describe each of them.

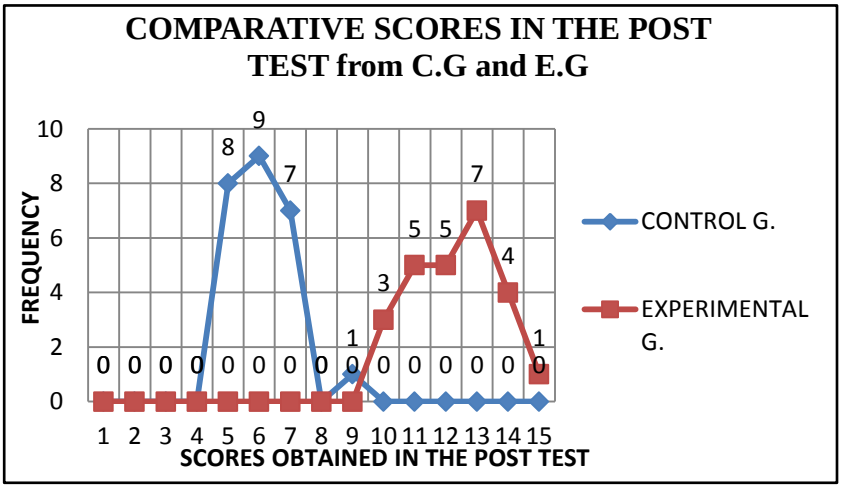
In the case of the C.G, we found four representative scores. Only one of the students obtained a highest score, which corresponded to 9 over 15 points. Then, seven students got 7 points. After, nine students obtained 6 points and finally 8 students got 5 points over 15.

With the results exposed above, it was evident that both groups differ from each other as it is stated in the graphic below.

**GRAPHIC: 19**

**COMPARATIVE GRAPHIC OF THE SCORES OBTAINED**

**IN THE POST-TEST FROM THE C.G & E.G.**




In the case of the C.G, the highest score was 9 points over 15 which was obtained by only one student. On the other hand, the E.G obtained 15 points after the exposure to D.R.T.A. Talking about the lowest score, 5 students got 5 points from the C.G; while in the E.G, 10 students after have been exposed to D.R.T.A got 10 points over 15.

Therefore, significative differences were found in both groups because the C.G did not receive any stimulation for reading while the E.G. was continuously motivated to read during the reading workshops where they activated their background knowledge and their higher order thinking skills. Synthesizing all the data, the C.G obtained a total score of 6.08 in the application of Post Reading

Comprehension Test while the E.G scored 12.3. Therefore, there was almost a 50%of the difference in the improvement of reading comprehension in the case of the E.G.

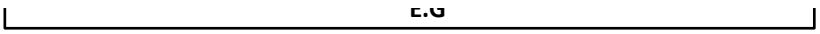
**TABLE: 22**

**COMPARATIVE CHART OF POST READING COMPREHENSION SCORE FROM THE C.G & E.G**

| COMPARATIVE READING COMPREHENSION SCORES FROM C.G & E.G. | | |
|---|---|---|
| | **CONTROL G.** | **EXPERIMENTAL G.** |
| **STUDENTS' AVERAGE** | 6,08 | 12,28 |
| **STD. DESV.** | 1.1 | 1,4 |
| **DIF. OF AVERAGE** | -6,2 | |

**GRAPHIC: 20**

**COMPARATIVE GRAPHIC OF AVERAGE OBTAINED IN THE POST TEST FROM THE C.G & E.G**




As it was stated on the table 25 and demonstrated in the graphic above, the C.G obtained 6.08 as a total amount in the development of reading comprehension with a standard deviation of 0.99. On the other hand, the E.G got 12.28 of amount with a standard deviation of 1.4. Here the difference between the C.G & the E.G average was -6.8. That means, that without doubt the E.G improved students' reading comprehension trough instrumenting D.R.T.A in E.F.L. In the following section, comparative quantified results of Pre and Posttest from the C.G and the E.G are described.

## 4.2.3.2 Comparative Results of the Pre and Post Test from the C.G

In this part of the study, a comparison of results in the Pre and Post reading comprehension tests are described. Let us remember that in the pre and posttest we used the same test that consisted of fifteen questions. The reason for using the same test was to measure and compare the score the students got in the pretest before the intervention and in the posttest after the intervention. Therefore, we wanted to observe the improvement in reading comprehension after the treatment. Thus, if we analyze in a general way the results both in the Pre and the Post- test with the C.G, they did not have any changes regarding the scores they obtained in the pre and post- tests. (For further details, see appendix 9c for students' score).

**TABLE: 23**

**COMPARATIVE FREQUENCY TABLE OF PRE & POST TEST**

**FROM THE C.G**

| PRE TEST | | | POST TEST | | |
|---|---|---|---|---|---|
| **Total Scores** | **Frequency** | **%** | **Frequency** | **%** | **Difference** |
| 1 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 |
| 3 | 4 | 16 | 0 | 0 | -4 |
| 4 | 5 | 20 | 0 | 0 | -5 |
| 5 | 7 | 28 | 8 | 32 | 1 |
| 6 | 5 | 20 | 9 | 36 | 4 |
| 7 | 4 | 16 | 7 | 28 | 3 |
| 8 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 1 | 4 | 1 |
| 10 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL** | **25** | **100** | **25** | **100** | |

The results in the table above are stated in the graphic below in order to analyze the results, where the frequency, and the number of students' scores are properly described by a comparison between the Pre and the Post -test from C.G.

**GRAPHIC: 21**

**COMPARATIVE SCORES OF THE PRE AND THE POST TEST**

**FROM THE C.G**

SCORES OBTAIINED IN PRE & POST TEST

If we analyze the data presented above clearly, we found differences regarding the results of the pre and posttest in the **Control Group**. For example, 5 tendencies in the the results of **the pretest** were found. First, the highest score corresponded to 7 points over 15, which was obtained by 4 students representing the 16%. Second, 6 points was the next high score, it was got by 5 students

which denotes the 20% of the participants. Third, 5 points were got by 7 students giving us 28%. Fourth, the intermediate score was 4 points acquired by 5 students that implies 20%. Finally, the lowest score corresponded to 3 points obtained by 4 students that corresponds to 16 over 100% of the students' frequency. From the results described above, in terms of passing or failing the pre reading comprehension test, 50% of the students answered correctly 50 % of the answers, that is to say, they did not pass the test because they did not achieve the 51% required for passing.

Regarding the results of **the posttest** in the C.G, four tendencies were found. First, the highest score corresponded to 9 points, which was only got by 1 student that represents 4% over the total of 100% of participants. The second high score was 7 points that was obtained by 7 students representing the 28%. Finally, 5 and 6 points corresponded to the lowest score obtained by 9 and 8 students respectively giving us 36 and 32% over 100% of the students' frequency. The results obtained in the posttest in the C.G shows that only 4% of the students improved their score. On the other hand, 96% of them maintained a 50% in their score in terms of comparing the pre and posttests respectively.

If we compare the results of the pre and posttests from the C.G, in the case of pretest, students failed in the reading comprehension test because they only got the 50% of the total of 100% assigned to the test. Regarding the posttest, students obtained a minimum improvement because only the 4% of the students got an acceptable score and the others maintained the score obtained at the beginning of the experimental stage; that is to say, 50%.

From the description in the previous paragraphs, it is necessary to obtain the students' average, the standard deviation, and the differences of those averages in order to get specific data about the students' reading comprehension level as it is stated.

**TABLE: 24**

**COMPARATIVE CHART OF THE PRE AND THE POST TESTS FROM THE C.G**

| COMPARATIVE CHART OF PRE AND POST TEST FROM C.G | | |
|---|---|---|
| | **PRE- TEST** | **POST- TEST** |
| Average | 5 | 6,08 |
| Std. Dev. | 1,32287566 | 0,99666109 |
| Dif. Of Av. | -1,08 | |

According to the global data, the Control Group's average in the pre- test corresponded to 5 points, with a standard deviation of 1.3. This identification of the standard deviation helped us to prove one of the hypothesis stated for this work. On the other hand, the post-test average was 6 points with a standard deviation of 0.99. Therefore, the difference between the Pre and Post- test average corresponded to -1.08, which means that there was not a significative difference between the pre and posttest results. That refers that the students maintained the same level of reading comprehension; however, in terms of passing or failing the pre and the posttests, they definitely did not pass the test.

## 4.2.3.3 Comparative Results of the Pre and the Post Test from E.G

Having analyzed the results in the pre and posttests with the Control Group, in this section of the study, a comparative analysis of the results in the Pre and the Post Tests with the **Experimental group** is made. So the analysis was based on statistical, descriptive, and inferential techniques in order to understand the data gathering. (For further details, see appendix 9D).

**TABLE: 25**

**COMPARATIVE FREQUENCY TABLE OF THE PRE & THE POST TESTS RESULTS FROM THE E. G**.

| | PRE TEST | | POST TEST | | |
|---|---|---|---|---|---|
| Total Scores | Frequency | % | Frequency | % | Differences |
| 1 | 0 | 0 | 0 | 0 | 0 |
| 2 | 1 | 4 | 0 | 0 | -1 |
| 3 | 1 | 4 | 0 | 0 | -1 |
| 4 | 4 | 16 | 0 | 0 | -4 |
| 5 | 7 | 28 | 0 | 0 | -7 |
| 6 | 9 | 36 | 0 | 0 | -9 |
| 7 | 3 | 12 | 0 | 0 | -3 |
| 8 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 3 | 12 | 3 |
| 11 | 0 | 0 | 5 | 20 | 5 |
| 12 | 0 | 0 | 5 | 20 | 5 |
| 13 | 0 | 0 | 7 | 28 | 7 |
| 14 | 0 | 0 | 4 | 16 | 4 |
| 15 | 0 | 0 | 1 | 4 | 1 |
| Total | 25 | 100 | 25 | 100 | |

In the table 25, it is clear that there were differences between the pre and the post reading comprehension level in the **Experimental Group**. For example, 5 tendencies related to the results of **the pretest** were identified. First, the highest score corresponded to 7 points, which was obtained by 3 students representing the 12%. Second, 6 points was the next high

score, it was got by 9 students which denotes the 36%. Third, 5 points were got for 7 students giving us 28%. Fourth, the intermediate score was 4 points acquired by 4 students and that students' frequency implies the 16%. Finally, the lowest score corresponded to 3 and 2 points obtained by 1 student each one, which corresponded to 8% over 100%. From the results described above, in terms of passing or failing the pretest, 50% of the students achieved only a 50% of the correct answers; that is to say, they did not pass the test because they did not achieve the 51%.

From the results described above, in terms of passing or failing the pre reading comprehension test, 50% of the students achieved only a 50 % of the correct answers, that is to say, they did not pass the test because they did not achieve the 51%.

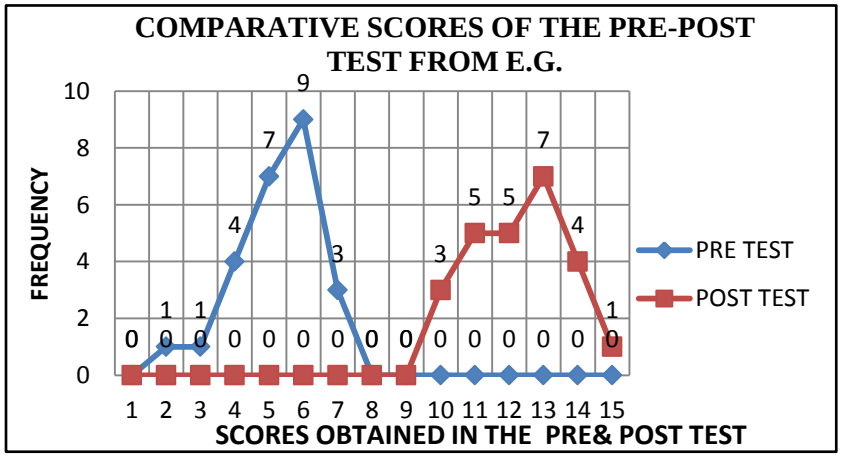
Regarding the results of **the posttest** in the **Experimental Group**, six tendencies related to the scores were found. First, the highest score corresponded to 15 over 15 points, which was got by 1 student representing the 4% over the total of 100%. The second high score was 14 points that was obtained by 4 students representing the 16%. Third, 13 and 12 points was identified as the intermediate score obtained by 7 (28%) and 5 (20%) students respectively. Finally the lowest score corresponded to 11 and 10 points by 5 (20%) and 3 (12%) students each score. The results obtained in the posttest from the E.G give us to understand that students passed the reading comprehension test because they got the 100% of the total of the reading comprehension test.

If we compare the results in both groups, in the case of the C.G, students both in the pre and in post- test failed to comprehend a text they had read. Regarding the Experimental group students, they had the same scores as the Control Group in the pre –test; that means, they had failed the test. However, after the exposure to D.R.TA, students in the experimental group achieved higher scores in reading comprehension. For example, some of them (4%) scored a 100% of comprehension and the lowest score corresponded to 12% of the students with more than 70% of comprehension. In order to show these clear differences between the pre and the posttest in the E.G, a lineal graphic is presented below.

**GRAPHIC: 23**

**COMPARATIVE GRAPHIC OF THE PRE & POST TEST**

**FROM E.G**




Based on

the lineal graphic, it is necessary to obtain the students' average, the standard deviation, and the differences of those averages in order to get a specific data about the students' reading comprehension level as it is described next.

**TABLE: 26**

**COMPARATIVE CHART OF THE PRE & POST**

**TEST FROM E.G.**

| COMPARATIVE PRE & POST TEST SCORES FROM E.G | | |
|---|---|---|
| | **PRE TEST** | **POST TEST** |
| **Average** | 5,24 | 12,28 |
| **Desv. Sta.** | 1,23423391 | 1,4 |
| **Dif. Of Averages.** | -7,0 | |

According to the global data observed in the graphic above, it is clear that there is a difference between the Pre and the Post Test in the E.G because the average of the pretest corresponds to 5.24 with a standard deviation of 1.2. On the contrary, the average of the posttest corresponded to 12.3 with a standard deviation of 1.4. Therefore, the differences between Pre and Post- test average corresponded to 7.0. This means that there was a considerable improvement in the E.G students' reading comprehension level after the experimentation. In order to achieve these results during the intervention or reading workshops, we created a positive atmosphere, where students activated their background knowledge, constantly made predictions, and used higher order thinking skills being thoughtful readers.

### 4.2.3.4 Comparative **Results of Referential Reading Comprehension Level (Literal) in the Pre and Post Test from E.G**

In this section, a comparison of results in the Pre and Posttests at referential reading comprehension level are described. We should remember that out of 15 questions in the pre and post-tests, 11 questions tested referential level of reading comprehension level. At this stage of the study, our concern is to describe the results only in the referential comprehension. Therefore, our 100% constitute 11 questions. Those questions were assigned with one point each one having a total of 11 points as a total score. For all exposed above, a frequency table and its graphic is used in order to enrich the entire data gathering in the Experimental Group.

**TABLE: 27**

**COMPARATIVE FREQUENCY TABLE OF PRE & POST TEST**

**AT REFERENTIAL READING COMPREHENSION LEVEL FROM E.G.**

| | | PRE TEST | POST TEST | |
|---|---|---|---|---|
| Total Scores | Frequency | % | Frequency | % |
| 1 | 0 | 0 | 0 | 0 |
| 2 | 1 | 4 | 0 | 0 |
| 3 | 1 | 4 | 0 | 0 |
| 4 | 4 | 16 | 0 | 0 |
| 5 | 7 | 28 | 0 | 0 |
| 6 | 9 | 36 | 0 | 0 |
| 7 | 3 | 12 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 8 | 32 |
| 10 | 0 | 0 | 7 | 28 |
| 11 | 0 | 0 | 10 | 40 |

As we can observe in the table 27, we used a comparative frequency table related the scores of referential reading comprehension level from E.G. Table 27 contains 5 columns. The first column shows the scores students obtained for referential level. On the second and fourth columns, the frequency of the scores are presented; that means, in these columns the number of the students who obtained the scores depicted on the first column are presented. On the third and fifth columns, the percentage of the frequencies in the pre and the posttest are stated.

The pre reading comprehension test with the E.G, five positions were found at referential level: Seven points was obtained as the highest score and that score was obtained by 3 students who represented with 12% of the E.G. Second, 9 students obtained 6 points, that score represented the 36% of the 100%. Third, 5 points was got by 7 students which denoted the 28%. After that, 4 points was got by 4 students that represents 16%. Finally, the lowest result of the pretest at referential level concerned to 2 and 3 points respectively who was obtained by two students that represented the 8 %. From the results obtained in the pretest in terms of passing or failing, students approved the test at referential level because they got the 65% of the 100% that means, students have good referential comprehension level.

In the case of posttest at referential comprehension level the highest score corresponded to 11 points, 10 students obtained this score, which represents the 40% of the 100%. The second position corresponded to 10 points that was obtained by 7 students, which denotes 28%. Finally, the lowest score was represented by 9 points acquired by 8 students representing the 32% of the total of 100% The scores obtained in the posttest at referential level in the E.G give us to understand that all the students got good proficiency at referential reading comprehension level.

Comparing the results from the pre and posttest at referential reading comprehension level in the E.G, in the pretest students got good reading comprehension level before the experimentation

take place but after the exposure to D.R.T.A students' score increased highly their scores because none of them obtained 100% of the total score in the pretest but it was got in the post test.

From the explanation stated previously, we used a table, where the differences between the pre and the posttest at referential level, the standard deviation and the differences between pre and posttest average are stated from the E.G.

**TABLE: 28**

**COMPARATIVE TABLE OF THE PRE & POST TESTS AT REFERENTIAL READING COMPREHENSION LEVEL FROM E.G**

| COMPARATIVE CHART OF THE PRE AND POST TEST AT REFERENTIAL LEVEL FROM E.G. | | |
|---|---|---|
| | **PRE TEST** | **POST TEST** |
| **AVERAGE** | 6.04 | 10,5 |
| **STD.DEV.** | 0,8717 | 0,789514 |
| **DIF. OF AVE.** | 4.46 | |

The table above shows the average of the experimental group at referential reading comprehension level. In the pre -test they scored 6, 04 with a standard deviation of 0, 8717. While, the post -test corresponded to 10.5 with a standard deviation of 0.7895. Therefore, there is a difference between the pre and posttest average corresponded to 4.46. (For further details, see appendix 9E).

## 4.2.3.5 Comparative **Results of Inferential Reading Comprehension Level in the Pre and Post Test from E.G**

In order to demonstrate the effectiveness of D.R.T.A we dealt with inferential Reading Comprehension level, we stated the results of the Pre and Post -test before and after conducting D.R.T.A. At this stage, we should remember that out of 15 questions in the pre and posttests, 4 questions tested inferential level of reading comprehension. Therefore, our concern is to describe the results only in the inferential comprehension. thus, our 100% constitute 4 questions. Those questions were assigned with one point each one having a total of 4 points as a total score. For all exposed above, a frequency table is used in order to enrich the entire data gathering in the Experimental Group.

**TABLE: 29**

**COMPARATIVE FREQUENCY TABLE OF PRE & POST TEST**

**AT INFERENTIAL READING COMPREHENSION LEVEL FROM E.G.**

| SCORES | PRE TEST | | POST TEST | |
|---|---|---|---|---|
| | FREQUENCY | % | FREQUENCY | % |
| 0 | 20 | 80 | 0 | 0 |
| 1 | 4 | 13 | 0 | 0 |
| 2 | 1 | 7 | 7 | 28 |
| 3 | 0 | 0 | 9 | 36 |
| 4 | 0 | 0 | 9 | 36 |
| **TOTAL** | **25** | **100** | **25** | **100** |

In the table above, is described the pre and post -test at inferential reading comprehension level from E.G. Therefore, in the case of the pre- reading comprehension test, three positions were found at inferential level: 2 points was obtained as the highest score and only one student who was represented with 7% of the E.G. obtained that score. Second, 4 students obtained 1 point, that score represented the 13% of the 100%. Finally, the lowest result of the pretest at inferential level concerned to 0 points who was obtained by 20 students that represented the 80 %. From the results obtained in the pretest in terms of passing or failing, students did not approve the inferential reading comprehension level because they only got the 50% of 100%, which means, students have poor inferential comprehension level.

In the case of posttest at inferential comprehension level the highest score corresponded to 3 and 4 points respectively, 18 students obtained this score, which represents the 72 % of the 100%. The lowest score corresponded to 2 points that was obtained by 7 students, which denotes 28%. The scores obtained in the posttest at inferential level in the E.G give us to understand that all the students got high proficiency at inferential reading comprehension level.

From the explanation stated previously, we used a table, where the differences between the pre and the posttest at inferential level, the standard deviation and the differences between pre and posttest average are stated from the E.G

**TABLE: 30**

**COMPARATIVE CHART OF THE PRE & POST TESTS AT INFERENTIAL READING COMPREHENSION LEVEL FROM E.G**

**COMPARATIVE CHART OF THE PRE & POST TEST AT INFERENTIAL COMPREHENSION LEVEL FROM E.G.**

| | PRE TEST | POST TEST |
|---|---|---|
| Average | 1,7 | 4,08 |
| Std. Dev. | 0,79162281 | 0,81240384 |
| Dif of Ave. | 2,38 | |

The table above shows a brief summary of the students' average, Standard deviation and the differences between the pre and post -test averages at inferential reading comprehension level from the E.G (For further details see appendix 9F)

In chart 30, we can observe the average of the experimental group. In the pre -test they scored 1.7 with a standard deviation of 00.7916. While, the post -test corresponded to 4.08 with a standard deviation of 0.8124.

From the results stated previously, we can say once more that D.R.T.A is an effective strategy for developing reading comprehension and of course, for improving inferential level because the scores obtained before and after the treatment demonstrated a clear difference between both tests. Therefore, it is useful to work with D.R.T.A because this strategy permits the reader to read critically and reflectively.

Now, talking about the hypotheses testing, they will be described and analyzed based on the information that was stated in the previous sections. Therefore, in order to support or reject what has been stated in the hypotheses in chapter I, we took into account the following steps:

- First, the level of significance was found, which indicates the risk of level that is assumed in order to refuse the null hypothesis when actually it should be accepted for being true. That is why, the level of significance was set at $\alpha = 0,05$ for being adequate for this study.
- Second, the statistical prove was identified; in this case the "T Student" (See annex 7) because our population has the normal distribution and the variances of study (Control and Experimental). Therefore, the "T student" follows a distribution with regard to the number of observation of the C.G less the number of observations from the E.G (NC+NE-2).
- Finally, the region of rejection (RR) was determined taking into account the following points:

  25+ 25- 2 = 48 **gl** (Degree of freedom); and the level of significance 0.05.

  Therefore, as we noted at the beginning of this chapter, the fieldwork has been divided into three main parts. The first was concerned with the descriptive

part, then the second and third with the experimentation. So, the testing of the hypotheses will be discussed based on these criteria, which will be supported in Chapter 5 in the research findings.

### 4.2.3.6 Data Analysis of Post Questionnaire after using D.R.T.A

The post questionnaire was developed in order to find out the students' progress after having been exposed to D.R.T.A. method in reading comprehension as E.F.L. Therefore, we used a questionnaire of "Likert," where the items are presented as statements each of them have four options, these options are "I agree, I strongly agree, I disagree, and I strongly disagree."

In order to understand the post questionnaire, we used the "Frequency table" where a quantification of the results was described. In this light, on the first right column the answers were quantified: while on the second column, the amounts of answers were expressed in percentages. At the same time, a graphic for each statement was presented followed by their respective descriptive and inferential analysis as it is stated.

**TABLE: 32**

**FREQUENCY TABLE OF THE MAIN STUDY QUANTIFIYING THE RESULTS OF STUDENTS' POST-QUESTIONNAIRE IN THE E.G.**

| N° | Questions | Quantity | 100% |
|---|---|---|---|
| 1 | Applying D.R.T.A enabled me to get better comprehension of the text. | | |
| | a. I agree | 10 | 40 |
| | b. I strongly agree. | 15 | 60 |
| | c. I disagree. | 0 | 0 |
| | d. I strongly disagree. | 0 | 0 |
| 2 | Spending time to use D.R.T.A into English class enabled me to be more enthusiastic about reading comprehension. | | |
| | a. I agree | 14 | 56 |
| | b. I strongly agree. | 11 | 44 |
| | c. I disagree. | 0 | 0 |
| | d. I strongly disagree. | 0 | 0 |
| 3. | Through the application of D.R.T.A. It is easier for me to work with literal and even more with inferential reading comprehension. | | |
| | a. I agree | 15 | 60 |
| | b. I strongly agree. | 10 | 40 |
| | c. I disagree. | 0 | 0 |
| | d. I strongly disagree. | 0 | 0 |
| 4. | D.R.T.A activates my background knowledge and permits me to think aloud in order to justify my answer. | | |
| | a. I agree | 7 | 28 |
| | b. I strongly agree. | 18 | 72 |
| | c. I disagree. | 0 | 0 |

| | | | |
|---|---|---|---|
| | d. I strongly disagree | 0 | 0 |
| 5. | I think students should be taught to use D.R.T.A in teaching reading comprehension as foreign language. | | |
| | a. I agree | 20 | 80 |
| | b. I strongly agree. | 4 | 16 |
| | c. I disagree | 1 | 4 |
| | d. I strongly disagree. | 0 | 0 |
| 6. | Applying and learning D.R.T.A makes me think that reading comprehension of English, as foreign language is not too difficult. | | |
| | a. I agree | 22 | 88 |
| | b. I strongly agree. | 3 | 12 |
| | c. I disagree | 0 | 0 |
| | d. I strongly disagree. | 0 | 0 |

According to the data obtained in the Post questionnaire, which was applied to the E.G we obtained the following results:

The first statement is intended to find out if Applying D.R.T.A enabled students to get better comprehension of the text. The highest result in this item was “strongly agree” with 15 answers, which represented the 60% of the students. Then, the intermediate result came from letter “b” with 10 answers, which represented 40% of the students who indicated agreement with applying D.R.T.A method in the improvement of reading comprehension in EFL. Finally, the lowest results in this item were letters “c and d” which did not obtained any answer. Therefore, from what has been exposed previously, we conclude that students without doubt can improve their reading comprehension in EFL applying D.R.T.A. (the last statement can be supported by the results of the post reading comprehension test in the E.G.).

The second question required information about D.R.TA more specifically if “Spending time to use the proposed strategy in the English class enables students to be more enthusiastic about their reading comprehension.” The highest result in this item was “agree” with 14 answers, which represented 56% of the students. Then, the intermediate result was item letter “b” with 11 answers, which represented 44% of the students who indicated strong agreement for applying D.R.T.A method. Finally, the lowest results in this item were represented by letters “c and d” which did not obtain any answer. Therefore, we conclude that students feel more enthusiastic and motivated to work with D.R.T.A for their development of reading comprehension.

The third question also required information about D.R.T.A through the question of whether “The application of D.R.T.A. is easier for students to work with literal and even more with inferential reading comprehension.” The highest result in this item was “agree” with 15 answers, which represented the 60% of the students. Then, the intermediate result was letter “b” with 10 answers, which represented the 40% of the students who indicated strong agreement with applying D.R.T.A method. Finally, the lowest results in this item were letters “c and d” which did not obtain any answer.

The fourth question needs information about D.R.T.A as well. The question was posed in order to find out if D.R.T.A activates students’ background knowledge and permits them to think aloud in order to justify their answer. The highest result in this item was option “b” with 18 answers, which represented the 72% of the students. Then, the intermediate result was letter “a” with 7 answers, which represented the 28% of the students who indicated strong agreement for applying D.R.T.A method. Finally, the lowest results in this item were letters “c and d” again which did not obtain any answer.

The fifth question required students' opinion, that is to say, if students think that D.R.T.A should be used in the process of teaching reading as foreign language. The highest result in this item was letter "a" with 20 answers, which represented the 80% of the students. Then, the intermediate result was letter "b" with 4 answers, which represented the 16% of the students who indicated strong agreement for applying D.R.T.A method. Finally, the lowest result was item "c" with 4% of the students.

Finally, the sixth item needed students' opinion about D.R.T.A which suggest students to think that reading comprehension is not a difficult work. Therefore, the highest result in this item was item "a" with 22 answers, which represented 88% of the students. Then, the intermediate result was the item "b" with 3 answers, which represents 12% of the students. Finally, the lowest results in this item were letters "c and d" which did not obtain any answer.

In summary, students' opinion related to the application of D.R.T.A for improving reading comprehension when they are dealing with English, as a foreign language was useful for them because this strategy permitted them to activate students' background knowledge, to make predictions, to set purposes for reading and other things more than they did not do before.

## 4.3 Chapter Summary

This chapter showed the results of the pre questionnaire, the test and the attitude scale statistically, from the results described in the previous points, it is obvious that there is a significant difference in the improvement of reading comprehension with the use of D.R.TA. because the results of the study indicated that students in the control group maintained their reading comprehension scores. On the contrary, the students who received the treatment became more successful in their scores. This might have happened because of the use of technological environment in which students were involved in. Therefore, according to the study results, reading through the development of D.R.T.A is more effective than reading in the traditional way. In the proceeding chapter, we are going to describe the research findings, the pedagogical implication in teaching reading comprehension, and finally some recommendations for future investigations.

# CHAPTER V

# RESEARCH CONCLUSIONS

## 5. Introduction

This chapter discusses the major findings reported in Chapter IV. The discussion is organized based on the achievement of the research objectives and the approval or rejection of the hypotheses stated in Chapter I (p 8). Also, some pedagogical implications, as a result of the research, are described in this stage and finally, some recommendations for further investigations are given.

## 5.1 Research Findings

In order to describe **the accomplishment of the four research objectives**, we start describing each of them by giving an explanation about the way they were achieved. Therefore, we follow to describe the first objective:

**First Specific Objective:**

*"To describe E.F.L leaners' experience in relation to reading comprehension."*

In order to find out students' experience towards reading comprehension a pre questionnaire was administered (see appendix 1) for both groups (E.G and C.G). In a certain way, the pre questionnaire intended to get information about learners' perception towards reading comprehension. At the same time, the dependent variable was observed; that is why, quantitative, descriptive, and inferential techniques were used. Regarding quantitative techniques let us remember that 15 questions were posed; as for the descriptive technique, the answers to the 15 questions were described; finally, in order to find out and determine the perception of the students inferential techniques were used.

From the results obtained in the pre questionnaire, we found out that students were more worried about developing speaking skill rather than reading or the other skills. According to students' opinion, this situation may happen because they only want to work as teachers, translators, or tour guides. According to them in those occupations, they do not need reading. Therefore, according to the previous finding the dependent variable "Reading" become to constitute a minor interest for

intermediate students of English language because nowadays with the advantage of the internet students prefer watching a video rather than reading a printed material.

If we analyze students' positions towards reading comprehension, we conclude that in a certain way students have an erroneous conception about "reading since they consider it as boring activity". However, nowadays with the advantage of technology, people have lots of possibilities for acquiring, selecting or using the most useful and adequate reading material, so they should develop a reading awareness because reading itself is a very important activity.

**Second Specific Objective:**

Talking about the second objective, this was stated as:

> *"To work with informational, narrative, and argumentative texts in order to prove D.R.T.A effectiveness in the improvement of referential and inferential reading comprehension in EFL classes."*

In order to demonstrate the effectiveness of D.R.T.A strategy in students' reading comprehension levels, informational, narrative, and argumentative texts were used during the experimentation. The purpose of using these types of text was to find out in which kind of texts students had more improvements (by using D.R.T.A). At this stage, the independent variable "D.R.T.A" was observed in order to determine the effects and reactions on the dependent variable "reading comprehension levels."

Before describing the major findings obtained, let us remember that the variations of the independent variable were controlled by assessing 4 points for each indicator (Pictorial Clues, Prediction, Background Knowledge and Higher Order thinking Skill such as making logical inferences), which gave us a total of 16 points. The minimum score for measuring the effectiveness of D.R.T.A process corresponded to 8 points over 16 which corresponded to 51% over 100%.

In the case of the **informational text,** students got a good score since they obtained 14 points over 16 (See students' quantified average using D.R.T.A in informational text. p 119). This score indicated that D.R.T.A really helped students to improve their reading comprehension by guiding them to key points in the text and of course increasing their knowledge and experiences.

Regarding the **narrative text**, students got acceptable score since they obtained 11 points over 16 (See students' quantified average using D.R.T.A in narrative text. p 120 for further details). Therefore, students' average using D.R.T.A in Narrative texts ran well because the variables that were observed and measured helped students in improving their reading comprehension. Although the narrative text was new for them, D.R.T.A stimulated students to activate their prior knowledge involving them to be active readers.

In the case of the **argumentative text**, English learners obtained 10.5 points over 16 (See students' quantified average using D.R.T.A in argumentative text. p 123 for further details). At this stage, D.R.T.A demanded from students to think critically because as this type of text contains arguments and contra arguments, students had to activate their background knowledge in order to be thoughtful readers.

From the results we got in Informational, narrative and argumentative texts, we identified that students felt more comfortable when they worked with informational texts since the text itself permits the reader to expand their knowledge dealing with topics related to their own contexts. Therefore, dealing with this kind of text offered and got students' interest because at the beginning

they had the conception that reading was boring, but after D.R.T.A was instrumented, students' opinion changed in a radical way. While on the other hand, narrative and argumentative texts represented a certain kind of difficulty because these types of texts were new for them.

**Third Specific Objective:**

Talking about the third objective, it was stated as follows:

> *To overcome inferential reading comprehension difficulties by using "Directed Reading Thinking Activity" (D.R.T.A)*

In order to overcome inferential reading comprehension problems D.R.T.A was used. The proposed strategy permitted students to think critically because at this stage students considered reading as a problem solving activity. This conception implied that the essence of the text should be resolved. Therefore, the way readers can solve their inferential reading comprehension problems is by using their previous knowledge; and of course, predicting the text by making inferences. According to the results obtained in the posttest at inferential level, students definitely improved their difficulties since they scored 4 points which represented the 100% of the average expected.

**Last Specific Objective:**

The final objective of this study was:

> *To support that "Directed Reading Thinking Activity" (D.R.T.A) improves referential and inferential reading comprehension on EFL students.*

In order to demonstrate the effectiveness of D.R.T.A strategy in students' reading comprehension levels, pre- and post- reading comprehension tests were administered (See appendix 3 for further details). The reason for using a pre and posttest, in both groups, was to measure, compare; and finally, support the effectiveness of D.R.T.A in the Experimental group.

According to the results obtained from pre and posttest (See table 26, p 134) in the experimental group, it was definitely determined that the inclusion of D.R.T.A in EFL students improved their reading comprehension at referential and inferential level. This is evident because the comparison between the control group and the experimental group showed that the control group did not increase their scores (*pre test* with 5 points and *post test* with 6 points over 15); that is to say, they maintained the same reading comprehension level. However, the experimental group had an increase on all participants' scores after the exposure to D.R.T.A. The progress is evident in all of the cases from 5,24 in the pre test to 12,28 in the post test because participants had the posibility of thinking actively by making prediction, inferences and of course appealing to their background knowledge. Therefore, the use of D.R.T.A when students were dealing with reading comprehesion improved their reading comprehension.

Based on the information described and analyzed in the previous paragraphs, we can attempt to discuss the extent to which the data support or reject what has been stated in the hypotheses in chapter I; therefore, the **testing of the hypotheses** is discussed as follows:

> ***H1****: Students who work with Directed Reading Thinking Activity will improve their Referential and Inferential reading comprehension on English as foreign language in comparison to those students who are not working with that strategy.*

According to the results we obtained in the study, we were able to confirm an improvement of reading comprehension in the E.G in which we applied the D.R.T.A strategy in comparison to those

students who did not work with the strategy. In order to demonstrate and support the effectiveness of the D.R.T.A we tested the hypothesis **making use of the "T- student."** This is a statistical measure which enabled us to determine the level of reliability and significance of the difference between the experimental and the control group. Therefore, for testing the first hypothesis we needed to calculate the standard error of the sampling, which can be done by using the following formula.

1. $$\sigma_D = \sqrt{\frac{Se^2{}_1}{N-1} + \frac{Se^2{}_2}{N-1}}$$ Standar error of the differences between the means.

$$\sigma_D = \sqrt{\frac{1.2}{25-1} + \frac{1.4}{25-1}}$$

$$\sigma_D = 0{,}3768$$

In the preceding formula, we substituted the standard deviation which was got from the scores of the pre and post -test in the E.G. (See table 26, p. 134). Once we got the standard error, we proceeded to calculate the "T student" according to the following formula.

**Calculating "T Student" from the Pre and Post Test from the E.G**

$$t_e = \frac{(\overline{X}e_1 - \overline{X}e_2) - \phi}{\sigma_D}$$

$$t_e = \frac{(5{,}2 - 12{,}2) - 0}{0.3768}$$

$$t_e = 18{,}8428$$

Therefore, the "T" value is 18, 8428 which means that the hypothesis was fully accomplished because of the high value was obtained. Furthermore, based on the critical values of t, and according to the degrees of (freedom d.f) that in our case becomes from the calculation of:

$$g = (Ne_1 - 1) + (Ne_2 - 1)$$

$$g = (25-1) + (25-1)$$

$$g = 48$$

Taking into account the level of significance that is 0.05% (5%) our "t" is 18, 8428. That means, our **t** is higher than 1.684 for the size of the sample established by the statistical datum; therefore, the first hypothesis is acceptable and of course the null hypothesis is rejected, which was:

> ***Ho****: Through the application of Directed Reading Thinking Activity, students will not improve their referential and inferential English reading comprehension.*

Once the Pre & Post-tests were analyzed in general in the E.G, in the Pre & Post Tests the referential and inferential reading comprehension levels are examined in detail. Regarding the first one, we used the following statistical formulas:

Students' average of Pre test

$$\overline{X}e_1 = 3.52$$

$$Se_1 = \sqrt{\frac{\sum_{i=1}^{n}(X - \overline{X})^2}{N-1}}$$

$$Se_1 = 0{,}87$$

$$Ne_1 = 25$$

Students' average of post test

$$\overline{X}e_2 = 6.04$$

$$Se_2 = \sqrt{\frac{\sum_{i=1}^{n}(X_I - \overline{X})^2}{N-1}}$$

$$Se_2 = 0{,}78$$

$$Ne_2 = 25$$

Testing the hypothesis

$$\alpha = 5\%$$

$$\sigma_D = \sqrt{\frac{Se^2{}_1}{N-1} + \frac{Se^2{}_2}{N-1}}$$

$$\sigma_D = \sqrt{\frac{0{,}87^2}{25-1} + \frac{0{,}78^2}{25-1}} \qquad \sigma_D = 0{,}028$$

Calculating T Student

$$t_e = \frac{(\overline{X}e_1 - \overline{X}e_2) - \phi}{t_e = \frac{(3{,}5 - 6{,}04) - 0}{t_e = 19{,}63^{\wedge}28}}$$

As it can be [illegible] ious formulas, the hypothesis can be approved because "t" is 19, 63 and this is higher than 1.708 (t calculated is 19, 63 > t critic 1.708) at 0, 05% of the significance level. Therefore, hypothesis 2 is approved and of course, the null hypothesis is rejected.

Now in the case of Inferential level, we have:

Students' average of Pre -test

$$\overline{X}e_1 = 1.72$$

$$Se_1 = \sqrt{\frac{\sum_{i=1}^{n}(X - \overline{X})^2}{N-1}}$$

$$Se_1 = 0{,}79$$

$$Ne_1 = 25$$

Students' average of post test

$$\overline{X}e_2 = 6$$

$$Se_2 = \sqrt{\frac{\sum_{i=1}^{n}(X_I - \overline{X})^2}{N-1}}$$

$$Se_2 = 0{,}81$$

$$Ne_2 = 25$$

Testing the hypothesis

$$\alpha = 5\%$$

$$\sigma_D = \sqrt{\frac{Se^2{}_1}{N-1} + \frac{Se^2{}_2}{N-1}}$$

$$\sigma_D = \sqrt{\frac{0{,}79^2}{25-1} + \frac{0{,}81^2}{25-1}} \qquad \sigma_D = 0{,}245$$

Calculating T Student

$$t_e\ t_e = \frac{(1{,}7 - 6.08) - 0}{0{,}245}$$

$$t_e = 17{,}88$$

Therefore once more, the first hypothesis which was related to Inferential reading comprehension level was approved because "t" is 17, 88 and this is higher than 1,708. (t calculated is 17,88 > t critic 1.708) at 0,05% of the significance level. Thus, hypothesis 2 was approved and the null hypothesis was rejected.

Finally, the results of the Post-test in the E.G and C.G were tested in order to show the differences, the findings that came out from the experimentation and of course to test hypothesis 2, which was closely related to hypothesis 1. Therefore, we have:

> ***Hз:*** *Proved with Directed Reading Thinking Activity students will have significative effects in relation to the improvement of Referential and Inferential reading comprehension in comparison to those students who are not applying the proposed strategy*.

Statistical Comparison of Post Test from C.G & E.G.

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{S_1^{\ 2}}{n_1} + \frac{S^2{}_2}{n_2}}}$$

$$t = \frac{6.08 - 12{,}28}{\sqrt{\frac{1.1^2}{25-1} + \frac{1{,}4^2}{25-1}}}$$

$$t = 17{,}067$$

t = 17,067 > 1.684  5%  = 0, 05

Therefore, according to the results obtained, it can be stated that the Null hypothesis was rejected. While on the other hand, the alternative hypothesis was supported because according to the results, the "t student" corresponds 17.067 and that is the highest value of 1.684. From the results above, there was a significative difference between the group of study that worked with D.R.T.A compared to the students who did not work with this strategy.

In sum, the D.R.T.A method is useful for improving reading comprehension. The results showed significative results in the pre & the post in the E.G, that is to say: t student is higher (18, 84) than "t critic" (1, 68). We found a similar situation for Referential reading comprehension (t students is 52, 63 > t critic 1,708) and Inferential reading (t calculated is 17, 88 > t critic 1.708). Finally, in the posttest of the E.G & the C.G the "t student" was 17, 067 which is higher than 1,684. Therefore, all the results showed that D.R.T.A is a functional, interactive, and productive teaching reading comprehension strategy.

This means, the experimental group had an increase on all the participants' scores after the exposure to D.R.T.A, the progress is evident in all of the cases, perhaps, it occurred because participants had the posibility of raising their background knowledge and think critically, therefore, the use of D.R.T.A when students read different types of texts improved their reading comprehension.

Once more, the use of D.R.TA when reading different types of texts through a period of training sessions showed that it was very important to pay attention to what the students did in order to improve their ways of leaning. At this stage, it is very important the teachers' role because they are the only ones who can offer all the possibilities to their students to get a memorable learning process.

## 5.2 Pedagogical Implications

The research findings summarized earlier demonstrated that students who apply D.R.T.A could improve their reading comprehension when they deal with English as foreign language. Therefore, significant implications for the improvement of reading comprehension of English as foreign language may be drawn:

- *Informational texts could be employed to increase students' motivation for developing reading comprehension skill.*

One pedagogical implication concerning informational written texts is that dealing with this kind of texts, students feel more comfortable when appealing to their background knowledge in real situations in their own context. Therefore, dealing with this kind of texts gets students' interest for developing reading comprehension skills.

- *Questioning with inferential comprehension could increase and improve students' reading comprehension.*

Spending time to use D.R.TA and at the same time applying inferential comprehension questions permitted to activate students' mind in order to get thoughtful and critical readers.

- *More attention should be paid to vocabulary development in EFL teaching.*

Students from Linguistics and Languages Department reported having problems with vocabulary even though it was supposed that the articles were selected according their reading comprehension level. Therefore, EFL teaching should provide more opportunities for dealing with new vocabulary. In short, from the above pedagogical implications, regular reading can increase students' vocabulary and that is why this ability should be practiced more.

## 5.3 Strength and Limitations of the study

As we have mentioned several times, this study used data collection techniques such as pre questionnaire, pre and post -tests, and post questionnaire. At the same time, it was useful the "T Student" technique for testing hypotheses in order to approve or reject them. These procedures became the strength of the study.

Although this study had strengths, a limitation arose concerning the students' free time. Even though all the students at the intermediate level (E.G) were communicated about the reading workshops for improving and increasing their reading comprehension level, most of them did not have free time due to many factors such as schedules, lack of interest (five students) in the reading workshops or work. In spite of that situation, the study was completed successfully thanks to the support of three teachers of intermediate English level from Linguistics and Languages Department who unselfishly opened us the door of their classrooms.

## 5.4 Suggestions for further investigations

Based on the information from this study, we offer some suggestions for further research:

- First, this study was a preliminary attempt to improve reading comprehension through the application of D.R.T.A. Further research in this area is needed with the relationship and effects of cooperative language learning in the development of D.R.T.A.
- Second, future studies could conduct similar experiment working with D.L.T.A (Direct Listening Thinking Activity) for improving listening comprehension.
- Third, since the advanced level has not been taken into account in this research, some other research could be done at this level, it could probably be applied in the subject of literature. In addition, the number of participants could be increased in order to satisfy the number of requirements. Therefore, this study can also be used as a good starting point for initiating other studies.
- Fourth, future research can also examine the use of D.R.T.A in successful and unsuccessful readers whose proficiency levels are different in order to compare them and see the extent of D.R.T.A.
- Finally, all kinds of research concerning language learning help a lot in the process of language acquisition; therefore, we consider that this study would be very useful if the teachers of foreign languages (English and French) used the methodology.

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