

Universidad Internacional de las Américas
School of Education and Foreign Languages
Graduation Seminar



Thesis Submitted to Obtain the Bachelor in English with
Concentration in Teaching

***Using Metacognitive Strategies to Improve the Reading
Proficiency Level of 5th Grade students from la Braulio Carrillo
School during the Second Quarter of 2019***

Thesis Mentor: Lic. Leslie Elizondo Mora

Student: Laura Venegas Nájera

San José, Costa Rica

July, 2019

Acknowledgments

I would like to thank Mr. Leslie Elizondo Mora, my thesis mentor, I am grateful for all the support, help and patience that you had in all this process, It would have been impossible without your help.

Dedication

I want to thank God for giving me life to realize my dreams, my mother for being my example of overcoming and for always making me believe that I could achieve this.

To my father for always being by my side, my husband and my siblings for all the support they have given me in all these years and especially I dedicate this to my daughter, this is for you.

Table of contents

Acknowledgments.....	2
Dedication	3
Table of contents	9
Introductory framework.....	14
1.1 Problem statement	14
1.2 Objectives of the investigation	15
1.2.1 General objective	16
1.2.2 Specific objectives	16
1.3 Justification of the study	16
1.4 Scope	17
1.5 Antecedents	17
Chapter II.....	23
Theoretical Framework	23
2.1 Literature Review	23
2.1.1 Reading Skill	24
2.1.1.1 Importance of the reading skill in a second language	24
2.1.1.2 Theories of reading skill	25
2.1.2 Metacognition.....	30
2.1 Definition of Metacognition	30
2.2 Importance of Metacognition	31
2.3 The Metacognitive Knowledge	32
2.4 Learning strategies	33
2.5 Role of the teacher	36
2.5 Metacognitive Strategies.....	36
2.6 Metacognitive strategies to improve reading skill	38
2.6.1 Mental Maps.....	39
2.6.2 The V of Gowin.....	40
2.6.3 Think Aloud	41
2.6.4 Establishing objectives in reading	42
2.6.5 Teachers Training.....	43

Chapter III.....	44
METHODOLOGICAL FRAMEWORK.....	44
3.1 Research Approach	44
3.1.1 Quantitative approach.....	45
3.1.2 Qualitative approach.....	46
3.1.3 Mixed approach.....	47
3.2 Research Design	48
3.3 Information sources	49
3.3.1 Primary Sources	49
3.3.2 Secondary Sources	49
3.3.3 Tertiary Sources	50
3.4 Analysis categories	50
3.5 Data collection Instruments	51
3.5.1 Observation and Check-list	51
3.5.2 Pre-Test	51
3.5.3 Post Test.....	52
3.6.3 Questionnaire	52
3.7 Collection data process and data analysis	53
Chapter IV	55
Data Analysis	55
4.1 Analysis and Interpretation of the Results	55
4.1.1 Observation Checklist	55
4.1.2 Pre- Test	57
4.1.3 Questionnaire to Students.....	59
4.1.4 Questionnaire to the teacher	70
4.1.5 Post-test.....	73
Chapter V	75
Conclusions and Recommendations	75
5.1 Conclusions	75
5.1.1 To identify students deficiencies in reading.....	75
5.1.2 To apply different techniques to improve the English reading proficiency.....	77
5.1.3 To evaluate the results of using Metacognition.....	78

6.1 Recommendations	80
Bibliography	81
Appendixes.....	82
Appendix # 1	82
Appendix # 2	87
Appendix #3	89
Appendix # 4	91
Appendix # 5	93

Tables

<i>Table 1</i>	57
<i>Table 2</i>	65
<i>Table 3</i>	66
<i>Table 4</i>	68
<i>Table 5</i>	73

Figures

<i>Figure1</i>	60
<i>Figura2</i>	61
<i>Figure3</i>	62
<i>Figure4</i>	63
<i>Figure5</i>	64
<i>Figure6</i>	65

Abstract

The research entitled Using Metacognitive Strategies to Improve the Reading Proficiency Level of 5th Grade students from Braulio Carrillo School during the Second Quarter of 2019 aims to possibility help ESL improve the level of the reading skill by the use of Metacognitive strategies.

The main purpose is to show how students through Metacognition can improve their abilities on the reading. Those strategies also will help learners on their daily life since it motivates students to know about their own thinking process and which is the best way for them to learn.

Resumen

La investigación titulada “Uso de estrategias Metacognitivas para mejorar el nivel en lectura de estudiantes de 5° grado de la Escuela Braulio Carrillo durante el segundo trimestre de 2019 “, pretende ayudar a los estudiantes a mejorar el nivel de la habilidad de lectura mediante el uso de estrategias metacognitivas.

El propósito principal es mostrar cómo los estudiantes a través de Metacognición pueden mejorar sus habilidades en la lectura. Estas estrategias también ayudarán a los alumnos en su vida diaria, ya que motiva a los alumnos a conocer su propio proceso de pensamiento y cuál es la mejor manera de obtener conocimiento. La investigación primeramente se enfoca en determinar cuáles son algunas de las dificultades que estos estudiantes tienen en el área de lectura, para luego implementar diferentes estrategias que los ayudaran a mejorar esta área.

Introductory framework

English has been taught for more than 20 years in all the schools around Costa Rica. Learning a second language requires a lot of practice, but students receive few lessons per day. For this reason, this investigation is focused on searching through Metacognition different techniques that help students improve their reading abilities when they are at school. In addition, work as a tool when they are out of school without any supervision with the use of Metacognitive strategies.

1.1 Problem statement

Education suffers changes day by day. Nowadays, teachers are the ones who facilitate the process of learning, but students are in charge of their own learning process. For that reason, it is important for them to find strategies that help them in their process of learning.

A necessary condition to achieve this teaching methodology is to connect the students with themselves. Also, to recognize the best way for the students to learn and link knowledge with their own personal experiences.

Time spent in English classes is very short; because of that, learning results have not been favorable. Students stay with what they learned in the classroom and do not invest time in studying by their own. The knowledge that they have about language is very limited because they just have time to learn vocabulary and not another important skill like reading.

Reading skill is one of the four fundamental language skills that an ESL student has to perform. Sometimes students have problems with reading because it takes time to learn how to read accurately and in addition, that classrooms strategies are not effective.

This work is based on with the use of Metacognitive strategies help students to improve their reading skill, to teach them how to recognize which is the best way for them to learn. The following question states, which is the purpose of the research. It orientates and guides both researcher and readers to know what the topic will be about, what is going to be discussed, and what aspects will be take into consideration at the time of the research. The research question is, How to help students improve their reading proficiency through Metacognition?

1.2 Objectives of the investigation

Learning a second language is a process that involves many factors; over the years many professionals have studied different techniques to help students make this process easier.

The use of Metacognitive strategies in classrooms will help students in the process of learning; it describes the process involved when learners are capable to evaluate their own learning process. The principal objective of this research is to evaluate what kind of Metacognitive strategies are the most efficient to improve the reading skill for the ESL students.

1.2.1 General objective

- To analyze the effectiveness of Metacognition strategies to improve the reading proficiency of the 5th grade students from Braulio Carrillo School.

1.2.2 Specific objectives

- To identify students deficiencies in reading.
- To apply different techniques to improve the English reading proficiency.
- To evaluate the results of using Metacognition.

1.3 Justification of the study

This research has a general objective to help students improve their level of reading skill through metacognitive strategies and also help learners to understand in a conscientious way the best way for them to acquire knowledge.

The importance on learning strategies that improve the reading level on students is to make the acquisition of the English language easier because if students domain reading the other skills of English will be benefited. The use of metacognition in educational fields will teach students tools to help them in the process of learning by monitoring themselves. It will help them control their thoughts, ask them questions about what they have learned and enhancing their understanding. Metacognition can be an empowering tool for students because it will help them not only in their school, but also in their daily life.

1.4 Scope

Fifth grade students of Braulio Carrillo School are going to be the base of this research since they have several problems in the reading skill, and they do not give the importance that it requires.

As already known, reading is one of the four English language skills. If a student domains this skill, other skills are going to be beneficiated. Students will acquire more vocabulary. They will learn the structure of the sentences. They will learn about other cultures, and many other benefits that will help the student learn English in a successful way.

1.5 Antecedents

According with the Merriam Webster Dictionary (2012) definition, Metacognition refers to, “awareness or analysis of one's own learning or thinking processes.” It describes the processes involved when students are capable to plan, monitor, evaluate and make changes to their own learning behaviors.

The concept of Metacognition involves cognitive strategies to make the human “think about thinking”. It involves areas such as: personality, learning, and self-concept. It is employed in the psychological field, but also in the educational and psych pedagogical field.

The importance on cognition in education is very clear. It refers that each student needs to be conscious of its weaknesses and strengths. After that, he or she will recognize which is the best and easier way for him/her to study.

Based on the website <http://www.kunskapsallan.com> (2010):

The ‘thinking classroom’ presupposes that the teacher plans, assesses, chooses activities and tools, and arranges the setting carefully, with strong focus on fostering students’ habits of mind, rather than fixating on factual knowledge or covering of certain knowledge areas. The contextual and communicational interactions play a vital part of support in a thinking environment. These criteria were used when analyzing the results. However, evidence of the anticipated criteria were difficult to ascertain in the observed classrooms. However, most teachers showed an understanding of what would develop the students’ cognitive skills; they lacked the understanding of how to translate their theoretical knowledge into practice. (par. 1)

“What is valued as ‘good thinking’ has through history been defined differently (Pihlgren, 2013). In modern society ‘intelligence’ is an ideal, often used synonymously to good thinking abilities. Nevertheless, critics have stated that intelligence rather will become what the intelligence tests are able to measure; in other words, what we wish it to be. Recent research on intelligence shows a broader theoretical base than the earlier mostly psychological, and spans many disciplines, including neurology, anthropology, pedagogy, biology, and philosophy. This broader base and wider span opens up new insights and interpretations of the concept of intelligence. By investigating a vast amount of contemporary research, Howard Gardner (1999) has found that there are different brain dispositions, giving several different intelligences rather than one: linguistic, logical-mathematical, bodily-kinesthetic, musical are some examples (p 486). According to Gardner, the intelligences are neutral potentials that either will or will not be activated

depending on the values of the surrounding culture, the possibilities given, and the personal decisions made by the individual and/or the family, teachers, and others. According to his theory, intelligence is formed both by genetic predispositions and by context. All individuals carry the potentials, but to different extents, and the combinations and outcomes will be highly individual. The potentials will be mobilized and connected depending on the needs and cultural preferences.

In classroom there are number of approaches that teachers can use to facilitate metacognitive knowledge and regulation. One approach is for teachers to model their own metacognition for students as they solve a problem. When modeling, thinking aloud can assist students if teachers discuss their cognitive processes in real time (i.e., how to perform a task) and fix-up strategies can be provided to aid with monitoring and regulation processes (Huff & Nietfeld, 2009). Peer modeling of both strategies and metacognition is another approach that not only can improve metacognition and performance, but can also increase self-efficacy as well (Schraw, 1998). Sternberg and Williams (1996) present a number of suggestions for increasing students' regulation of cognition that include suggesting multiple approaches to solving problems, assessing creative strategies, defending strategy choices, developing plans to complete projects, keeping a daily thinking log of progress and roadblocks, discussing teacher feedback, and conduct peer evaluations. Teachers can promote metacognitive awareness by engaging their students in activities that require reflection to help make the sometimes invisible work of thinking visible and explicit. Hong, Jonassen & McGee (2003) concluded that solving ill-defined problems call on different skills than well-defined problems, including metacognition and argumentation. However, less empirical evidence exists for metacognitive interventions related to ill-

defined problems. Ideally, instructional approaches as described above assist students in constructing an explicit mental model of metacognitive thinking processes.

Mental models are necessary to monitor performance and in the development of self-regulatory skills. There are at least three basic levels of metacognitive mental models ranging from the basic tacit model, to the intermediate informal model, and eventually a sophisticated formal model (Schraw & Moshman, 1995). A Tacit model is an implicit understanding of one's cognitive processes Metacognition and Learning 10 without an explicit understanding model to work from. This basic model is acquired or constructed without any explicit awareness that one possesses a model (McCutcheon, 1992). Students at this level may be capable of solving complex problems but are unable to explain how they reached a solution. An Informal model is more advanced than the tacit model in that it is partially accessible to conscious introspection, scrutiny, and revision. This introspection allows for the revision of one's model over time. Informal models are fragmentary in that students are aware of some of their beliefs and assumptions but have not yet constructed an explicit theoretical structure that integrates and justifies these beliefs (Schraw & Moshman, 1995). A Formal model is an explicit, explanatory, representation of a complex phenomenon such as creative thinking. Students who have developed a formal model are explicitly aware of their purposeful efforts to construct and modify metacognitive theories. Schraw and Moshman (1995) suggested that learners develop metacognitive theories through cultural learning, individual construction, and peer interaction. Cornoldi (1998) echoed this perspective in his definition of 'metacognitive attitude' as the general tendency of a person to develop reflection about the nature of his or her own cognitive ability and to think about the possibility of extending and using this reflection. (edu sites, 2012)

Metacognition has become a popular term in theories of cognitive development and reading. What children know about the goals, tasks, and strategies of reading can influence how well they plan and monitor their own reading.

Reading is regarded as one of the essential skills to be taught in foreign language settings. Furthermore, it is noteworthy that reading is the most difficult skill to be developed as it is multidimensional in nature and a kind of complex mental process. Reading is assumed to be the primary means for learning new information and gaining access to interpretations in almost each aspect of our daily lives (Grabe & Stoller, 2001). Besides, it is defined as an interactive and dynamic process (Karbalaee, 2010), and a meaning-construction process (Al-Rubaye, 2012). As Nunan (1999) states, reading involves highly complex cognitive processing operations (p.249). A wealth of studies related to reading process has appeared in both foreign language and L2 language settings. Researchers are in fairly strong agreement that reading is an active and complex process for making sense out of what you read. Indeed, reading is the capacity through which the reader receives knowledge from a text and integrates it with his/her knowledge and assumptions (Grabe, 1991). Namely, reading entails combining information taken from the text with the reader's own background knowledge to make meaning (Anderson, 2003). In that reading is an active and fluent process including the reader and the text in building meaning (Anderson, 2004). It requires monitoring comprehension as a metacognitive activity (Baker & Brown, 1984). Many researchers have argued that reading is a fluent and interactive process involving ever-increasing numbers of variables to make sense out of the text such as the employment of metacognitive strategies. Recent years have seen much debate on the deployment of metacognitive strategies in reading comprehension in EFL

settings. It is reported that skilled readers are more able to reflect on and monitor their cognitive processes while reading (Sheorey & Mokhtari, 2001).

Chapter II

Theoretical Framework

The present section contains the most important part of the investigation; The theoretical framework explains the path of the research. The principal aim is to make the research findings more substantial. It guides the research, determines what things you will measure, and it connects the researcher to existing knowledge. (libguides). This chapter establishes on how a theoretical framework consists of concepts and together with their definitions and reference, to relevant scholarly literature, existing theory that is used for a particular study.

The present theoretical framework provides the reader with different theories about the use of Metacognition in educational fields. In addition, in how this technique could help students in the reading skill and the importance of this skill in learning English as a second language.

2.1 Literature Review

The purpose of this section is to demonstrate with different researches and theories how Metacognitive strategies can be helpful in the process of learning of ESL, focus on the reading skill.

2.1.1 Reading Skill

Definition

Reading skill is one of the four skills of the English language, defined as an active process of constructing meanings of words. It is a self-discovery process that involves cognitive and metacognitive efforts to fragment new knowledge to infer the meaning.

2.1.1.1 Importance of the reading skill in a second language

Reading skill has been investigated for decades. In the past, teachers did not give the importance that it needs, but today educators concluded that reading is crucial for a fortuitously learning of the English as a second language.

Although, there are other support resources such as music, movies, videos. The ability of reading is one of the most economical ways to access a foreign language providing an additional benefit, allowing the reader in an objective and effective way to expand their knowledge of a foreign tongue.

Together with a successful use of learning strategies, learners will improve other fields of the language acquisition such as pronunciation, composition, grammar and so on. This skill will expand the curiosity about the new culture, and improves interest since it allows students let the imagination fly.

Understanding a text for students depends on many linguistic, psychological and cultural aspects since interacting with different readings will expand their knowledge, make them question about many topics and thus will have more desires to continue learning.

The success of the reading skill on the students will depend of some factors, perception, reader's background knowledge, and interest of the text. Those factors will

depend of the student, but also of the different techniques that teachers will apply in the classroom.

Another important factor to take into account is the motivation that students will have when reading. According to Guthrie J. and Winfield A. (2000), “reading motivation is the enormous quantity of motivation that learners should consider their positive or negative idea about reading. For example, learners who read for pleasure and engaging approaches to support their understanding are extremely motivated readers. Learners of this kind usually consider reading to be a significant element in their daily activities, receive challenges in the reading process and are likely to be effective readers. Furthermore, reading motivation is one’s own purpose, idea, and interest related to the title, action, and the consequences of the Reading.” (p.1)

Realizing how crucial reading is for ESL, this factor is definitely a great importance of developing reading skills in the classroom. To achieve it, teachers should improve their lessons plans by implementing the best method and techniques provided by theories.

2.1.1.2 Theories of reading skill

Researches have shown that there are three main theories that explain the nature of reading. The first theory is the Traditional or “bottom up processing” that centers the importance on the printed form of a text. Second theory is focused on the cognitive view, or “top down processing”. It enhances the role of background knowledge in addition to what appeared on the printed page. Finally, the Third theory refers to the Metacognitive view,

which is based on the capacity of the reader to control and manipulate the act of comprehension when is reading a text. It makes the reader thinking about what he is doing while he is reading a text.

The Traditional Bottom up

It is a passive activity, where readers have no control over the action of comprehend a text. Readers try to understand a text by looking for individual meanings of the most basic units of the text. In that form, they try to understand the whole meaning of the reading. According with Tustin R. (2003), “This theory was popularized in the 1970s. Among them was Philip Gough in his work title “One second of reading” were he theorized that reading is a sequential process, whereby the person reading takes the letters, assembles them into sounds, and those sounds form words and phrases. In this teaching process, children learn to read by first mastering the letters of the alphabet. Then, they learn phonics, decoding skills, vocabulary, grammar, and eventually reading comprehension skills” (p.2) . Teaching Phonics make students learn the phonemes of the alphabet. After learning the letters, the next step for the students is to learn that when they combine letters they will produce a certain sound, and they will learn by hearing, seeing, saying the various sounds that they have learned. It is important that teachers in classrooms teach phonics in least complicated manner possible. The teacher needs to practice each phoneme as much as possible and do not explain the whole vowels in a just one or two classes. Each phoneme needs to be studied in individual way. Finally, decoding words recognition refers on the capacity that students has to recognize a word after have learned the phonics. Here the teacher should teach vocabulary with the phonic sound learned before in the class. It is expected that when

students approach decoding skills they will learn the vocabulary, grammar and finally reading comprehension.

The Top down processing

It is a traditional model of teaching reading, and it makes mention of recognize words using background information to predict the meaning of the text; for example teacher gives the students just a tittle of an article and students should predict what the text is going to be about.

The Metacognitive view

The research of this investigation is based on this theory and that defers on the use of Metacognitive strategies to improve the reading skill. Metacognition is the capacity that learners have to monitor themselves. It helps the reader make questions about what they are reading, give their opinions about the text and maybe go for different hypotheses of the writer. There are three key important aspects about Metacognition: awareness, knowledge, and control.

Hermida J. (2019) on her website explains those aspects.

a. Awareness: Awareness involves being attentive about what learning strategy you should use and how to use it. Setting goals for yourself would be a good way to be aware of the tasks you have on hand. Also, since we all learn by building upon existing knowledge, it is important for you to identify what you know about the topic or problem you want to learn. This knowledge may come from earlier classes in the course, other courses, your personal experience, literature, films, or other –formal or informal- sources.

- Consciously identify what you already know.
- Define the learning goal.
- Consider your personal resources (e.g. textbooks, access to the library, and access to a computer workstation or a quiet study area).
- Consider the task requirements (essay test, multiple choice, etc.).
- Determine how your performance will be evaluated.
- Consider your motivation level.
- Determine your level of anxiety.

b. Knowledge

Knowledge involves knowing about the learning process in general and specifically how you learn under different conditions. Having this type of knowledge will help you understand and identify a learning strategy that would suit you best. For example, knowing when you would need to apply a different learning strategy to study a historical work and another strategy to analyze a court case is considered knowledge in metacognition.

Perry's model of help you learn more about the learning process. William Perry claimed that individuals went through four stages of development during their college years.

Stage 1 is called the Dualism stage because students tend to divide the world into right/wrong, true/false good/bad dichotomies. Students view the teacher as right and that the student's role is to give the teacher back what they have received. They are

frustrated when asked to listen to other students' opinions (since they are likely to be wrong) and content when the teacher is clear and comfortable in lectures and assignments.

Stage 2 is called the Multiplicity stage because students have come to realize that other than a few dualistic areas, most knowledge is a matter of opinion and, therefore, any opinion is knowledgeable. The student's role is to offer their ideas. They are frustrated when they find that requirements restrict them and happy when allowed to express themselves.

Stage 3 is called the Contextual Relativism stage. Students recognize that there are disciplinary guidelines for choosing among various opinions. They accept that it is the student's role to apply the skills and knowledge base of the academic field. They are frustrated when arbitrary opinions seem to rule and content when they have the information they need to use to form a solid judgment.

Stage 4 is called the Commitment within Contextual Relativism stage. In it, students connect their disciplinary skills to new settings and see the need to apply knowledge and skills to settings outside the classroom. They are frustrated by activities that cover content without knowing relevant applications and happy when allowed to apply ideas to everyday problems.

c. Control

Control involves monitoring your own progress. You can do this by asking yourself questions like "Have I understood the information I am studying?" or "Am I keeping up with my study plan and goals?" To do this, you must first identify the learning strategy

that works best with the information you need to learn. You may also want to check what stage of Perry's model you are at.

- Reflect on the learning process, keeping track of what works and what doesn't work for you
- Monitor your own learning by questioning and self-testing.
- Provide your own feedback.
- Keep concentration and motivation high.

2.1.2 Metacognition

Physiologist Jonh Flavell (1978) defined Metacognition as “Thinking about your own thinking” (p.231-235). It describes the processes involved when learners plan, monitor, evaluate, and make changes to their own learning behaviors.

It is a term that has become more popular on the recent years due to necessity to understand the capacities of the human brain and improve techniques that helps students in classroom to develop a significant knowledge.

2.1 Definition of Metacognition

According with (Cambridge), “The ‘meta’ refers to higher-order cognition about cognition, or ‘thinking about one’s thinking’”. It is often considered to have two dimensions: metacognitive knowledge and metacognitive regulation.

Metacognitive knowledge includes the learner's knowledge of their own cognitive capacities (e.g., I have trouble remembering people's names). Also, the learner's

knowledge of particular tasks (e.g., the ideas in this article are difficult), and the learner's knowledge of different strategies including when to use these strategies (e.g., if I break telephone numbers into chunks I will remember them) (Brown, 1987; Flavell, 1979).

Metacognitive regulation describes how learners monitor and control their cognitive processes. For example, realizing that the strategy you are using to solve a math problem is not working and trying another approach (Nelson and Narens, 1990).

2.2 Importance of Metacognition

According with Pearson J. (2012), metacognition includes checking the outcome of any attempt to solve a problem, planning ones next move, monitoring the effectiveness of any attempted action, and testing, revising and evaluating ones strategies for learning. (p.29)

Several researchers about the Human behaviors demonstrate that children at a certain age develop cognitive development, which is a process extremely important for the child growth. A big part of the cognitive development will depend on the motivation that children has for a situation; due that, it is indispensable for teachers to teach in classrooms not only what, but also how, when and why of the things.

Students in schools do not know of the importance on speculate the reflecting on their own knowledge, and the way in which it occurs, not only knowledge but also the learning process. This fact, leads to the need to consider the study of metacognition. In addition, its importance in education, and how this mechanism helps the success on learning. The significance on comprehend which is the best way for the student to acquire knowledge will give him/her the tools for a productive learning. In addition, learners of any age will take active control when they are faced with intermediate difficulties because if the

task is easy for them, they need not bother, but on the other hand, if the task is too hard they will give up.

An effective learning requires an active monitoring of one's own cognitive activities. When a child have the ability to recognize the best way for him to learn, then is possible to measure the demands of a learning situation more adequately. If however the child is not cognizant of his limitations as a learner, then the child is going to be expected to take deterrent actions in order to recover from problems.

In the moment of learning, students develop in natural and unconscious way actions that allow them to learn. For example: when classifying information, when we take notes of the most important things of the book; in other occasions, we make conceptual maps or associate new knowledge with something already known to us so that we do not forget. All these strategies must be trained to have control and domain, and it will work with the use of

Metacognition.

2.3 The Metacognitive Knowledge

As is mention before, this knowledge refers on the comprehension of the cognitive processes.

John Flavell (1978) in the book "Speculations about the nature and development of Metacognition", he states that this knowledge will depend of three variables:

- **The learner: their own perception, what he/she thinks about their own capacities, what knowledge she has, what are the**

limitations and also the act of comparing themselves with the others.

- **Knowledge of task: what is the nature of the task and what are the demands that learners need to complete the task.**
- **The Strategy: The knowledge of the different strategies that students can apply of the different cognitive processes.**

To be aware with Metacognition, it is important the use of strategies that let students regulate the process of learning and stimulate cognition. The persistent use of these strategies will make learners more confident, independent and with that, they will achieve their goals.

An example of metacognition is to realize that it is harder for us to learn one text than another. We are also practicing metacognition when we change mental strategy to solve a problem to see the previous one did not work.

2.4 Learning strategies

In the terms of education, strategies take one the most important places. If teachers apply an effective strategy for the transmission of knowledge, students will have a successful learning; thus, strategies are steps taken for the students to reinforce their own process of learning.

Claudia Otake Gonzalez (2009), on the book “Las Experiencias Metacognitivas, Sus Estrategias y Su Relación Con Las Plataformas Educativas”, states that Strategies are flexible procedures, conscious and voluntary process to solve a specific goal and it has three characteristics: The control, the reflection and the selection. (p.6)

The concern for the improvement of the educational strategies is promoted by the new psychological orientations. Those studies have proved that learners who are exposed to

better learning strategies have more success than the ones that not. In addition, it is proved that it is more profitable to invest in the improvement of learning strategies, than materials.

Therefore, it is the great importance for the teacher to know what kind of students are on the classroom. Also, to know the capacities and limitations of each student; and then, apply an adequate strategy that helps students accomplish the goal. Strategies are oriented toward the broad goal of communicative competence.

Learning strategies can be categorized in many ways; most popular and according with the research divided in: direct, indirect, cognitive, metacognitive, social, communicative, linguistic, nonlinguistic, and analytic. According with the book “Language learning strategies” there are some important features about learning strategies:

- Contribute to the main goal, communicative competence
- Allow learners to become more self- directed
- Expand the role of the teacher
- Are problem oriented
- Are specific actions taken by the learner
- Involved many aspects of the learner, not just cognitive
- Support learning both, directly and indirectly
- Are not always observable
- Are often conscious
- Can be taught
- Are flexible
- Are influenced by a variety of factors

The importance to mention how the application of different strategies would help the learner is mentioned on the book “Language Learning Strategies “, (Oxford).

Rebeca L. Oxford (1990) found the following:

“As the learner’s competence grows, strategies can act in specific ways to foster particular aspects of that competence: grammatical, sociolinguistic, discourse, and strategic elements. For instance memory strategies memory strategies such as using imaginary and structure review, and cognitive strategies such as reasoning deductively and using contrastive analysis strengthen grammatical accuracy. Social strategies- asking questions, cooperating with native speakers, cooperating with peers, and becoming culturally aware- powerfully aid sociolinguistic competence. Strategies related. Many kinds of strategies compensation strategies, including using contextual clues for guessing, social strategies, such as cooperating and asking questions, and cognitive strategies, like recombination and use of common routines will encourage greater amounts of authentic communication and thus enhance discourse competence. Compensation strategies like guessing when the meaning is not clear or using synonyms or gestures to express meaning of an unknown word of expression are the heart of the strategic competence.” (p. 9)

Some of the most important characteristics of the learning strategies can be:

- a) Its application is not automatic, but controlled. They need planning and control of execution.
- b) They imply a selective use of the available resources and capacities. For that, a student can implement a strategy. It must have alternative resources, among which it decides to use, depending on the demands of the task, those that he believes most appropriate.
- c) Strategies are made up of other simpler elements, which are the techniques or tactics of learning and skills or abilities. In fact, the use effectiveness of a strategy depends largely on

the techniques chosen in any case and the mastery of learning strategies required. In addition to skill in mastering certain techniques, a deep reflection about how to use them; or in other words, reflective use - and not just mechanical or automatic- of them.

2.5 Role of the teacher

In recent years, new disciplines, new theories and new technologies have revolutionized everything. They have also caused a relevant change in education. The student has placed himself at the center of the learning process, which means that his needs and interests should be based on through the most appropriate methodologies to personalize learning and be meaningful. For all these, it is important to reflect on the role that the teacher must adopt in the face of this new perspective and to discover how teachers should act in the face of the most innovative methodologies.

The classroom must be a place of discovery, of experimentation, of debate, of teamwork. As far as possible, teachers must stop being the only source of knowledge and become a traveling companion, a guide, someone to accompany them and guide them while they learn, even learn with them.

2.5 Metacognitive Strategies

Metacognitive strategies refers to methods that help students to think about their own thinking process. Many teachers use these techniques because it has a positive impact in students with disabilities, and it makes students be aware on their own thinking process. They need to internalize what they are in order to comprehend in their own way. Improved

metacognition can facilitate both: formal and informal learning. It also can improve the performance of new tasks on the job and help teams problem solve more effectively.

Researches organize the skills of Metacognition into two complementary processes that make it easier to understand and remember. According to theory, Metacognition consist of the knowledge of cognition and regulation of cognition.

The knowledge of cognition

It has three components: knowledge of the factors that influence one's own performance, knowing different types of strategies to use for learning, and knowing what strategy to use for a specific learning situation.

Regulation of cognition

It involves setting goals and planning, monitoring and controlling learning, and evaluating one's own regulation (assessing results and strategies used).

Learners can incorporate Metacognitive Strategies to their own learning experiences, but these strategies can also help them on their own personal lives.

According with Cinta Martos Silvan (2016), some examples of the use of Metacognitive strategies can be:

- Students are aware of their own learning process. That is, we can observe and analyze it from outside.**
- Students reflect on the way they learn.**
- Students control the use of the most appropriate learning strategies in each case.**
- Students maintain motivation for a prolonged period until the task is completed.**

- **Students are aware of those internal or external things that distract us and we strive to ignore them and meet the objectives.**
- **Students are aware of their weak and strong points regarding the cognitive plane. For example, "I have problems remembering dates, although I have a very good memory to remember images and other visual elements"**
- **Students recognize if a certain task is going to be complex to understand.**
- Students know what strategy needs to use and if it is appropriate for the activity that will be carried out. For example, "if I write on a paper the key concepts of this text, I will memorize them better". Or, "perhaps I will understand the subject more easily if I first do a quick reading of everything".**
- **Students realize that a certain strategy is not being successful and they try to carry out a different one. It can also happen that they realize that there is another strategy better or more comfortable and efficient.**
- **Before doing a certain activity, students plan by asking themselves what the objective is, what strategies we are going to use. (p. 4)**

2.6 Metacognitive strategies to improve reading skill

In this investigation, Metacognitive strategies are going to be applied in order to improve the reading skill on 5th grade students. Studies shown that problems in schools are that students in classrooms do not know strategies that help them in reading comprehension. They do not know when or how to implement techniques that help them understand what they are reading; due that, they do not comprehend the information they have in a paper, and they get frustrated. For that reason, it is important for students to learn how they learn. Also to learn which is the best strategy for them, or recognize what things can be more difficult for them. In that way, the process of learning will be successful.

The objective in education is for students to develop meaningful learning that takes into account each one's abilities to generate cognitive skills. When students learn, they develop different strategies that allow them to learn. For example, students classify the information, they make schemes, or students associate knowledge to remember them better.

Metacognitive strategies influence how humans process information and help them regulate their learning. However, a strategy is not always good for everyone, so it is important to teach students to be aware of their thoughts and be able to plan, control and evaluate learning.

When specialists talk about metacognitive strategies, they are talking about doing self-assessment exercises. In addition, after having studied something in particular, trying different ways of doing the same activity, it guides the student in this case, to decide which strategy suits better or making conceptual maps to relate different concepts, among many other examples as an assessment tool. Metacognitive strategies allow students to understand and efficiently develop the acquisition of their own knowledge.

2.6.1 Mental Maps

Some learning strategies improve, stimulate and organize metacognition. One of them and more used with children of primary education is the mental map. The mental map is a structure of knowledge expressed in a schematic way through key words and drawings that idea after idea makes the child anticipate the knowledge that follows and expresses it in some way in a work paper or record. Mental maps will help learners to remember and understand key concepts about the text that they are reading. Those are easy to do since

they are informal and do not require much time. Here are some of the steps that students need to follow in order to create a mental map:

- a. Begin with the main idea of the paragraph
- b. Add branches to the main idea
- c. Explore topics and add more branches to the main idea of the paragraph
- d. Add images and colors to make you remember key concepts of the text.

According with Charlie Sweet (2017), Mind maps have many uses that help students in many areas:

- **Note taking: mind mapping provides an alternative form of notetaking whether for students or professors participating in committee meetings. It can be done before a class session by the professor, during the session by the student, or afterwards as a way of checking whether the fundamental and powerful concept(s) was taught or understood.**
- **Studying: instead of rereading notes taken, a method destined for failure, try reorganizing them into a mind map or two. Mind mapping not only offers the visual alternative here, but also provides retrieval practice, another metacognitive technique.**
- **Assessing: instead of giving a traditional quiz at the start of class or five-minute paper at the end, ask students to produce a mind map of concept X covered in class. This alternative experiment will demonstrate to students a different approach and place another tool in their metacognitive toolbox.**
- **Prioritizing: when items are placed in a mind map, something has to occupy center stage. (p. 2)**

2.6.2 The V of Gowin

The V of Gowin is an instrument that together with the conceptual maps helps the students to learn significantly. It is a resource that allows visualizing the dynamics of knowledge production, making explicit the relationship between what is learned and what

can be done to achieve new learning from them; the task of learning as if they were investigated.

The V diagram of Gowin properly used in the classroom can become a powerful research and learning tool for our students. The student constructs an active form of his own knowledge. Moreover, the learner is in the social environment and develops from his previous knowledge.

The diagram V is formed by three well-differentiated zones:

The left side

It is the conceptual side of the diagram. It is the theory, the knowledge. It is the "think" side. Incorporate the knowledge you have into your study.

The right side

It is the methodological side. Here is the "do" side. It incorporates information to the V of the immediate investigation. This knowledge is built within your study.

2.6.3 Think Aloud

Think aloud helps students to consciously monitor and reflect upon what they are learning. This strategy works well when teachers read a story or problem out loud and periodically stop to verbalize their thoughts. This allows students to follow the teacher's thinking process, which gives them the foundation they need for creating their own strategies and processes that can be useful for understanding what they are trying to comprehend. Reflecting aloud while trying to understand a text entails that the reader learn

to stop reading periodically, judge whether the text is understanding or not, and orally express what it does (what strategy it is using) to understand what it reads.

2.6.4 Establishing objectives in reading

This technique states that students establish objectives before reading. Before beginning to read, competent readers tend to consider a goal of reading or learning, which is a metacognitive response of planning and extra motivation to their desire to read and understand it. Making, or not, a purpose or a reason to read something affects and conditions the level of reading comprehension that students can achieve. There is evidence that students who read with a reading objectives use more strategic thinking.

Some of the questions that students can make to establish an objective before reading are:

- What do I know? In this point, have students brainstorm what they already know about a topic.
- What do I want to know? Here, have students brainstorm what they would like to learn about a topic.
- (After reading) what did I learn from reading the text? In this part, have students list several things they learned after reading the text.

When students used consistently, pre-reading activities improve reading comprehension of students. When they have prior knowledge of text, students are better able to concentrate on and comprehend what they are reading.

2.6.5 Teachers Training

Nowadays, Metacognitive strategies are important in educational fields. For that reason, it is important to train teachers, and help them understand how to apply these strategies inside the classrooms.

In this research, teachers were trained to understand and learn to apply these strategies in the classroom. In this way, professors help students improve their performance in the area of reading.

Chapter III

METHODOLOGICAL FRAMEWORK

Chapter III describes and explains the method to be used in order to carry out the investigation, as well the different sources that exist and which ones are going to be needed to develop the project. It also explains the categories of analysis, and the instruments the investigator needs in order to gather important information.

3.1 Research Approach

The type of investigation deals with the methodology that is going to be used to gather information. Moreover, it refers to the way to analyze it for a research work. A research needs a strategic frame that is needed to give a unity, sequence, coherence, and a practical sense to the plan the researcher formulated in order to reach the goals of the objectives proposed.

The information on this investigation is going to be collected with the appropriate instruments, this will help confirming if the research question is the correct one according to what the investigator wants to resolve. This will also help interpreting the nature of the problem due to the fact that the information collected will be analyzed to get accurate results.

The objective is to measure the speaking motivation of the students towards observations, surveys, and questionnaires to determine how the speaking ability could be affected by personality and social factors and consequently causing the lack of confidence when talking to someone. Moreover, the lack of knowledge or vocabulary may be one of the reasons why students would not talk. This will be also measured and analyzed through the instruments. The instruments will help knowing what the knowledge of the students is and what they have to work on.

Therefore, this research is focused on giving advice to teacher and students to accomplish the speaking skills through different activities. Moreover, this will help the teacher to determine which best way may be correct to develop the skill and motivate students at the same time.

Any investigation consists on a set of steps in order to achieve a solution to the problem that is under study. A research method refers to a group of specific tools or evidence that can be collected and examined (Neville, 2007, p 5). In addition, for the purpose of the investigation, instruments are going to be used, examples of these are interviews, observations, and questionnaires that will guide the researcher to the true and solution to the research question. The importance to include instruments according to Sampieri, Collado and Lucio, (2010, p.200), is that an instrument will serve as a mean to measure all the information related to the objectives of the study, and these will also allow the reader to understand the pre and post stages of the object of study.

3.1.1 Quantitative approach

The research is presented as a quantitative research due to the characteristics of the same. It is described as interpretive and naturalist because tries to observe, study and analyze deeply the environment of the students as well as to understand the different phenomena.

According to Corbetta (as mentioned by Sampieri, Collado and Lucio, 2010), it is not necessary to present results in numerical data to prove deductions. In a quantitative approach, Sampieri, Collado and Lucio (2010) explain that this type of research tries to define different situations or problems. The researcher uses a collection of data to validate or justify theories or hypothesis by using statistics and numerical data (p.4).

In addition, since quantitative approach develops by generating hypothesis, researchers look for a way of interpreting those predictions and analyze it into a general environment. It looks for a way to explain in some way the theory and at the same time give away a new one.

3.1.2 Qualitative approach

The qualitative method is going to be used during the process. According to Roberto Hernández (1991), the qualitative method is used “to recollect the data without a numeric measure to find out or polish the research questions in the interpretation process” (page 7).

A qualitative research, due to its characteristics, evaluates the natural development of events. For that reason, the results are analyzed in terms of the way of living of the people, their situations and feelings towards it; in other words, their perspective and that is the reason why it is considered to be under the parameters of a qualitative research since it was necessary to observe and analyze the students. This type of approach, because of its

most important characteristic, exemplifies the information collected in a unified and logical way.

Sampieri, Collado and Lucio (2010) explain that on the qualitative method, the work of the researcher is to establish a situation or problem that must be delimited and specific and finally, throughout the process, data in numbers must be applied.

The qualitative approach will help readers have a clear idea of the results obtained by the instruments applied to the participants. The way results are represented with the use of this approach may benefit the investigation illustrating the information gathered by the different instruments.

3.1.3 Mixed approach

As qualitative and quantitative are the classical types of investigation approaches, today it exists another one that combines the scene of both. This new methodology is known as the mixed method. For this reason, this research will be conducted with a mixed type.

The approach mentioned before, wants to continuously look at a research question from different angles, and clarify unexpected findings and/or potential contradictions. For instance, it provides strengths that offset the weaknesses of both quantitative and qualitative research. Thus, by using both types of research, the strengths of each approach can make up for the weaknesses of the other.

In addition to the many positive characteristics of the mixed approach, it provides a more complete and comprehensive understanding of the research problem than either quantitative or qualitative approaches alone.

The instruments used for the investigation are considered part of a qualitative and quantitative research; however, the researcher will base the investigation with instruments that belong to both the qualitative and quantitative due to the objectives and the collection of information.

As a final point, as it was stated before, the purpose of the researcher is to explain those phenomena. For this project, the researcher, by using the data collection, is going to represent the results by explaining the point of view and progress development of the students during the methodology through numerical data.

3.2 Research Design

Research design of the investigation is a Phenomenological design. The methodology used in phenomenology differs than most other research methodology because the goal is to *describe* a lived experience. Phenomenology makes use of a variety of methods including interviews, conversations, participant observation, action research, focus meetings, analysis of diaries and other personal texts. This methodology will encourage students to share different experiences they have had during the learning process and this information is going to help to develop the objectives of the research.

3.3 Information sources

According to the website <https://libguides.willamette.edu/primary-sources> (2019), there are three different information sources: the primary, secondary and the tertiary.

3.3.1 Primary Sources

Primary sources are first-hand accounts or individual representations and creative works. They are created by those who have directly witnessed what they are describing, and bring us as close to the original event or thought as possible without being filtered, influenced or analyzed through interpretation. They tend to be original documents that don't usually describe or analyze work by others. Primary sources may be published or unpublished Works.

3.3.2 Secondary Sources

The secondary sources build off primary sources with more extensive and in-depth analyses. They summarize, evaluate, and analytically interpret primary material, often by offering a personal perspective. While these are useful to check what other experts in the field have to say, they are not evidence. It is one step removed from the original or primary source. Because secondary sources are published works, they will list their sources of information that can be used to locate additional information for your research.

3.3.3 Tertiary Sources

The tertiary sources are distillations and collections of primary and secondary sources. The information is compiled and digested into factual representation, so that it does not obviously reflect points of view, critiques or persuasions. Tertiary sources are typically the last to be published in the information cycle. Because it has been filtered through many reviewers, it tends to consist of highly reliable and accurate information, plus contain broad perspectives of topics.

In this Investigation, the secondary and tertiary sources are going to be used.

3.4 Analysis categories

The variables in the research represent a concept of vital importance within a project. The variables are the concepts that form statements of a particular type called hypothesis. The variables of the investigation are metacognitive strategies and reading proficiency.

Metacognitive strategies refers to methods used to help students understand the way they learn; in other words, it means processes designed for students to ‘think’ about their ‘thinking’.

The reading proficiency is the ability to understand a written text; it also involves the pronunciation of words and the meaning of them.

3.5 Data collection Instruments

The instruments that will be used to carry out the research are: the observation-checklist, pre-test and post-test, and questionnaires to students and professor.

3.5.1 Observation and Check-list

Based on the website www.reference.com (2017), a check-list is defined as a list of questions that an observer will be looking to answer when they are doing a specific observation of a classroom. (par.1). This specific tool collaborates in the analysis of different details the lessons may present. In most of the cases, check-lists are done inside the classroom. They may show clear situations like the methodologies implemented are positive for the students and if learners are gathering knowledge in a favorable environment.

Furthermore, check-lists are used to help on the learning improvement of the students besides the growth of the professor's methodologies either. For that reason, it is important to clear that this tool is not a way to criticize the job of any educator; they are tools to collaborate in the progress of the educational process of institutions. Students may feel intimidated by the observer, but it is a job of the teacher to introduce and calm the nerves of students that a stranger is watching their moves. Check-lists include questions for the observer in order to gather important information about the environment of the group.

3.5.2 Pre-Test

According to The Free Dictionary by Farlex (n.d.), pretesting is defined as: “A preliminary test administered to determine a student's baseline knowledge or preparedness for an educational experience or course of study.” Based on that definition, a pre-test will be good for the purpose of the research, since the researcher wants to help the students and future generations to identify what the students (object of the study) know and what they do not know when reading refers to.

A pre-test that consists on a paper and pencil test will be applied to the students before applying any technique to measure the initial level, reading issues and general status of the students, as well as identify extra elements that could interfere with the reading skill the student will provide.

3.5.3 Post Test

A definition for post-test according to The Free Dictionary (n.d.) is “A test given after a lesson or a period of instruction to determine what the students have learned”. This Post-test will consist on a second paper and pencil test, which will be applied to the students in order to measure the improvement the students have had after applying the techniques. This post-test will be able to measure and compare results to determine if there was an improvement.

3.6.3 Questionnaire

According to Sampieri, Collado and Lucio (2010), the questionnaires, “Consists of a set of questions for one or more variables to be measured”. It means that the investigator

creates a set of questions according to the variables that want to be responded and measured. (p. 217)

These questions must be clear. As a consequence, Sampieri, Collado and Lucio, (2010) stated that there are two kind of questions: the open questions that are questions in which students answer with their own opinion freely; and the other kind of question are the closed questions. These last questions have as a purpose to get isolated responses without any explanation because the researcher wants to get specific responses. These questions must be together with the research question and the specific objectives. For the purpose of the investigation, it is important to know the reason why the students present problems on the reading skill, and what areas are important to control and focus for future speeches.

A questionnaire focused on several aspects and specific details related to the reading area will be applied to the students in order to identify the level of obstacles presented before and during reading. This assessment will help the students and the teacher to identify the areas that need to pay attention to on when practicing reading, and this will help to provide a better performance. In addition, a questionnaire to the teacher is going to be presented too. The answers provided by the professor may help effectively for the purpose of the investigation.

3.7 Collection data process and data analysis

The research results are going to be presented as an analysis of the qualitative information obtained from the individual interviews. The interviews are done to a group of

students from fifth grade from Braulio Carrillo School, an interview for the teacher and an observation checklist.

Those interviews for the students are going to be related with the process of learning a second language, and how they know about their own personal way of learning. The interview for the teacher will help understand what kind of methods she uses in the classroom and how does she develops the class. An observation checklist is going to be used in order to understand what factors affects and helps the development of the students in the classroom. Finally, a pre-test and a post-test are going to applied in order to comprehend the abilities of the students in the reading skill.

Chapter IV

Data Analysis

According with Business dictionary (2019) data analysis refers to the process in which the information is gathered and then is evaluated using analytical and logical processes to conduct a research or experiment. The following information pretends to explain the different methods that the researcher used during the investigation with the purpose of answering the research question.

The different methods used for the researcher will be explained to show the progress of the students since the very first time of the investigation. This information includes the observation checklist applied in the institution, the interviews applied to the teacher and the students, and the pre and post-test applied to the students.

4.1 Analysis and Interpretation of the Results

4.1.1 Observation Checklist

According with Collins dictionary observation is the action or process of carefully watching someone or something.

Marshall and Rossman (1989) define observation as "the systematic description of events, behaviors, and artifacts in the social setting chosen for study". (p. 91)

First instrument applied in the investigation was the observation checklist in order to understand and meet all the necessities of the students in the classroom. This instrument was developed at the institution, and the information gathered is described below.

School facilities and infrastructure

The intention of this rubric in the observation checklist was to see if the classroom had the adequate elements to help students a successful learning in the reading area.

Fifth grade class is a group with 15 students. It has enough space for each of the students, but it does not have enough windows. For that reason, the lack of light could be an obstacle for the students to read the paragraphs efficiently. Classroom arrangement was disorganized causing a distraction to students to focus on their duties. Multimedia and technology was not observed at all, and these are excellent tools that support the students to learn. There was not reading material for the students in the classroom. For this point, the teacher mentioned they only work with the student's book, but sometimes she is the one that bring books or material to the classes.

Teacher

The teacher shows to have an adequate attitude with the class. She also had a lesson plan to develop the class, but it does not have a constant positive reinforcement in reading activities. Unfortunately, reading activities were general. Students just had to read a part of the paragraphs in their textbook to see the pronunciation, but they did not comprehend what the text was about. There was not a specific time for the reading skill, and the teacher did not apply learning strategies to develop this skill.

Students

Students were respectful with the teacher. They had good behavior, but since the very first time students did not show interest in the reading skill. They did not enjoy reading classes because they thought that reading skill was boring, and sometimes it was hard for them to understand what they were reading.

Materials

There was not reading material in the classroom. Students worked with the textbook, and the readings on the book were short and difficult for the students to understand. The teacher mentioned that sometimes she brings extra material for the students to read, but she is the one who pays for that.

4.1.2 Pre- Test

The second instrument that the researcher applied in the investigation was a pre-test to meet the strengths and weaknesses of the students in the reading skill in order to know what kind of Metacognitive strategies can be applied to improve this skill.

The pre-test was a short test, which consisted of two parts. The first part was a reading comprehension of one and have page long in which students had to read it and make a seven multiple-choice questions. Second part was made of four short answer questions related with the reading from the first part.

The grades obtained for the students were:

Table # 1. Grades obtained by students on the pre-test.

Student	Grade
One	73
Two	18
Three	36
Four	73
Five	27
Six	36
Seven	36
Eight	45
Nine	27
Ten	27
Eleven	45
Twelve	50
Thirteen	66
Fourteen	72
Fifteen	42

Table 1 shows the results for the pre-test.

Source: Researcher's create.

As seen on the grades, the majority of the students failed the test with low grades.

The researcher noticed that students did not have interest on comprehend what the text on

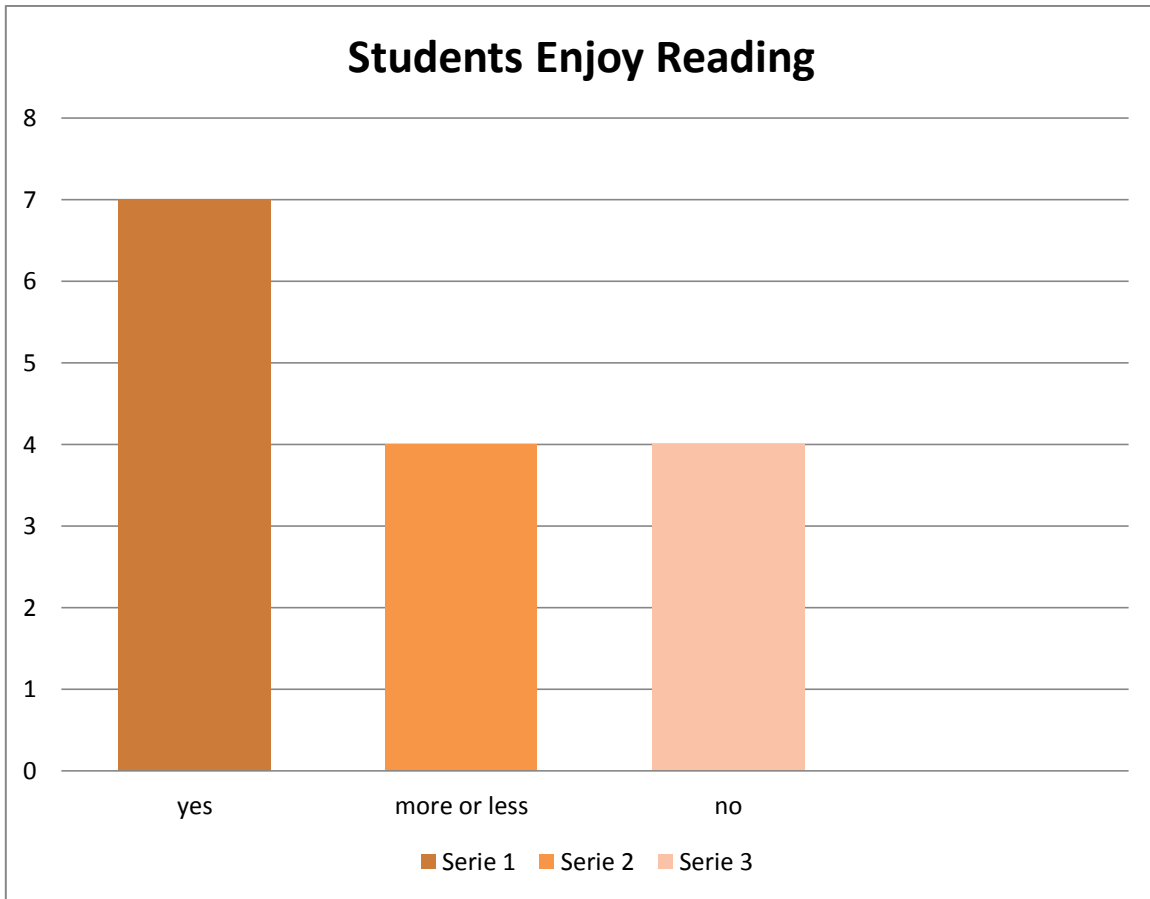
the first part was about. Students only read the title, and they thought that it would be a boring text. Some of them in the multiple-choice part marked randomly the options because they did not want to read the questions.

4.1.3 Questionnaire to Students

The third instrument applied to the students was a questionnaire with 10 different questions that consists of seven multiple-choice questions and three opened questions. This questionnaire was applied at the beginning of the investigation to meet how the reading skill is developed in this school.

The first question asked was a closed ended question, the questions intended to investigate if students enjoy reading. The participants answered as graphic #1 show.

Figure 1. Students at Braulio Carrillo enjoy reading.



*Figure 1 shows if students at Braulio Carrillo enjoy reading.
Source: Researcher's create.*

Among the fifteen students in fifth grade, the majority of them in this case, seven students responded positively to the first question. They said that they enjoy reading; four students indicated that they more or less enjoy it, and the last four mentioned that they do not enjoy reading.

Based on the answers for question number one, the researcher can identify that the majority of the class enjoy reading. Four of them mentioned that more or less, but with the adequate learning strategies applied, maybe these students would have more interest on this skill. However, it is important to pay attention to the students that do not enjoy the reading skill and see if with the use of Metacognitive strategies can change their thought.

The second question for the questionnaire applied was a multiple-choice question. Students were asked to mark with an “x” inside a parenthesis how much time they consider that they read, being the options “Always”, “Sometimes”, and “Never”.

Figure 2. How often students read.

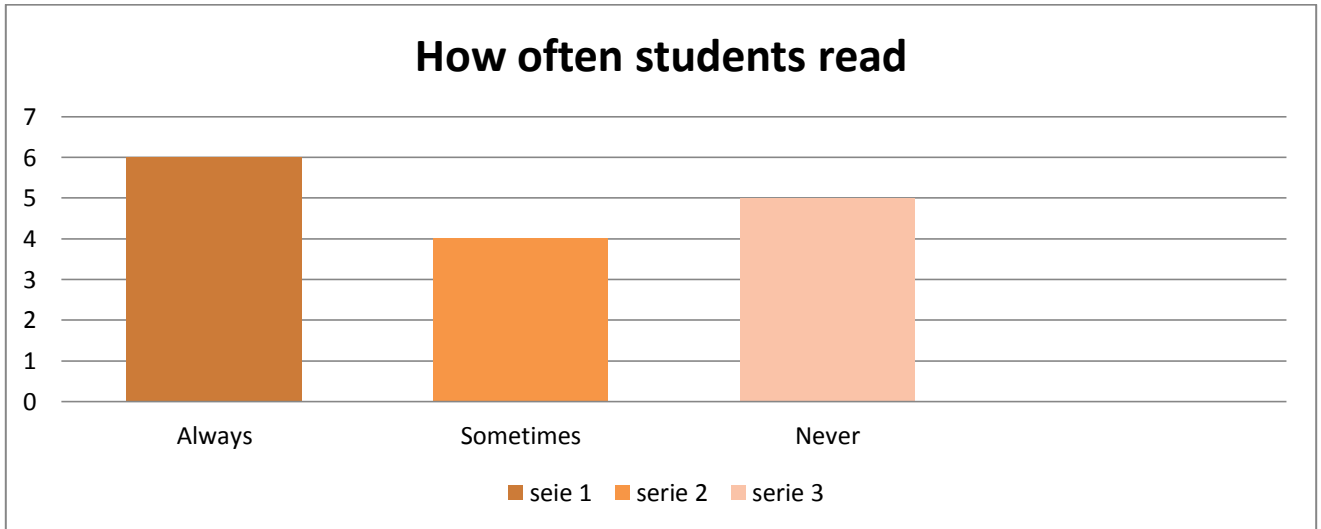


Figure 2 shows how often students read.

Source: Researcher's create.

In the graphic for this second question, it can be seen that among fifteen students, six of them mentioned that they always read. Four of them mentioned that sometimes, and five students mention that they never read.

Question number two was intended to discover how much do students read. A positive aspect to take into account is that the majority of them read frequently, but it is important for the researcher to pay attention to the five students that never read; this, in order to see the causes, and use the Metacognitive strategies to encourage them to practice more reading.

Question number three was a closed ended question. The same was proposed to find if students practice reading during the time of English class.

Figure 3. Time that students practice reading during the class.

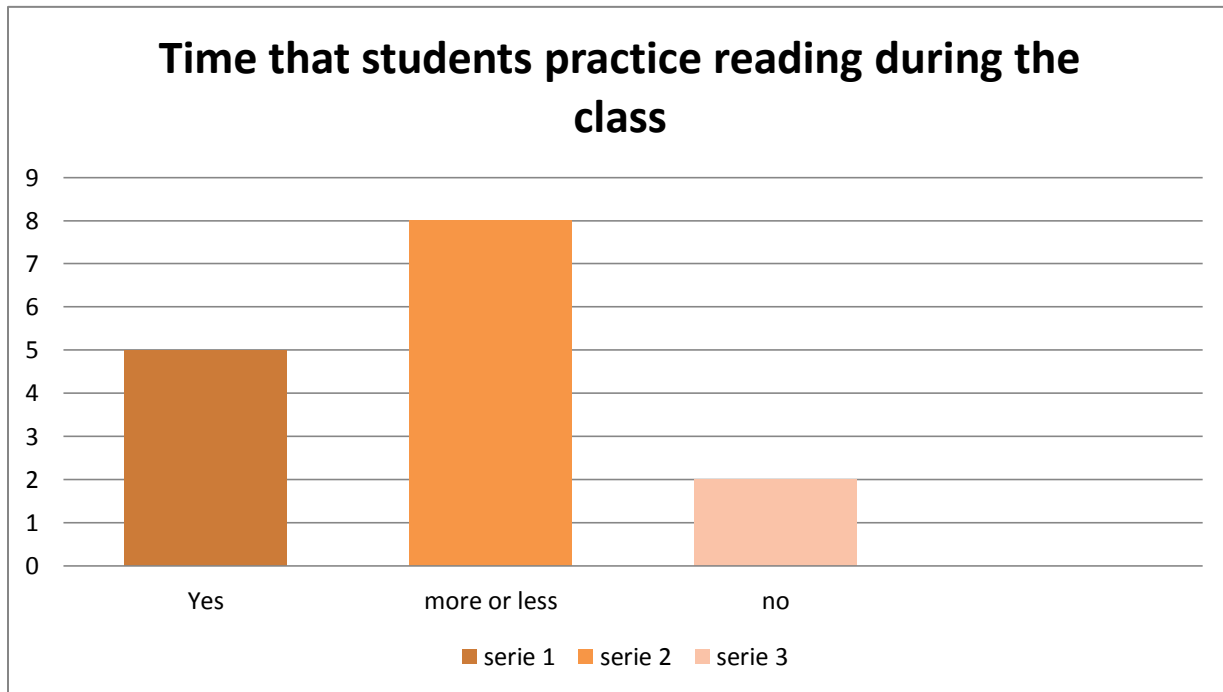


Figure 3 the time students practice reading during the class.

Source: Researcher's create.

Graphic number three presents that among fifteen students, five of them mentioned that they practice reading during English classes, eight of them said that more or less and just two students said that they do not practice reading at all.

It calls the researcher's attention that the majority of the class expressed that they more or less practice reading. In addition, it is important to consider those two students who perceived that they are not practicing reading in classes at all.

In question number four, the researcher intended to get student's perspective on the amount of reading they consider that they do when they are at home. It was a multiple-

choice question; the options available for answers were: “Always”, “Sometimes” and “Never”.

Graphic 4. The time students spend reading at home.

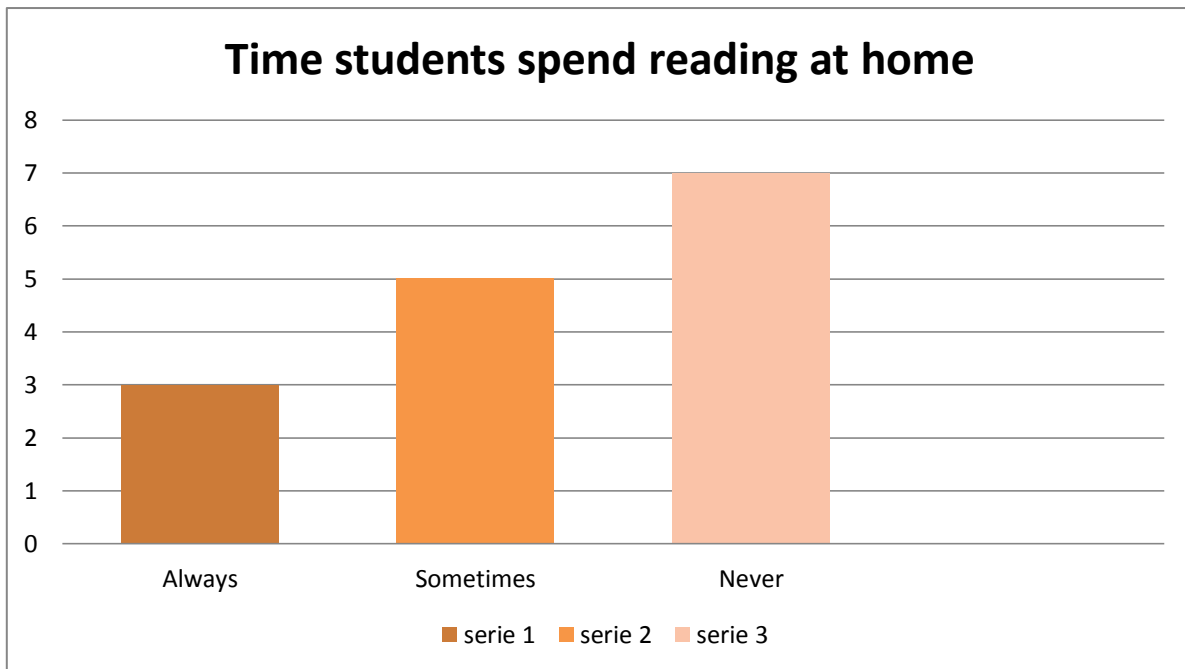


Figure 4 presents the time students spend reading at home.

Source: Researcher's create.

In graphic number four, the results present that among fifteen students, three of them always read when they are at home, five of them sometimes, and seven mentioned that they never read at home.

The majority of the students expressed that they never read at home. This fact it is important for the researcher in order to pay attention to that number of students. It is necessary to understand the reasons why students do not read when they are at home.

Question number five was a closed ended question. It included discovering the students' thoughts on the importance of reading to improve their English level. It is

important that ESL students know the importance of this skill to improve their knowledge. In addition, to have consciousness on how this skill will help them for the development and complement for the other skills.

Graphic # 5. Importance of reading in English as a Second Language.

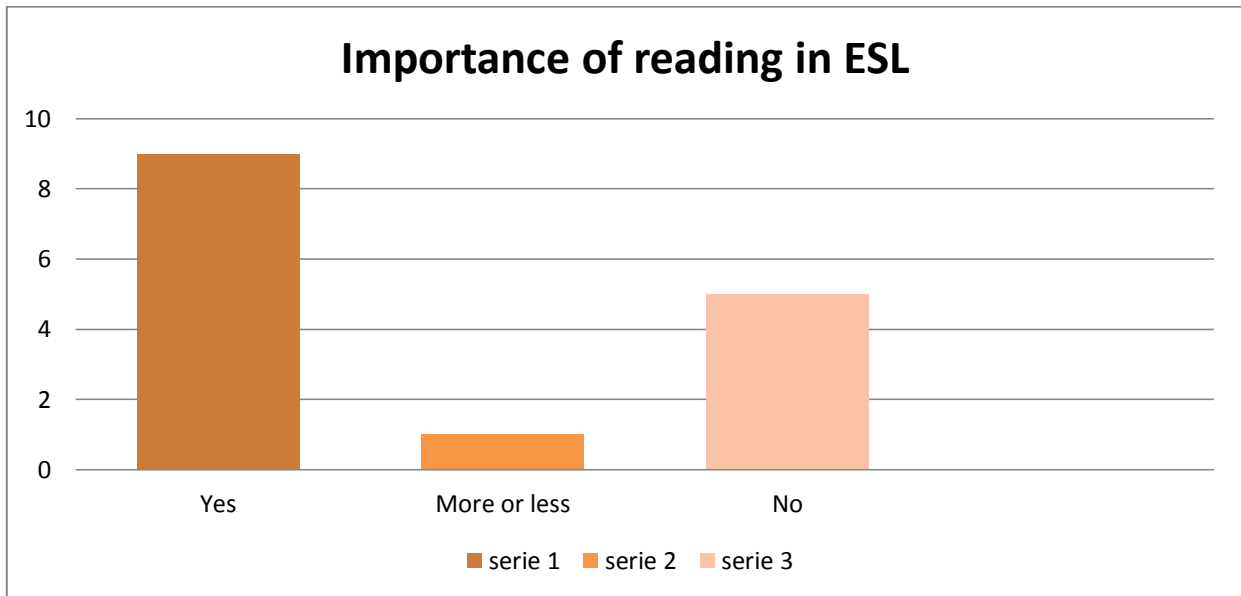


Figure 5 shows the importance of reading in ESL.

Source: Researcher's create.

Graphic number five it can be seen that among fifteen students, nine of them believe that reading is important in the acquisition of a second language. One of them think that more or less, and five of them think that reading is not important at all.

As it shows on graphic number five, most students are conscious of the importance of reading to improve their English level. As a positive outcome from the answers of question number five is that most of the participants are aware of the importance of reading to upgrade English. However, it is important for the investigator to find out why the students who responded "No" considered that reading is not necessary to improve English.

Question number six of the questionnaire was a closed ended question where the students had to answer if they like how their teacher develops reading lessons. The options available for answers were: “Yes”, “More or less” and “No”.

Graphic # 6. Student’s opinion about enjoying how the teacher develops the class.

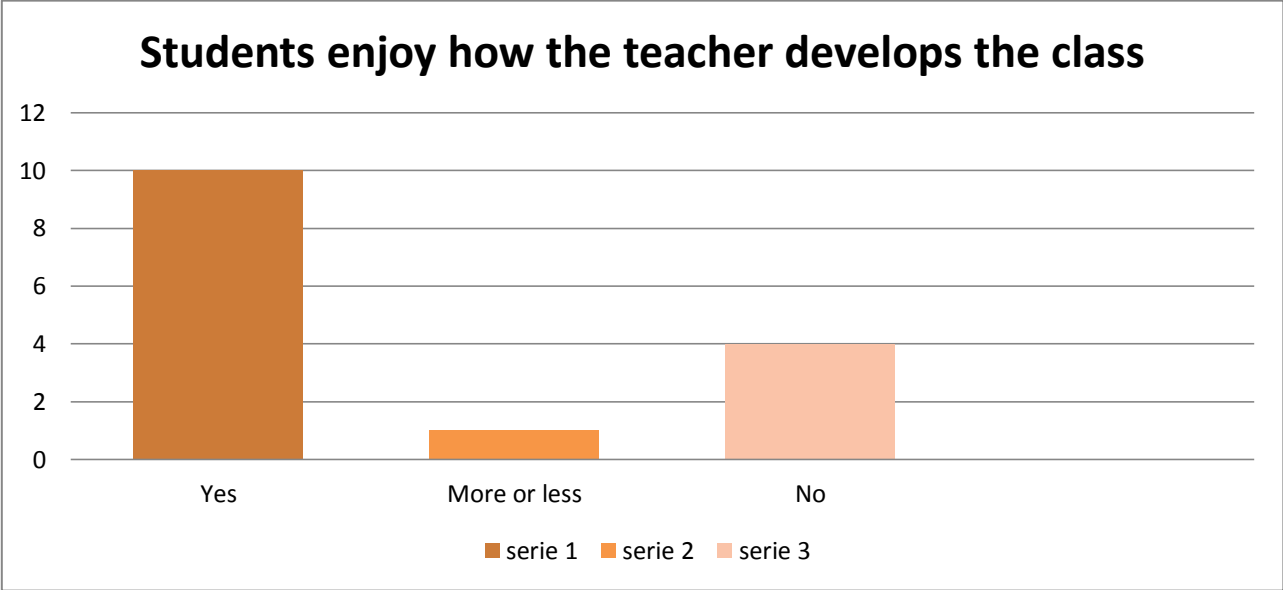


Figure 6 shows how students enjoy the developing of the class by the teacher. Source: Researcher’s create.

As is seen on graphic number six, the majority of the class likes how the teacher develops reading classes. This specific result makes the researcher think that the professor should take advantage of this positive point. As it was mentioned before, students do not receive enough reading. For this reason, it is important to include more constantly on the planning lesson reading activities in order to improve the interest for the students on this skill and get benefits from the learners’ positive attitude toward the lessons.

Question number 7 was an opened question in which the students had to answer what changes would they like to make to the reading lessons. If students considered that classes do not need any change, they had to skip the question.

The answers provided by the participants to this question were:

Table #2. Answers about changes students would like on their reading lessons.

Interviewer	Answer
One	
Two	
Three	
Four	
Five	I do not know
Six	More creative
Seven	Not boring classes
Eight	I do not know
Nine	I do not know
Ten	
Eleven	
Twelve	
Thirteen	Dynamic classes
Fourteen	
Fifteen	

*Table 2 shows the answers about changes students would like on their reading lessons
Source: Researcher's create.*

In table number two, the majority of the students skipped the question, three of them answered that they do not know, and three of them said that classes could be more creative or dynamic.

Since the majority of the class did not know what changes they can make in reading classes, it could be easier for the investigator to implement Metacognitive strategies to the group. The reason is to help the students think about their own thinking and implement those strategies in a creative way in order to make learners feel more interested for the reading classes.

Question number eight of the questionnaire was an open-ended question. Students were asked to indicate what types of books they find interesting. This was done with the purpose to have knowledge about what kind of readings the researcher can bring and plan in order to carry out the strategies set for this investigation.

The answers provided by the participants to this question were:

Table # 3. Students' answers to the books they find interesting.

Interviewer	Answer
One	Magic books
Two	War, Horror
Three	

Four	Action books
Five	Adventure, fantasy , action
Six	
Seven	Fantasy
Eight	No one
Nine	I do not know
Ten	Comedy
Eleven	
Twelve	
Thirteen	About wars
Fourteen	Science Fiction
Fifteen	Horror

*Table 3 shows Students' answers to the books they find interesting.
Source: Researcher's create.*

As is seen on table # 3, the answers were varied. Some students have a similar interest on book types, such as fantasy and horror. Others answered about wars, and some did not answer the question.

Since students have a similar taste in the genders, it becomes easier for the researcher to find the readings that will be used during the investigation. The researcher can bring more extra readings about similar topics, so the participants can choose the one they like the most in order to develop the Metacognitive strategies.

Question number nine intended to gather the participant's thoughts regarding three reasons why they consider that people do not enjoy reading. Among the answers given by the participants, we can find the information below.

Table # 4. Students' opinion about their consideration people do not enjoy reading.

• Interviewer	Answer
One	They think is boring
Two	Because they do not understand
Three	<ul style="list-style-type: none"> ➤ Because they think is boring ➤ Because they do not know how to pronounce the words ➤ Because they do not understand
Four	Because is an obligation
Five	Is boring
Six	Is boring and they do not understand
Seven	Because is boring
Eight	Because they do not understand
Nine	
Ten	Because they do not have time
Eleven	People do not understand
Twelve	They do not understand
Thirteen	It is not interesting
Fourteen	Because they do not enjoy the books
Fifteen	Books are boring

Table 4 shows Students' opinions about their consideration people do not enjoy reading. Source: Researcher's create.

Table number four shows that some of the students believe that reading is a boring think to do. The majority believes that people do not comprehend what they are reading. It is important for the researcher to implement the Metacognitive strategies to help the learners understand the readings in order to make them feel like in the reading classes. In that way, they will find reading more interesting.

4.1.4 Questionnaire to the teacher

The fourth instrument used by the researcher was a questionnaire to the teacher in charge of the group selected to carry out his investigation. The questionnaire intended to get the teacher's point of view regarding the reading skill and the strategies that she applies during the classes. The questionnaire was made with 10 questions, both multiple-choice and open-ended questions to ensure that the teacher had the opportunity to express her thoughts.

The first question asked to the teacher was to answer how often she teaches reading during the class. The professor mentioned that she sometimes teaches reading because she does not have the materials for this skill since they have to follow a textbook; due to that, she is the one who sometimes brings extra material for the students to read.

Second question asked to the teacher was if she considers that reading is an important skill to develop in English classes. It was a multiple choice question in which the options were yes, more or less and no. She answered to the interviewer that more or less because she believes that other skills such as speaking are more important than reading.

Question number three from the questionnaire the teacher had to number the skills of reading from one to four where one was the most important position and four the less important. In that question, the teacher placed speaking as the most important skill, listening was the second, reading the third one and writing the fourth one. The educator explained that she believes if students learn how to speak, then other skills will be easier for the students.

Question number four from the questionnaire was also a multiple-choice question. This question asked the teacher what percentage from 0% to 100% she considered that students read during each English class. The options available for answers were in ranges. The first range was from 0% to 30%, the second range was from 30% to 70% and the third range was from 80% to 100%.

In this question, the professor mentioned that her students read only 30% to 70% because she applied other strategies to transmit the knowledge, such as role-plays or listening activities.

On the next question (number five), the teacher was asked if she considers that her students had reading habits. The answer was, "No". This answer makes the researcher to think that in the interview to the students, some of them answered that they like to read when they are at home, but maybe they are not having a positive reinforcement by the teacher.

Question number six was an opened question. The researcher intended the professor to communicate what kind of strategies does she applies to implement reading. The professional mentioned that she uses reading comprehension, and also that sometimes she

asks students what kind of books they would like to read; this, in order to bring them some extra material for this skill.

The teacher mentioned that she did not know anything about Metacognitive strategies. In addition, she expressed that she only knew about reading comprehension as the strategy to improve the reading skill.

Question number seven was also an opened question. The teacher had to mention what obstacles she considers to face when she teaches reading. She explained that the majority of the class believes that reading is boring, and that they also have bad attitude towards the reading skill. The researcher suggested the teacher to make classes more creative and to take advantage of technology to call the attention of the students. Unfortunately, the teacher said that she does not receive support from the school, and she has to finish the whole book. For that reason, it was hard for her to implement strategies in the reading skill.

Last question was question number nine. The teacher needed to answer if she considers she had the enough material to develop reading classes. The educator answered that “no”. The reason is that they only have to work with the book. If they want to bring extra material, teachers have to pay for it, and since the students do not have a positive attitude toward reading, she does not worry about it.

4.1.5 Post-test

The researcher almost at the end of the investigation applied a Post-test. After having applied different Metacognitive strategies in order to help the students improve reading skill, the post-test was the instrument used as an evaluation for the strategies.

Some of the strategies applied were mental maps and reading aloud. They were developed in a creative way to help students enjoy the process.

After the application of Metacognitive strategies, the grades obtained by the students were:

Table#5 Grades obtained by students on the post-test.

Student	Grade
One	100
Two	82
Three	78
Four	100
Five	98
Six	75
Seven	82
Eight	87
Nine	100
Ten	96

Eleven	85
Twelve	78
Thirteen	100
Fourteen	100
Fifteen	89

Table 5 shows the results for the post-test.

Source: Researcher's create.

As in seen on the table number five after applying Metacognitive strategies the grades of students in the post-test showed an important improvement. Students seemed to be more interested about reading; and most important, they could comprehend what they were reading.

Chapter V

Conclusions and Recommendations

According with Cambridge dictionary, the conclusion refers to “The final part of something”. In this chapter the conclusions of the researcher about the present investigation are going to be explained, also some recommendations are going to be given.

5.1 Conclusions

Based on the results of the instruments applied on fifth grade class and the use of different Metacognitive Strategies, the research reach a number of conclusions that are going to be discussed below.

5.1.1 To identify students deficiencies in reading.

The infrastructure of fifth grade classroom is a bit deteriorated. It lacks of windows, and it does not have much light; because of that, students cannot read clearly. On the other hand, the class does not have classroom arrangement; this could be a distraction for the concentration of students when it comes to reading and understanding.

The lack of technological support in the classroom reduces the motivation of the students, and it affects the teacher’s performance in the classroom specifically in the reading area.

The teacher considers that the reading ability is not important. She focuses on developing more the other skills and because of that, the reading skill is affected.

The teacher rarely practices reading with her students in the classes. This fact means that the students do not have the adequate motivation for this skill.

The teacher does not make specific planning for the reading area. For this reason, it shows the lack of interest of the educator for this area. It definitely means that students will not show an interest on developing this skill.

There is a lack of supporting reading material for the development of the classes. The only material used is a textbook that lacks of readings which shows poor reading habits for this group of students.

Students present a negative attitude toward the reading skill. They thought that reading is a boring skill. Due to that, students create a barrier when they have to develop this skill.

Fifth grade students at Braulio Carrillo School do not have the reading habit when they are at home. For this reason, that issue affects the development of this skill in the classroom too.

Fifth grade students in classroom had a good behavior in the class, and they were also respectful with the teacher. They enjoy the English class, and they make a big effort to learn the language. That means that with the correct use of strategies and motivation in the reading area, they will have an excellent development in the reading area if it is explored.

5.1.2 To apply different techniques to improve the English reading proficiency.

Before starting the investigation, the researcher applied a pretest in order to know the level of the students in the reading area. The results of the pretest showed that fifth grade students do not have an accurate development of the reading skill.

The teacher did not apply techniques to improve Reading. Since the first time of the investigation, reading was not a priority in the classroom. The teacher gave more importance to the other skills, and reading was practiced only two or three times per week. When the teacher practiced reading inside the classroom, she did not use a special technique to teach it, and students just read a short paragraph with a short activity about it.

Students felt positive when applying the techniques. They started to participate more. The researcher noticed their passive mode changing into an active student. They accepted the metacognitive strategies positively.

A strategy such as mental maps created a great impact on students. The way it works by knowledge expressed in a schematic way through key words and drawings was something new for them. Students were curious on how this strategy helped them improve their reading skill. For that reason, the researcher felt satisfied with the results from this technique.

The moment the researcher introduced the V of Gowin, students were interested on how an instrument like that will help them improve their reading. It was exciting to explain how these V of Gowin works. Students did not miss any point related to this instrument. The innovative strategy for them caused a positive change in the way students saw reading.

The moment they learned how to put into practice this instrument, the changes were remarkable, and for the interest of this investigation, the results were really positive.

The professor from this group felt involved during the process of this investigation. The moment the researcher started to practice the reading aloud strategy, the teacher wanted to participate and joined the activity. The educator took the leadership on reading the story prepared for this activity and followed the steps planned to practice with the students. The researcher ended as an observer taking notes of the results from this strategy. Finally, the reading aloud strategy became an interesting activity in which students liked it and the professor expressed her satisfaction to continue applying the strategy more continuously during her lessons.

At the very end of the investigation, training sessions about metacognitive strategies to the staff were planned. The teachers showed a positive attitude toward the application of them. They felt amazed about the results presented with the fifth grade of the institution. They definitely considered that gathering knowledge about metacognition might be an excellent tool to improve reading skill on students and indirectly to progress the other skills.

5.1.3 To evaluate the results of using Metacognition.

The researcher applied different Metacognitive strategies on the fifth grade class in order to teach how to develop the reading skill in an easy way, and to teach students techniques to develop the moment they are reading. After the application of the strategies, the researcher applied a post-test in order to confirm if Metacognitive Strategies were effective. The results were positive because all students presented excellent grades. That

means that with the correct use of learning strategies, students can change their thought about something.

Students enjoy reading skill when it is creative. After the application of Metacognitive strategies, text related with the likes of the students and a well-prepared lesson plan, students change their attitude about reading skill. They took turns when reading aloud and with the help of colorful mental maps, they made it by themselves. They understood the central meaning of a text, and the most important is that students enjoyed the class.

Metacognition was difficult for some learners. Not all the students have the capacity to regulate themselves. For some students, it was difficult to understand the best way to acquire language since they were used to memorize everything. Fortunately, at the very end metacognitive strategies were effective and helped students improve their reading skill, and the researcher to achieve the goal.

Students improve reading after the techniques applied. At the beginning of the investigation, fifth grade students did not have any interest on reading aloud, comprehend a text, and answer questions. They seemed to have a low level of reading. After the techniques applied, students learned how to solve problems the moment they did not understand something. They also acquired vocabulary since they made questions about meanings of the words. They also tried with the help of mental maps to understand a text and express their thoughts. At the end of the research, students improved their reading level, and they were motivated.

6.1 Recommendations

It is important that Eco Centro Educativo Braulio Carrillo invest in the infrastructure of the classroom because students need to feel comfortable when they are studying. In addition, the institution should invest in technology supplies. It is also important because it makes classes more interactive and creative. Also, the teacher will be benefited because she can plan classes with these resources in order to call more the attention of the students.

The teacher needs to give more importance to the reading skill. Studies have shown that if reading skill is well developed in classes, other skills such as grammar and listening are going to be improved. Moreover, the teacher needs to take a specific time for this strategy in her lesson plan. The habit of reading every day will increase the motivation of students.

It is important for the teacher to work motivation on students. It is necessary on trying to develop creative classes with different strategies in order to change the attitude of the students when reading. The teacher needs to take into account that students enjoy English classes, and that is a big opportunity to give emphasis of reading.

Bibliography

- Sampieri, H., & Collado, C., & Lucio, M. (2010). Metodología de la Investigación. México: McGraw Hill Interamericana.
- Hernández, R. (1991). Metodología de la Investigación. México: McGraw-Hill.
- Oxford, R.L (1991). Language learning strategies. British : Oxford Editorial
- Hargrove, R.A (2012). The Impact of Metacognitive Instruction on Creative Problem Solving. United States. University of Kentucky
- Pihlgren, A (2013). Planning for Thinking and Cognitive Development of Students. Stockholm University, Sweden

Web References

- <https://www.reference.com/education/observation-checklist-3339276cf1431d40> Retrieved on October 20, 2017.
- <https://www.thefreedictionary.com/investigation>. Retrieved on November 5, 2017.
- <https://study.com>. Retrieved on October 8, 2010.
- <https://libguides.usc.edu>. Retrieved on July 20018.

Appendixes

Appendix # 1

Pre test

The main objective of this pre- test is to observe the capacities in reading skill of the 5th grade students from Braulio Carrillo School, in order to recognize what are their weakness and strengths on this skill. The information obtained will be treated just for educative purposes and with total confidentiality.

Total points:

Total points: 11 pts.

Obtained points: _____

Score:

Student's name: _____ Group: _____

Part 1

Reading comprehension

Football

The American type of football was developed in the 19th century from soccer and rugby football. Played by professionals, amateurs, college, high school, or

young children, football in America is one of the most popular sports. It attracts millions of fans each fall and people are very supportive of their favorite teams. The origin or beginning of football may have been a game played by the ancient Greeks called harp Aston. In this game, there was no limit to the number of players. The ball was kicked, thrown, or run by the players and the object was to move a ball across a goal by kicking. The football playing field of today is rectangular in shape and measures 100 yards long and 53.5 yards wide. White lines are painted on the playing field to mark off the distances to the end zone. The game is divided into four quarters, each fifteen minutes long. The first two quarters are known as the first half. There is a rest period between the two halves which usually lasts about fifteen minutes. Each team has eleven players. Each team has offensive players (play when the team has possession of the ball) and defensive players (play when the other team has possession of the ball). Players are required to wear protective equipment to help keep the body safe during the game. Helmets are worn to protect the head and face area. Pads are worn to protect the shoulders, arms, and legs. Protective equipment must be worn because of the body contact players have during the game. Officials supervise the game and are considered to be very important to the game of football. They carry whistles and flags and make certain that the rules of the game are followed during the

game. The football is made of leather and is brown in color. It is shaped much like an oval and has white rings near each end of the football. These rings help the players see the ball when it is thrown or someone is running with it. The eight stitches on the top of the football help players to grip or hold the ball when throwing or passing. The most famous football game of the year is the Super Bowl that is played in January or February. It is televised around the world and is watched by millions of people each year.

A. Instruction: Read the following sentences and mark with an X the correct option. 7 pts

1. What is the most famous football game each year?

A. the Georgia-Florida game

B. the Super Bowl

C. the Alabama-Auburn game

2. What shape is the football?

A. Rectangular

B. Circle

C. Oval

3. Why are there white rings on each end of the football?

A. To help players see the ball

B. To help players score

C. To help players run

4. Why do players need protective equipment during the game?

A. to make their uniforms fit

B. to see the ball

C. to keep the body safe

5. Who plays American football?

A. Adults and teenagers

B. Professionals players

C. All of them

6. What do officials do during the game of football?

A. watch the game

B. take up tickets

C. make sure the rules are followed

7. The word grip means to _____.

A. end zone

B. score during the game

C. hold tightly

Part II Short answer 4 pts

A. Complete the following sentences according with the previews text.

1. The American football was developed in _____

2. Helmets are worn to protect _____

3. How many players have each team? _____

4. What is the Super bowl? _____

Appendix # 2

Observation Checklist

1 = Not observed 2= More emphasis recommended 3= Accomplish very well

School facilities and Infrastructure

Enough light and ventilation	1	2	3
Classroom arrangement	1	2	3
Multimedia and technology	1	2	3
Classroom is organized and clean	1	2	3
There is reading material for the students	1	2	3

Teacher

There is constant positive reinforcement in reading activities	1	2	3
Reading activities are varied to meet the needs of all learners	1	2	3
Teacher manage a well prepared lesson plan	1	2	3
Teacher uses specific time for reading activities	1	2	3
Teacher speaks at a proper speed for comprehension and interest	1	2	3
Teacher had an adequate use of the English language	1	2	3
Learning strategies were applied	1	2	3
Teacher has good management of the group	1	2	3
Tone of voice	1	2	3
Reading Classes are creative	1	2	3

Students

Students are attentive and interest on reading	1	2	3
Students follow directions when performing reading activities	1	2	3
Students are respectful	1	2	3
Students enjoy reading classes	1	2	3
Students ask questions to get more information	1	2	3
Students has interest on books and readings	1	2	3

Materials

Teacher includes reading activities	1	2	3
The teacher includes extra material when teaching reading	1	2	3
The teacher uses a variety of visual aids and props to support student learning	1	2	3
Students reacted positive to the type of materials used for reading activities	1	2	3

Appendix #3

Interview to the teacher

The main objective of this questionnaire is to gather general information about different variables in study related to the English teacher from Braulio Carrillo School in order to establish an analysis, which benefits the institution and school population in the teaching-learning process. The information obtained will be treated just for educative purposes and with total confidentiality.

1. How often do you teach reading during the class?
 Always
 Sometimes
 Never

2. Do you consider reading as important skill to develop?
 Yes
 More or less
 No

3. From 1 to 4, having 1 as the most important position, place an order to the skills you consider prioritizing on students.
 Reading
 Listening
 Writing
 Speaking

4. What percent do you consider your students read during each class?
 0% - 30%
 30% - 70%
 80% - 100%

5. Do you consider your students have good reading habits?

- Yes
- More or less
- No

6. What strategies or techniques do you apply in class in order to implement reading?

7. What obstacles do you consider to face when teaching reading?

8. What resources do you use to teach reading during classes?

9. Do you consider the resources you have are enough to teach reading? Why?

10. What changes would you like to make to the reading lessons?

Appendix # 4

Observation Checklist

1 = Not observed 2= More emphasis recommended 3= Accomplish very well

School facilities and Infrastructure

Enough light and ventilation	1	2	3
Classroom arrangement	1	2	3
Multimedia and technology	1	2	3
Classroom is organized and clean	1	2	3
There is reading material for the students	1	2	3

Teacher

There is constant positive reinforcement in reading activities	1	2	3
Reading activities are varied to meet the needs of all learners	1	2	3
Teacher manage a well prepared lesson plan	1	2	3
Teacher uses specific time for reading activities	1	2	3
Teacher speaks at a proper speed for comprehension and interest	1	2	3
Teacher had an adequate use of the English language	1	2	3
Learning strategies were applied	1	2	3
Teacher has good management of the group	1	2	3
Tone of voice	1	2	3
Reading Classes are creative	1	2	3

Students

Students are attentive and interest on reading	1	2	3
Students follow directions when performing reading activities	1	2	3
Students are respectful	1	2	3
Students enjoy reading classes	1	2	3
Students ask questions to get more information	1	2	3
Students has interest on books and readings	1	2	3

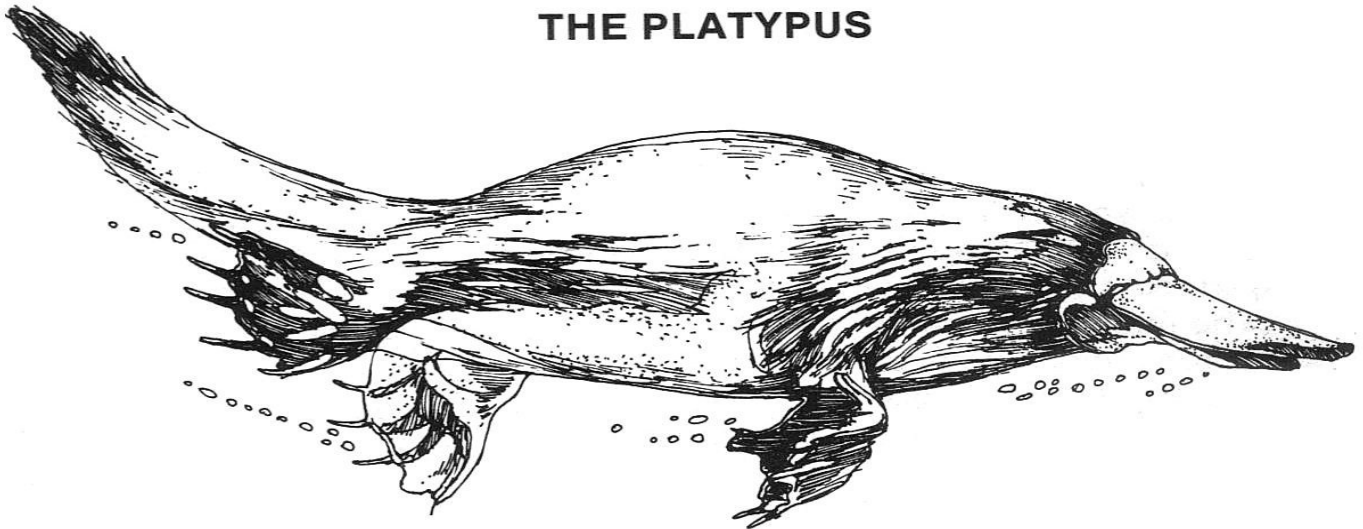
Materials

Teacher includes reading activities	1	2	3
The teacher includes extra material when teaching reading	1	2	3
The teacher uses a variety of visual aids and props to support student learning	1	2	3
Students reacted positive to the type of materials used for reading activities	1	2	3

Appendix # 5

Post Test

THE PLATYPUS



Directions: Read to find out what kind of animal the platypus is. Then answer the ten questions by putting circles around your choices. Look back to the selection if you need help.

The duck-billed platypus is a very odd creature. When sightings of this animal were first reported in 1798, European people refused to believe the stories. Scientists were also puzzled, because they had never seen the platypus's strange features together in one animal. For over eighty years, scientists questioned whether a platypus was a bird, reptile or a mammal.

The word platypus comes from the Greek language and means "broad-footed." The first part of the word, "platy" means broad or wide and "pous" means foot. The name suggests that the animal has webbed feet, which it does. The platypus uses its feet for swimming, diving, and digging. In fact, it has webs of skin between its toes that resemble the webbed feet of many birds.

Typical of a mammal the platypus is warm-blooded and nurses its young with milk. Like mammals, its body is covered with fur. The young of most mammals are born alive, but the platypus is different from most mammals because it lays eggs! The mother platypus lays one to three eggs at a

4. How long is an adult platypus's body?

- a. 30 to 33 inches
- b. 18 to 20 inches
- c. 10 to 14 inches

5. Where could you see a platypus?

- a. In an Asian fish pond
- b. In a North American stream
- c. Along the banks of an Australian river

6. How does a male platypus protect itself?

- a. It uses its poisonous spurs
- b. It bites with its rubbery nose
- c. It claws with its webbed feet

7. How is a platypus like some birds?

- a. It is cold-blooded
- b. It has wings and feathers
- c. It has a bill and webbed feet.

8. How is a platypus like a reptile?

- a. Its eggs are soft and leathery.
- b. It has scales.
- c. It is cold-blooded.

9. What kind of animal is the platypus?

a. mammal

b. reptile

c. bird

10. The main idea of this selection is

a. how the platypus uses the spurs on its back legs

b. how the platypus lays eggs

c. how a platypus has many strange traits