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IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

**Improving Reading Comprehension Test Results through Direct Instruction of  
Metacognitive Strategies for Reading Comprehension of Eighth Graders in a  
Blended Learning Environment**

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Graduate diploma in TESOL

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Chía, Colombia

2017

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Research report submitted  
in fulfillment of the requirements for the degree of  
Master in English Language for Self-directed Learning and  
Graduate diploma in TESOL

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Department of Foreign Languages and Cultures

Universidad de La Sabana

Chía 2017

# IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

## Declaration

I hereby declare that my research report entitled:

Improving Reading Comprehension Test Results through Direct Instruction of Metacognitive Strategies for Reading Comprehension of Eighth Graders in a Blended Learning Environment

- is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared and specified in the text;
- is neither substantially the same as nor contains substantial portions of any similar work submitted or that is being concurrently submitted for any degree or diploma or other qualification at the Universidad de La Sabana or any other university or similar institution except as declared and specified in the text;
- complies with the word limits and other requirements stipulated by the Research Subcommittee of the Department of Foreign Languages and Cultures;
- has been submitted by or on the required submission date.

Date: February 2017

Full Name: EDWAR ANTONIO PRIETO RODRIGUEZ

Signature:

A handwritten signature in black ink, appearing to read "Edwar Prieto". The signature is written in a cursive style with a large, prominent letter 'P'.

**Abstract**

This document reports the effects of direct instruction of metacognitive strategies for the development of reading comprehension skills by using a blended learning methodology which involved technology mediated and face to face activities. This study was carried out with 35 eighth graders at Carlo Federici I.E.D School, located in Bogotá, Colombia.

The intervention involved 16 sessions implemented during a two month period. Prior to the intervention, the problem was identified and inquiry about the level of students' awareness of the systematic use of reading comprehension strategies was effected through the application of the Metacognitive Awareness of Reading Strategies Inventory (MARSİ). With the data collected, students' needs were identified regarding the use of reading comprehension strategies, and subsequently, sessions for the intervention were programmed considering metacognitive strategies suggested by Flavell (1978), Brown (1980), Baker & Brown (1984), and Koda (2005), focusing mainly on *planning, monitoring and evaluating*.

Through the application of a *Pre-test* and a *Post-test* as well as detailed intervention descriptions taken from the *Teacher's journal* and *Students' journals*, it was possible to establish that, after the intervention, most students improved their results on reading comprehension tests, showing relationship and effectiveness between the systematic use of strategies and their reading comprehension skills.

*Key words:* Reading comprehension, reading strategies, metacognition, metacognitive strategies, blended learning.

## Resumen

Este documento reporta los efectos de instrucción directa de estrategias metacognitivas para el desarrollo de habilidades de comprensión de lectura utilizando una metodología mixta la cual involucra actividades mediadas por la tecnología y actividades presenciales. Este estudio fue realizado con 35 estudiantes de grado octavo en el colegio Carlo Federici I.E.D, localizado en Bogotá, Colombia.

La intervención involucró 16 sesiones implementadas durante un periodo de dos meses. Previo a la intervención, el problema fue identificado e indagación acerca del nivel de conciencia de los estudiantes en el uso sistemático de estrategias de comprensión de lectura fue llevado a cabo a través de la aplicación del cuestionario MARSÍ (inventario sobre estrategias metacognitivas de lectura). Con los datos recolectados, fueron identificadas las necesidades de los estudiantes respecto al uso de estrategias de comprensión de lectura, y posteriormente, las sesiones para la intervención fueron programadas considerando estrategias metacognitivas sugeridas por Flavell (1978), Brown (1980), Baker & Brown (1984), y Koda (2005), enfocándose principalmente en *planear, monitorear y evaluar*.

Mediante la aplicación de un *Pre-test* y un *Post-test*, junto con descripciones detalladas de la intervención tomadas del *diario del Profesor* y el *diario de los Estudiantes*, fue posible establecer que, después de la intervención, la mayoría de los estudiantes mejoró sus resultados en pruebas de comprensión de lectura, evidenciando efectividad y relación entre el uso sistemático de estrategias y sus habilidades para la comprensión de lectura.

*Palabras Clave:* Comprensión de lectura, estrategias de lectura, meta cognición, estrategias metacognitivas, aprendizaje mixto.

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## Chapter One: Introduction

Reading comprehension has been considered a weakness of the Colombian educational system. Every year, state examinations are held in order to assess educational quality at different levels of the Colombian educative system. Lately, results in local SABER examinations, led by Instituto Colombiano para el Fomento de la Educación Superior - ICFES (Colombian Institute for Promotion of Higher Education) and international examinations as the Programme for International Student Assessment (PISA), have shown the weakness of Colombian students in reading comprehension skills, being the reading area the one with lower results obtained by students, according with the results published by ICFES in 2015 and by PISA 2012. The analysis of PISA 2012 results (OECD, 2014) show that “Shanghai - China, Hong Kong China, Singapore, Japan and Korea are the five highest performing countries and economies in reading in PISA 2012” (p.4). “On average across OECD countries, 8% of students are top performers in reading (Level 5 or 6). These students can handle texts that are unfamiliar in either form or content and can conduct fine grained analyses of text” (p. 4). Meanwhile, Colombia obtained 403 points in a scale of five levels of reading performance, in which the highest score is 700; this means Colombia was classified in level 1, where scoring goes from 335 to 407 points. “These low levels of performance tend to be coupled with low levels of engagement with school and – as observed in PISA 2009 – with low levels of engagement with and commitment to reading” (OECD, p.9).

This trend appeared not just in public schools, but also in the private ones, as shown by PISA results (2012), which tests both types of schools, questioning educators on how to improve reading skills and how to motivate students to read in a cultural environment where the reading rate in Colombia is one of the lowest in Latin America with an average of 2,2 books per person read in a year, compared with Chile, where 5,4 books

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are read per person in the same period of time, and Argentina, where 4,6 are read, according with a study carried out in 2014 by *Centro Regional para el Fomento del Libro en América Latina y el Caribe* (Cerlalc). Considering this issue, generating a reading culture and improving reading skills is becoming a challenge.

The low proficiency levels of reading comprehension are also perceived at institutional level in Carlo Federici School. According to the Sistema Institucional de Evaluación Estudiantil - SIEE (Institutional System of Students' Evaluation), there are three dimensions to consider when evaluating students' general performance by the end of each one of the four academic terms during a year, and they are: 1) "hacer", which corresponds to the students' assessment on classwork and homework; 2) "saber", the end of term examination, which in the case of the EFL subject contains ten KET type questions; and 3) "ser", which corresponds to students' behavior, good manners and attitude shown during the lessons.

Results obtained from the examinations administered by the educational institution Carlo Federici I.E.D, corresponding to dimension 2 (saber), showed that nearly 80% of students failed the EFL examination carried out at school, information supported by statistics provided from the Language Department at the institution. This phenomena has been present since the inclusion of the end of term examinations at Carlo Federici School, which have a value of 30% of the total grade each term.

Considering the importance of these examinations at the School, its assigned value in quantitative academic performance, its influence as a practice for external examinations - SABER, and due to the low results obtained by students, the necessity of including an action plan for developing and improving students reading comprehension skills through the conscious use of metacognitive strategies emerged. Concern about the importance of developing reading comprehension skills in students arises from the relevance of this process in language learning. The role of reading comprehension in second language

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acquisition has been widely explored in the EFL field. Harmer (2001), recognized that the act of reading in second language learning impact positively the development of other language skills such as speaking and writing. Other view about the relationship between reading comprehension and language learning is the one stated by Hussain (2005), who identified the capabilities that a person should have for comprehending English language. This capabilities are greatly related with reading skills and strategies such as: understand the lexical and the structural meaning of the words, phrases and sentences, guess the meaning of unfamiliar words while reading a text, skip unnecessary information while skimming, differentiate between facts and opinions locate the topic sentence in a paragraph, among others. Finally, and considering the direct effects of language input in language acquisition (Krashen, 1982), it is important to mention the importance of reading in the “internalization” period, where learners of a second language concentrate on understanding the meaning of oral and written text to help themselves to internalize the associations between form and meaning (Khul, 2009). This study aim to contribute to the improvement of the effectiveness of second language learning through the development of reading comprehension abilities.

### **Statement of the problem**

At Carlo Federici School, where research was conducted, results in internal examinations in different subjects are considered low. According to institutional statistics provided by the academic coordination of the institution, 75% of students fail end of term examinations, which are aligned with SABER standardized tests type.

Teachers at Carlo Federici School consider that lack of reading comprehension skills is the main cause of students´ academic failure, based on interviews carried out as part of this research. However, external examinations, specifically SABER 11, locate Carlo

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Federici School among the best scores in the locality of Fontibón in Bogotá – Colombia.

Nevertheless, results are still low if they are compared at a national level.

SABER 11 examinations assess students' knowledge and skills in five components:

1. Lectura critica (*critical reading*)
2. Matemáticas (*mathematics*)
3. Sociales y ciudadanas (*Social studies and citizenship*)
4. Ciencias naturales (*Natural science*)
5. Inglés (*English*)

Each component is evaluated in a 0-100 scale, including four levels of performance, Bajo (*Low*) from 0 to 30, Medio bajo (*Medium-low*) from 31 to 45, Medio alto (*Medium high*) from 46 to 70 and Alto (*High*) from 71 to 100.

The following chart shows the results obtained by eleventh graders (morning shift) in SABER 11 examination in 2015:

Table 1.

*SABER 11 Results Colegio Carlo Federici morning shift (2015)*

<b>Place</b>	<b>Component</b>	<b>Score over 100</b>
1	Matemáticas	59,08
2	Inglés	58,01
3	Ciencias naturales	57,15
4	Sociales y ciudadanas	57,08
5	Lectura critica	56,45

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Despite the recognition as one of the tenth best results at SABER 11 examination among public schools in Bogotá with Medium High scores, results must improve for the purpose of reaching the school expected outcomes of being located at the High Level in the results of SABER 11 examination.

Considering the role of the researcher as an English language teacher of the institution where the project is carried out, and the low results obtained in the English component (Inglés), it is evident that actions were needed to be taken in order to find out if helping students develop reading metacognitive strategies would influence academic success and particularly students' performance on internal and external EFL examinations like SABER 11. Another aspect which called the researcher's attention, regarding students' results in SABER 11, was the fact that the critical reading component (*lectura crítica*) was located in the last place, supporting the proposal of this study to enhance the acquisition of effective reading comprehension strategies and reading metacognitive strategies.

During the implementation and intervention sessions in this study, learners were provided the opportunity to develop their cognitive skills, to understand and select the reading strategies they considered most important and useful through the reading process as well as identify the aims to be achieved through the development of tasks they performed in order to help them be able to set their own academic and personal goals. Additionally, teachers and learners took advantage of the feasibility of using technology mediated resources along the development of the action research process through a blended-learning methodology, considering the advantages of this way of instruction to foster participants' engagement and motivation and in the development of the study and for the possibilities it can offer to keep frequent communication between the researcher and the participants. Additionally, blended-learning was seen by the researcher as a

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teaching and learning tool which allows the teacher to expand the time available with students in school with an educational environment available out of school schedule.

In this study, it is believed that by designing and implementing an intensive reading course aimed at the development of six reading metacognitive strategies (*asking questions, predicting-infering, identifying main idea, analyze text structure, vocabulary cognates, summarize*) through direct instruction in a blended-learning environment, learners are given the opportunity to make decisions and contribute responsibly to the improvement of their literacy skills, which might be reflected in better results in internal as well as in external English language reading tests. This experience might have a positive impact not only on learner's context, but it can also enhance other teachers from different schools with similar issues to implement new strategies and approaches, pursuing the improvement of their pedagogical practice.

### **Research Question**

Taking into account the role of reading comprehension in educational settings and especially in second language learning, along with the particular context and issues aforementioned, the following research question was formulated as a cornerstone for the development of this study:

What are the effects of using a blended methodology involving reading comprehension activities aimed at developing planning, monitoring and evaluating metacognitive strategies for improving results on reading comprehension EFL (English as a Foreign Language) tests in eighth graders?



**Research Objectives**

- To design and implement an intensive reading course aimed at the development of reading metacognitive strategies
- To determine the effects that direct instruction of reading metacognitive strategies has on learner's performance in EFL examinations.
- To foster students' awareness on the use of reading comprehension strategies and procedures.
- To determine the benefits of using a blended learning environment in the learning of metacognitive reading strategies.

## **Chapter Two: Theoretical Framework**

This chapter introduces important concepts, definitions and constructs that are essential to understand the formulation and execution of this particular research project. It also provides relevant insights about previous studies which have been carried out in the fields of *reading comprehension* and *metacognition*, among other key concepts involved along this research.

It is relevant to highlight important concepts which are related with the core of this study. First, a description of the reading models, top-down and bottom-up will be introduced, followed by the definition of the interactive reading model, as well as the intensive reading approach proposed for the intervention stage. Then, approaches to reading instruction focused on direct instruction of reading comprehension strategies will be presented. As the intervention of the present study involves the instruction of the use of strategies, then the concept of learning strategies, including metacognitive, cognitive and socio-affective strategies as well as reading comprehension strategies will be broadened. Finally, features and implications of using a blended-learning methodology will be introduced.

### **Reading Models**

This research focuses on the ability of reading and the development of its effectiveness when taking ESOL reading tests. Different views, thoughts, insights opinions and theories have been developed around the concept, definition, and understanding of reading as a behavioral process and also as a cognitive one. When considering reading as a behavioral process, the act of reading is conceived as an associative perceptual act. From Bloomfield's view (1938), reading is nothing more than the correlation of a sound image with its corresponding visual image, considering reading as learning to pronounce

the written representation of words. However, this definition moved to a more cognitive oriented view in which thinking processes were considered. For Richards (1938), reading is not only an understanding of the literal or sense meaning of a passage, but also the meanings implied by the author's mood, his tone, his intent and himself. Later, Goodman (1968) referred to this action as an interaction between the reader and the written language, in which the reader attempts to reconstruct a message from the writer.

As a comprehension process, reading also involves using alternatively some approaches such as the bottom-up and the top-down reading models.

### **Bottom-up model**

Although the term *bottom up* has been generally related to the behavioral view of reading and the term *top down* related to the cognitive view, this study conceived these two terms from Goodman's view (1967), who characterizes the *bottom up* model description of the reading process as 'the common sense notion' by stating that "reading is a precise process involving exact, detailed, sequential perception and identification of letters, words, spelling patterns, and larger language units" (p. 135).

### **Top-down model**

This author also introduces the idea of the "*top down*" reading process to highlight the interaction that takes place between the reader and the text. According to Goodman (1967) it is a "psycholinguistic process by which the reader, a language user, reconstructs as best he can, a message which has been encoded by a writer as graphic display" (p. 135). Goodman (1967) describes this model of the reading process in the following way:

"Reading is a psycholinguistic guessing game which involves an interaction between thought and language. Efficient reading does not result from precise perception and identification of all elements, but from skill in selecting the fewest,

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most productive cues necessary to produce guesses which are right the first time”  
(p. 108).

The following table shows main features of teaching under Bottom-up and Top-down models adapted from Silvester & Farrell (2009).

Table 2.

*Features of teaching under Bottom-up and Top-down reading models*

<b>Bottom-up Reading Model</b>	<b>Top-Down Reading Model</b>
<ul style="list-style-type: none"><li>● Involves perceiving and decoding almost every letter or word in order to grasp meaning.</li><li>● Reflects lower-level linguistic processing.</li><li>● Construction of meaning from smaller to larger linguistic units.</li><li>● Can be referred to as scaffolding activities.</li><li>● Includes analytical and detailed oriented strategies.</li><li>● Text based</li><li>● Aims for developing building blocks necessary for text interpretation</li></ul>	<ul style="list-style-type: none"><li>● Use of background knowledge.</li><li>● Higher level of cognitive processes direct the reading activity.</li><li>● Promotes reading as an active process.</li><li>● Meaning does not require 100% of word identification.</li><li>● Reader based</li></ul>

During intervention sessions,

In light of the above, reading instruction should aim for the setting of objectives and development of activities oriented towards recognition and practice of bottom-up as well as

top-down reading approaches for achieving effective reading as proposed in the interactive reading model described as follows.

### **Interactive Reading Model**

Based on Goodman's reading models, bottom up and top down, this study frames reading instruction into an *Interactive Reading Model -IRA*, a term used to define the combination of both *bottom up* and *top down* processes, considered as a primary ingredient in successful teaching methodology, due to the importance of both processes in the development of effective reading skills, (Brown, 2001).

IRA has recognized that there is "no single method or single combination of methods that can successfully teach all children to read" (p. 2). IRA has also remarked and recognized the value of the knowledge of multiple methods of teaching reading that teachers should have, as well as awareness of their students' learning styles and preferences in order to create the appropriate balance of methods needed for the children they teach. (International Reading Association, 1998).

The combination of both reading models, bottom-up and top-down in teaching reading, has been a matter of interest for research, starting by Rumelhart (1977) who developed the *Interactive Reading Model*, in which the author recognizes the interaction of bottom up and top down processes simultaneously through the reading process, considering that successful reading is both a perceptual and a cognitive process. The *Interactive Reading Model* has been supported by other authors. Years later, Davis & Bistodeau (1993) stated that bottom-up strategies alone are not sufficient for global comprehension and top-down strategies alone result in a "short circuit", bringing the combination of both of them as a suitable option for improving reading effectiveness. Later, Nunan (1999) argued that reading is an interactive process in which the reader constantly shuffles between bottom-up and top-down processes. Considering previous

author's position and insights about the benefits of an interactive reading model for reading comprehension, the present study has been framed under this specific model.

Reading instruction, under the interactive reading model framework requires teacher's efforts on developing efficient top-down and bottom-up reading strategies in their learners (Nunan, 1999), supported by this view, the present study involves direct instruction of metacognitive reading strategies which are defined hereunder. Bearing in mind the conditions of this study, regarding educational settings, time available for the development of the project and the objectives to be achieved, it was decided to plan an intensive reading course for the implementation stage.

### **Intensive reading**

Miller (2011) defines intensive reading as a teacher centered approach in which the instructor directs most of what happens in class including what to read, when to read, what vocabulary, grammar, text organization or comprehension points are to be discussed. This author also states that activities under intensive reading approach attend to issues of grammar, vocabulary, text organization and meaning that arise from the readings. Some benefits of intensive reading approach for improving reading comprehension have been argued by different authors. Pollar, Durodo, Gonzalez, Simmons, Kwok, Davis & Taylor, (2011 cited in Erfanpour, 2013) regarded intensive reading as an effective tool for improving reading comprehension and Paran (2003) considers that teachers require intensive reading methodology to enhance learning the three phases of pre, while and post-reading for better language preparation and activation strategies.

Regarding the above mentioned conceptions about reading, this study considers both models of reading, bottom up and top down for the development and design of instruction materials used during intervention sessions and implementation in an intensive reading course proposed by the researcher.

### **Reading Instruction**

Considering reading as an activity which involves cognitive processes, teaching and guidance on the use of strategies that facilitates understanding of written texts can be brought into the language classroom in order to make the reading process of learners more effective and help them improve their reading proficiency.

The role of reading in language learning is determined by its purposes, which according to Nuttall (1982), are different in the first language compared to the purposes of reading in a foreign language. This author suggests that a typical use of reading in a foreign language class is to teach the language itself and, in this way, vocabulary, structures and other aspects can be learnt through reading in a foreign language. Supported by Nuttall's (1982) view on the role of reading in language learning, this study gives importance to reading instruction in a foreign language with the purpose of developing learners' comprehension ability of written texts and test performance in EFL. It also involved direct or explicit instruction as a means to carry out the intervention sessions along the development of the different implementation stages.

### **Direct instruction**

The term Direct Instruction (DI) is initially recognized by the idea of an explicit, teacher-directed model of effective instruction developed by Engelmann (1960). This pedagogical model proposes a curriculum design and instructional delivery in which explicit and systematic instruction takes place. Some of the main features of Engelmann's DI Model includes: instruction based on scripted lesson plans, frequent assessment and careful monitoring of the program in order to ensure efficiency. Although at the beginning DI model was implemented in disadvantaged children, Engelmann was able to further demonstrate effectiveness of DI with middle class and above average students. It is important to mention that the concept of direct instruction in the development of this study

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is supported by different authors' views. For instance, Pearson & Dole (1988) demonstrated the positive impact of new instructional reading comprehension frameworks such as explicit instruction on reading comprehension skills compared with the traditional basal reading programs, in which instruction consists of allowing students to practice skills independently. Later, Duke (2001) demonstrated that explicit teaching of comprehension strategies favors students' understanding of information in written texts. Based on her study, Duke developed the five components of explicit teaching of comprehension strategies:

1. An explicit description of the strategy and when and how it should be used.
2. Teacher and/or student modeling of the strategy in action.
3. Collaborative use of the strategy in action.
4. Guided practice using the strategy with gradual release of responsibility.
5. Independent use of the strategy.

All these five components were considered in the design and implementation of the intervention sessions in the present study.

Recently, authors such as Rosenshine (2008) and Rupley (2009) have pointed out direct instruction as an active reflective approach to instruction that breaks learning into smaller steps with scaffolding, leading towards students' independence and mastery. Rosenshine (2008) has synthesized three types of direct instruction: 1) Teacher effects patterns, which refers to identification of specific patterns of instruction or instructional procedures used by the most effective teachers; 2) Cognitive strategies meaning, related with instructional procedures used for teaching higher-level cognitive tasks (such as reading comprehension, test-taking and reflective thinking strategies) with scaffolding or temporary supports being the predominant instructional procedure for teaching cognitive strategies; and 3) DISTAR, an acronym for *Direct Instruction System for Teaching Arithmetic and Reading*, which corresponds to a series of procedures for direct instruction



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developed by Engelmann (1968). Although there are differences among the three types of direct instruction, Rosenshine (2008) also underlined some commonalities among them in which four main characteristics are included:

- Guided practice
- Active students participation
- Scaffolding
- Gradual release of responsibility towards student Independence.

It is worth stating that Rosenshine's synthesis also served as support for the design of the twelve blended-learning instructional modules applied during the intervention sessions along the execution of this research project.

More recently, Lencioni (2013) carried out a study at two elementary schools in the suburban San Francisco Bay Area during a six-week period of instruction. That study aimed at finding out the effects of explicit reading strategy Instruction on reading comprehension in fourth grade students. A total of 105 participants divided in two groups were involved during the execution of the study. One group of 48 participants received explicit direct instruction of reading comprehension strategies and cooperative learning while the other 57 participants received explicit direct instruction and independent seat work. A pre-test and a post-test were applied and then results were contrasted ,concluding that both groups improved their scores in the tests applied, demonstrating the positive effects of explicit direct instruction of reading strategies on reading comprehension performance.

### **Language learning strategies**

Strategies can be understood as skills that are opened to conscious reflection and use (Grabe & Stoller, 2002). In the case of reading comprehension, strategies are aimed at actively processing the sense and meaning of the text. According to Solé (2006), such

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strategies are high order procedures which imply *setting goals*, *planning actions* for goals attainment and *constant evaluation* to adjust or change those actions. Strategies, particularly learning strategies and its relationship with effective learning have been highlighted by authors like Chamot and O'Malley (1994). These authors stated that students who use strategic approaches to learning will comprehend spoken and written language more effectively. They have also argued that students who make use of learning strategies tend to learn new information easily and have better retention in the use of a second language. Based on theory and on student observation, Chamot and O'Malley (1994) present three types of strategies: *metacognitive*, *cognitive* and *social/affective*.

- **Metacognitive strategies** include planning, monitoring and evaluating learning activities and are described as the execution of a process which enables learners to anticipate or plan for a task, determine how successfully the plan is being executed, and then evaluate the success of the learning and the plan after learning activities have been completed.
- **Cognitive strategies** are often linked to individual tasks and involve three broad categories: rehearsal, organization and elaboration strategies.
- **Socio-affective strategies** involve interaction in order to assist learning, as in cooperating learning and asking questions for clarification, which make them particularly important in second language acquisition.

### **Metacognitive strategies**

One of the key concepts, in which the present study is framed, is metacognition. According to Koda (2005), the foreign language reading task "is the product of a complex information processing system, involving a constellation of closely related mental operations. Each operation is theoretically distinct and empirically separable, serving an

identifiable function” (p.19), that implies learners’ awareness of the different processes that they are carrying out as well as the ones that they need to develop in order to improve their reading comprehension skills. In accordance with Koda’s (2005) insights above mentioned, it is relevant to support learners to build up metacognitive awareness. The reader guided process of planning, monitoring, and evaluating the cognitive functions that are required by a task is referred to as metacognition (Flavell, 1978; Brown, 1980; Baker & Brown, 1984; Koda, 2005). Based on previous insights about metacognition, the intervention in the study involved sessions of direct instruction in which the metacognitive process of planning, monitoring and evaluating were considered.

### **Planning**

Planning describes how the learning will be carried out and involves the selection of appropriate strategies and organization of activities required to achieve a goal. From Miller’s view (as cited in Abdullah, Almadi &, Ismail 2013), this is a thought process which is essential to the creation and refinement of a plan, or integration of it with other plans; that is, it combines forecasting of developments with the preparation of scenarios of how to react to them.

### **Monitoring**

Monitoring refers to personal conscious awareness of comprehension and text performance. It is related to controlling the ongoing learning process and it enables students to determine whether the resources they have available are sufficient and are being well used, and whether they are doing what they planned to do (Slife & Weaver, 1992, cited in Abdullah, Almadi &, Ismail, 2013).

### **Evaluation**

Evaluation is related to assessment of activities of current learning. It is considered as a comparison of current impacts on understanding against the strategic plans which

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were established during the planning process. As stated by Swanson (1994), *planning*, *monitoring*, and *evaluation* need to be emphasized in the learning process and would motivate learners to control their improvement in reading comprehension.

This table shows the specific reading strategies taught to learners during the intervention sessions, the metacognitive process each strategy belongs to, and their corresponding reading model:

Table 3.

*Metacognitive reading strategies used for intervention*

<b>Metacognitive Process</b>	<b>Metacognitive Reading Strategy</b>	<b>Reading Model</b>
<b><i>Planning</i></b>	<ul style="list-style-type: none"><li>• Asking Questions</li><li>• Analysing text Structure</li></ul>	<i>(Top-down)</i> <i>(Bottom-up)</i>
<b><i>Monitoring</i></b>	<ul style="list-style-type: none"><li>• Vocabulary cognates</li><li>• Predicting and Inferring</li></ul>	<i>(Bottom-up)</i> <i>(Top-down)</i>
<b><i>Evaluating</i></b>	<ul style="list-style-type: none"><li>• Identify main idea</li><li>• Summarizing</li></ul>	<i>(Top-down)</i> <i>(Top-down)</i>

Moreover, Kellogg (1994) suggests that metacognition corresponds to the capacity individuals have to assume and control their own learning and it implies:

- Adopting awareness towards a learning task and to what should be learned.
- Selecting, applying and modifying strategies along the learning process.
- Recognizing what learning and thinking effectively means.

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- Internalizing conditions in which thinking and learning effectively is present.  
(Kellogg, 1994).

Table 4 represents the view of Gil, Garcia & Cañizales (2011), related to some fundamentals of the features a metacognitive reader should possess at each one of the three phases of reading (pre- reading, while reading and post reading).

Table 4.

### *Features of a metacognitive reader*

<b>Phase</b>	<b>Metacognitive Reader Features</b>
<b>Pre – reading</b> (planning)	<ul style="list-style-type: none"><li>• Establishes goals for reading</li><li>• Activates previous knowledge about the topic to be read.</li><li>• Explores the written text to determine its structure by using headlines, subheadlines, and graphs.</li><li>• Predicts what will be learned.</li><li>• Brainstorms ideas about the reading topic.</li></ul>
<b>While – reading</b> (monitoring)	<ul style="list-style-type: none"><li>• Applies a certain number of strategies.</li><li>• Contrasts predictions in order to make sure the reader is following the right track.</li><li>• Makes stops at certain points and sums up what has been read so far.</li><li>• Recognizes the meaning of words and/or phrases that were not understood.</li><li>• Asks questions that can be answered while reading the text.</li><li>• Re-reads what has not been understood.</li></ul>
<b>Post – reading</b> (evaluating)	<ul style="list-style-type: none"><li>• Reviews key ideas in the text.</li><li>• Evaluates what was learned from the reading.</li><li>• Thinks about what is needed to learn more about</li></ul>

	<p>the topic.</p> <ul style="list-style-type: none"> <li>● Establishes relationships between the topic and other extra information learned.</li> <li>● Reflects upon the strategies that best and least worked and why.</li> </ul>
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\* Chart adapted by the researcher from Gil, Garcia & Cañizales (2011).

Previous insights about features of a metacognitive reader were considered for the establishment of the intervention sessions inside this study and at the same time, they can serve as a basis of what teachers should achieve in learners during reading instruction.

### **Blended learning**

In the simplest words, blended-learning can be defined as the combination of face to face instruction with computer mediated instruction (Graham & Bonk, 2006). However, it is important to consider Garrison & Vaughan’s (2008) statement, which relies on the fact that blending-teaching is not just a matter of transferring a portion of your current course to the web. Instead, it involves developing challenging and engaging learning activities.

This study conceives blended-learning as a teaching methodology approach for instruction. As Pearson & Gallagher (1983) state, instruction of reading comprehension requires learners to be engaged in the process to become independent learners and a way to facilitate engagement can be considering learners’ interests for computer assisted activities in the design of the course. Additionally, Prensky (2005) highlights that twenty-first century students may require more dynamic and differentiated options for reading in order to stay engaged.

According to Horn & Staker (2015), blended-learning involves four models of instruction: the first one is rotation model, a model in which students rotate between learning paths or “modalities”—one of which is online learning—either on a fixed schedule

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or at the teacher's discretion. Rotation model includes four sub models: Station Rotation model, in which students rotate between various stations in the classroom, and at least one of these stations includes an online learning component. The second sub model is Lab Rotation model, which is similar to the previous one, but the online learning component takes place in a learning lab that is designed primarily for this purpose. It is also important to mention that participation of learners under this model happens while they stay on the school campus. The third sub model suggested is the Flipped Classroom Rotation model in which students rotate on a fixed schedule between classroom instruction during school day and online work outside of school hours. Finally, the fourth sub model, individual rotation model, in which students move to a variety of learning modalities based on student needs and interests, in this fourth sub model, the students' course is not prescribed by a teacher or schedule, but is rather customized for each student according to individual needs.

The second model of blended-learning instruction suggested by Horn & Staker (2015) is the flex model, which has a similarity with the individual rotation model in the sense that students work on a customized schedule that rotates between modalities, one of which is online learning. However, the flex model is fluid instead of fixed; it means that changes of schedules in real-time can happen according to students' learning needs. The third blended-learning model is a la carte model, also known as the "self-blend" model. In this model students are allowed to design their educational experience by selecting specific online courses to supplement their traditional in-school coursework (Beaver, Hallar & Westmaas, 2014). Finally the fourth model, enriched visual model, suggests that students learn primarily online, but split their time between the school campus and an off-site environment. Described by Horn & Staker (2015) as a "whole school experience," which means that it is a comprehensive approach to schooling.

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In the direction of deciding which one of the blended-learning models was the most appropriate to be adopted during the development of this study, the researcher relied on the rubric developed by Horn & Staker (2014) (*See Appendix I*). This rubric allows the teacher to analyze the circumstances of a course across six dimensions, represented in six questions:

1. What problem are you trying to solve?
2. *What time of team do you need to solve the problem?*
3. *What do you want students to control?*
4. *What do you want the primary role of the teacher to be?*
5. *What physical space can you use?*
6. *How many internet-enabled devices are available?*

Once the given answers in the rubric were selected and the results were analyzed, the researcher came to the conclusion that the model that best fits the circumstances of the problem to be solved in this study was the Rotation Model: Flipped-classroom model.

This model of blended instruction, Flipped-classroom seems to have some benefits in learning processes. Bergmann & Sams (2012) established, after research on this issue, the main advantages of flipped classroom for learners as well as for teachers. The following chart summarizes Bergmann & Sams (2012) findings about how flipped-classroom model of instruction can favor learning effectiveness in different kind of learners.



Table 5.

*Advantages of the flipped-classroom model.*

<b>Advantages for learners</b>	<b>Advantages for teachers</b>
<ul style="list-style-type: none"> <li>• Learners have more control over their own learning.</li> <li>• Lessons and content are more accessible.</li> <li>• Learners can explore subjects in a deeper manner and go to their own pace.</li> <li>• Content can be explored once and again.</li> </ul>	<ul style="list-style-type: none"> <li>• It promotes Self-Directed Learning-SDL.</li> <li>• It promotes student-centred learning and collaboration.</li> <li>• Teachers can support students in better understanding the concepts through practical application.</li> <li>• Adaptation of teaching styles to different types of learning.</li> </ul>

For the development of this particular study and due to its particular characteristics in terms of context, facilities and time available with participants for the different stages of the project, flipped-classroom was the blended model of instruction that better fit for the implementation during intervention sessions.

Benefits of blended instruction have been highlighted by different authors. Sharma and Barrett (2007) refer to blended-learning as a language course which combines a face-to-face (F2F) classroom component with an appropriate use of technology, and they have suggested six reasons for employing blended-learning in ELT: pedagogical richness; access to knowledge; social interaction; personal agency (i.e. learner control and choice); cost effectiveness; and ease of revision. However, Graham (2004) proposed a compressed list of three main reasons for implementing this type of approach which are: improved pedagogy, increased access/flexibility; and increased cost effectiveness. Other authors such as Marsh, McFadden & Price (2003) have also mentioned the use of a blended learning solution to improve the teaching of large groups.

### **State of the Art**

The significance of the reading comprehension process in academic settings for developing cognition and the way reading should be taught have been a matter of study for EFL teachers and researchers. Different issues related to reading comprehension processes and what surround them have been widely discussed by different authors. The present study discusses the influence of direct instruction through a blended-learning methodology of metacognitive reading strategies in the performance of students in reading comprehension EFL tests.

### **Direct instruction on reading strategies**

There are studies in the area of improving comprehension of reading texts through explicit instruction on reading strategies. One of these studies is the implemented in Colombia by Romero (2013), who worked with a group of 39 low proficiency students from eleventh grade located at A1-A2 Level according to the CEFR in a secondary school. The study was aimed at improving students' reading comprehension of English texts having in mind self-directed learning principles. A reading comprehension test was administrated in a pre-test post-test basis, in order to find out the effects of instruction on pre-reading strategies in learners reading comprehension performance. After implementation stage in which students were given twelve (55 minutes long) sessions of instruction on five pre-reading strategies (*brainstorming, visual aids, pre-questioning, pre-teaching vocabulary and K-L-W*), it could be determined improvement on participants' reading comprehension ability and at the same time, progress of their language skills and involvement in their learning process was demonstrated.

Considering that one of the main areas of interest in the development of the present study is the one related to the influence of metacognitive processes in reading

comprehension performance, it is considerable to mention some recent studies carried out in this area, which supports the benefits of teaching metacognitive reading strategies for improvement of reading comprehension.

### **Teaching metacognitive reading strategies**

This field of study explores studies such as the empirical study developed in Iran by Koosha & Tavakoli (2015), which researched the influence of explicit metacognitive strategy instruction on reading comprehension and self-efficacy in EFL among university students. The study was developed with a sample group of 100 EFL major students aged between 19 and 18 from different universities in Khuzestan, Iran, who had studied English for 6 years at school. The study involved two sub groups, the experimental group, which included 50 students who were given twelve sessions of explicit instruction in the use of different metacognitive reading strategies, and the control group, with 50 students who received no strategy instruction, but instead a traditional-based instruction on reading during the twelve sessions. After the instruction period, both experimental and control group took the same reading comprehension test that they had taken as a pretest, this time as a post test. Results revealed that students in the experimental group showed greater achievement in reading comprehension than students in the control group. Researchers concluded that if explicit metacognitive strategy instruction is incorporated into everyday foreign language classroom activities and tasks, it can positively and significantly enhance learners reading achievement.

In another study aimed at the establishment of the relationship between metacognitive strategy use and reading achievement, Seepo & Zhang (2013) found similar results. In this opportunity, a group of 33 third-year EFL major students, both high proficiency students (HP) and low proficiency students (LP) who were taking an “Advanced English Course” at Guizhou University in China, were assessed with the Metacognitive Strategy Questionnaire (MSQ) in order to find out the metacognitive strategies that they

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actually used to plan, monitor, and evaluate their reading processes. Then, a reading comprehension test (RCT) consisted of six reading passages selected from the China Public English Test System (PETS 5, the highest level) was administered in order to identify participant reading comprehension achievement. Correlation among the use of planning, monitoring and evaluating reading strategies by the students and their English reading comprehension scores was significant enough to determine that the students who used more metacognitive strategies tended to score higher on the reading comprehension test, whereas the students who used fewer metacognitive strategies were likely to get low scores. This research motivates the idea of including instruction on planning, monitoring and evaluating reading strategies as a basis for the development of this study.

However, as the focus group in this study includes a younger population (13 to 16 years old), it is also worth considering previous studies with younger learners, as the one carried out in two urban elementary schools in the United States by Boulware-Gooden, Carreker, Thornhill, & Joshi (2007). The purpose of the study was to determine the effectiveness of systematic direct instruction of multiple metacognitive strategies designed to assist students in comprehending text, specifically in reading comprehension and vocabulary achievement; it involved the participation of 119 third-grade students from two different schools. One of the schools was considered the intervention school and the other one, the comparison school. All participants were pre and post tested with the 2000 Gray Silent Reading Test in order to determine students' progress in reading comprehension. During a 5 weeks period, the students in both schools received 30 minutes of reading comprehension instruction; students in the intervention school were given direct instruction of metacognitive strategies such as identifying main ideas and summarizing, while students in the comparison school received traditional reading instruction. After intervention, a post test was administered to both groups and findings showed that students in the intervention school gained 20% in reading comprehension over students in

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the comparison school, concluding that the systematic instruction of metacognitive strategies led to positive effects for understanding written text.

Results found in previously mentioned studies demonstrate the favorability of providing direct instruction in reading metacognitive strategies for the development and improvement of reading comprehension performance. In contrast, a study carried out in Santa Marta (Colombia) by Barbosa & González (2013), which included the participation of 40 tenth grade students, aimed at the establishment of the relationship between metacognitive activity and reading comprehension, concluded that after analyzing results, there was not statistically significant relationship between the two processes. The study did not involve any intervention as the main objective was merely to find out if there were relationship between metacognitive activity and reading comprehension. For that purpose, three instruments for collecting data were used: the first one was a social demographic survey which allowed researchers to identify aspects such as age of participants, scholar level of participants 'parents, number and type of books that participants had at home and reading habits of both participants and their parents. The second instrument was a short version of the PISA test, which was used in order to measure participants' level of reading comprehension in three dimensions; literal, inferential and critical. Finally, the instrument which allowed researchers to find out participants' awareness and control of metacognitive activity was a self-report questionnaire of metacognitive activity. A relevant conclusion stated in this particular study, is that the teachers and the resources they direct, are responsible of the mediation and effective relationship between reading comprehension and metacognition. However, this confrontation of ideas enhances the development and analysis of data in the present study in order to compare and contrast them with early research.

Finally, it is important to mention the relationship between the methodology applied (blended learning) as a means for direct instruction during the development of this study and its effects on reading comprehension performance

### **Blended-learning for teaching language learning strategies**

Implications of Blended-learning into reading comprehension processes have been lately a matter of research. An example of a research study carried out in this area is the one conducted by Schechter, Macaroon, Kazakoff & Brooke (2015) in an urban elementary school in western Massachusetts. The study aimed at investigating the potential benefits of a blended-learning approach on the reading skills of low socioeconomic status students. The study involved two groups, treatment students and control students. Treatment students were exposed to English language arts instruction that was both teacher-led and technology-based, while control students received the same English language arts instruction without the blended learning component. Results showed significantly greater pretest/posttest gains on a standardized reading assessment for the treatment students, compared to the control students, which demonstrates the positive impact of a blended-learning approach in the improvement of reading comprehension performance.

In Colombia, research on blended-learning instruction and its relationship with reading comprehension performance in EFL has been scarcely explored and blended learning in EFL has been described as an educational challenge (Ochoa & Roberto, 2011).

Nevertheless, some positive aspects of the use of technology for explicit instruction of reading strategies and the improvement of students' reading comprehension in EFL have been demonstrated. Montalvo (2013) developed a research study aimed at the improvement of eleventh and tenth graders' reading comprehension level through the use of explicit reading strategies and personal blogs. In her study, Montalvo (2013) involved 30

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students who were tested with a standardized reading comprehension test before intervention in order to find out their level of reading comprehension. Then, 19 instructional sessions on the use of reading comprehension strategies were delivered. After explicit face-to-face teaching on reading strategies, technology was involved for the development of specific reading comprehension tasks in which students had the opportunity to use the reading strategies learned previously. By the end, a different reading comprehension standardized test was applied to participants as a post-test with the purpose of identifying students' progress on reading comprehension. Analysis determined improvement not just in participants' reading comprehension performance, but also in the development of students' awareness of the use of reading strategies when approaching a written text, what the researcher described as metacognitive control. Other benefits of employing blended-learning in ELT have been demonstrated by outcomes found in studies like the one carried out by Arismendi, Colorado & Grajales (2011) in the school of languages at Universidad de Antioquia which aimed at exploring and comparing students' reading comprehension processes in EFL through different modalities of instruction, specifically face-to-face and web-based modalities. They found that after giving the same content course of direct instruction on the use of reading comprehension strategies to two different groups of graduate students, one group receiving face-to-face instruction and the other one receiving web-based instruction, participants in both environments improved their ability to use strategies and understand written texts. Researchers of this study argued that despite the fact that both modalities of instruction showed independently to have a positive impact in the development of reading comprehension abilities, one of these modalities can be considered as a complement to the other one.

Analysis of previous research in different contexts regarding common aspects involved in this study, contribute to the purpose of this research which aim at demonstrate if direct instruction on reading metacognitive strategies enhance reading comprehension

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abilities and at the same time to find out information about the effectiveness of using a blended modality of instruction for teaching language learning strategies in a group of eighth grade EFL learners at Carlo Federici I.E.D. School.

The next chapter will describe key aspects such as type of study, context, participants and instruments used to analyze data during the development of the present study.

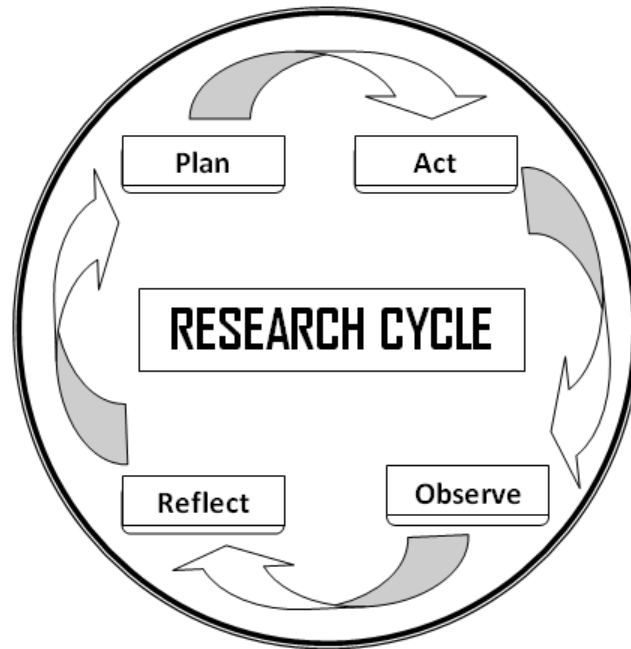


### **Chapter 3: Research Design Framework**

The following chapter introduces information about the type of study, participants' contextualization and the role of the researcher. It also describes the instruments used during the intervention stage and how data was collected.

#### **Type of study**

This research was encompassed under an action research approach which involved the participation of all individuals who took part in the process (Bailey, 1998). In this case, the individuals were students from eighth grade and the teacher took the role of the researcher. According to Richards (1998), action research takes its name from two central processes: a data gathering component (the research element) and an action component. These two processes facilitate "the reflective cycle" and improve "professional action" (Wallace, 1998). Although authors such as Brumfit and Mitchell (1989) and Jarvis (1991) have considered reflective practice and professional growth as a weakness of action research, some other points of view have arisen in its favor. Authors such as Burns (1999) states that action research offers a valuable opportunity for teachers to be involved in research which is felt to be relevant, as it is grounded in the social context of the classroom and the teaching institution (p.17). Nunan (1992) considers that this type of research fulfills basic research requirements because it is initiated by a researchable question/ issue, is supported by data and interpretive analysis, and is carried out by a practitioner investigating aspects of his or her own context and situation, leading to improvement in the practice of language teaching as a professional activity. This last author states that action research is developed within an iterative cycle which involves four phases or stages (*planning, acting, observing, reflecting*) and they are the basis for the development of the present study (see figure 1).



*Figure 1.* Action Research Cycle according to Nunan, D. (1992). Adapted from Nunan, D. (1992). *Research Methods in Language Learning*. Cambridge: Cambridge University Press.

Further, a more detailed model of action research was proposed by Burns (as cited in Ellis, 2012), who established five repetitive phases:

1. Identifying an issue or problem relevant to a specific instructional context (the initial idea).
2. Obtaining information relevant to the problem / issue (fact finding).
3. Working out a possible solution on this problem (the action plan).
4. Trying out the solution in the specific instructional context (implementation).
5. Collecting data to investigate whether the solution is effective (monitoring).

This particular research is framed on Burns' (1999) mixed method design in which quantitative as well as qualitative data interpretation is analyzed and then contrasted, increasing the reliability and validity of the research, considered in this way as a viable research type. According to Burns (1999), the fact that data collection methods can be

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triangulated, which means, findings can be tested out against each other, makes results more valid and reliable, and potentially more generalizable. That can be considered a great advantage, considering the replication of the intervention sessions by other teachers working in similar conditions. Additionally, Grabe and Stoller (2002) highlight that action research “permits to examine reading in practical terms and explore practical alternatives to reading instruction in our own classrooms, with our own students, at our own pace” (p.158).

### **Context**

Carlo Federici School is a public school which was inaugurated in the year 2007. It is located in the locality of Fontibón in Bogotá, Colombia and is one of the schools called “mega-schools”, because of the amount of students attending (1.200 students in the morning shift and 1.200 students in the afternoon shift) as well as its infrastructure and resources provided, such as a technology room and two informatics rooms; one of them for primary students and the other one for secondary students, with 40 computers each. Additionally, the school has three laboratories: one for biology, one for chemistry and one for physics. The school also has a cafeteria where students have breakfast in the morning shift and lunch for students in the afternoon shift, all provided by the government.

Thanks to the support of the mayor's office of the locality, each one of the ten public schools located in Fontibón have a Language Resource Center where the purpose is to help students and teachers to improve English language teaching and learning processes.

The school is located in an area which is considered an international node for being adjacent to the Free Trade Zone, where companies and enterprises demand qualified bilingual individuals, as for its proximity to “El Dorado” International Airport, where bilingual people are also required. All of these conditions must be seen as an advantage for the population of primary and secondary students who study at Carlo Federici School and who

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will require to manage an additional or foreign language in order to be competitive in a globalized world.

The School Carlo Federici I.E.D has been chosen as one of the pilot schools of bilingual education by the Secretary of Education of Bogotá in 2011. Being a bilingual education public school means that gradually and from the first stages of primary education, there must be a curricular proposal of bilingual education through Content Based Learning, (ACUERDO No. 364 de 2005 PROGRAMA "*BOGOTA BILINGÜE EN DIEZ AÑOS*" – AGREEMENT No 364 of 2005 PROGRAM "BILINGUAL BOGOTÁ IN TEN YEARS").

### **Participants**

Thirty five students participated during the development of this study: eighteen boys and seventeen girls. All of them were eighth graders aged between 13 and 15 years old. Most of the participants live in the school surroundings where their socioeconomic strata are 2 and 3. This group of students takes four hours of English classes weekly, divided in two sessions. Due to the grade they are coursing currently, this group of students is not still part of the bilingual curricular proposal of bilingual education through Content Based Learning. Their level of English language proficiency is considered to be A1, according to the CEFR, which was the result of the pre-test taken by participants at the first stage of the study. Moreover, as has been noticed in the vast majority of students, they present weakness in their reading comprehension skills, as shown in their results obtained in tests at the institutional level.

In Colombia, according to National Ministry of Education (MEN), there are three levels of education: (preescolar) pre-school, (educación básica) primary and (educación media) secondary education. Moreover, following guidelines from secretary of Education in Bogota, Carlo Federici School's curricular levels of education are distributed in five

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learning cycles: Cycle 1 (preschool, first and second grades), Cycle 2 (third and fourth grades), Cycle 3 (fifth, sixth and seventh grades), Cycle 4 (eighth and ninth grades), and Cycle 5 (tenth and eleventh grades). This organization shows that eighth graders are facing a transition from one cycle of learning to another and are close to being evaluated by SABER Examinations in ninth grade, which can serve to see the impact of the intervention, not just by the end of this research, but also by the end of learning cycle 4, when they take the SABER Test applied by ICFES. The above supports the decision to choose a group of eighth graders.

### **Researcher's Role**

As mentioned previously, action research is a participatory process which involves an active role by participants. In this opportunity, the practitioner (teacher) moves from being merely a craftsman, acting on other people's ideas, to being a creative, reflective, critically-oriented professional, entitled as teacher-researcher (Freire, 1993).

Through the development of this research project, the teacher-researcher performed several duties at the different stages involved during the research process suggested by Nunan (2005):

- *Plan:* The researcher identified the problem.
- *Observe:* During preliminary investigation, the teacher-researcher collected baseline data through observation, then formulated hypothesis, and additionally set instructional goals and objectives.
- *Act:* At this intervention point, the teacher-researcher selected and adapted instructional and assessment instruments and monitored, supported, and provided feedback to participants while recording what was happening through data collection.

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- *Reflect*: The teacher-researcher analyzed and described data collected and evaluated the effects of actions taken and finally planned future actions for expected outcomes.

In addition, Cohen and Manion (1985) describe action research as small-scale interventions “in the functioning of the real world” (p. 208), which involves sometimes the collaboration of teachers and other researchers. For this particular research study the researcher also has the role of an examiner and an evaluator by being acquainted with learners’ needs and classroom variables to make changes in the process, as well as evaluating learners’ progress.

### Data Collection Instruments

In order to collect data, seven instruments were used at different stages during the development of the research. The following table includes information about the stages of research, the instruments used and the number of participants in each one of them.

Table 5.

*Data collection instruments*

STAGE	INSTRUMENT	# OF PARTICIPANTS
<b>PRE Intervention</b>	1. Pre Test – <i>KET (A)</i>	35
	2. MARSII (Metacognitive Awareness of Reading Strategies Inventory)	35
<b>Intervention</b>	3. Teacher’s Journal	N/A
	4. Learners’ Journal	35
	5. Ongoing Test – <i>KET (B)</i>	35

<b>POST Intervention</b>	6. Post Test – <i>KET (A)</i> *	35
	7. Participants’ interview	10

\* The post-test KET is the same pre-test KET.

A brief description of each one of the instruments presented in (Table 5) can be found below.

### **Key English Test (KET) - pre-test, ongoing-test and post-Test**

The instrument used to analyze the performance of the participants in reading comprehension examinations of English for Speakers of Other Languages (ESOL) was a sample of the Key English Test (KET).

KET is a Cambridge University ESOL examination released in 1994. The test assesses all four language skills (reading, writing; listening and speaking) and knowledge of grammar and vocabulary and it is designed for beginning learners of English language.

The KET exam is aligned to the Council of Europe Common European Framework of Reference (CEFR) for Languages Level A2 and as mentioned by Cambridge ESOL examinations organization, it follows an extensive review which makes the test recognized worldwide as a valid instrument for testing learners’ use of everyday English at a basic level. For the purpose of collecting data about students’ performance in reading comprehension tests, a set of 35 questions taken from KET - Paper 1 (Reading and Writing) were chosen due to their relationship with reading comprehension skills (See *Appendix A*).

Previous to the application of the KET, a test analysis was conducted by the researcher. In this test analysis, key aspects of reading comprehension to be tested and its relationship with reading comprehension competences expected students to develop by the end of eight grade could be identified. By comparing each type of question included in

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KET and the reading abilities required to succeed according to the parameters established by Cambridge ESOL examinations with the reading competences suggested by the Ministry of Education, which are defined as the national standards, it was possible to match each one of the five abilities tested in KET with one of the reading competences established for eight graders in the national standards.

Paper 1 (Reading and Writing) includes 9 parts, but only the first five parts were tested in the reading comprehension pre-test, ongoing-test and post-test, with a total of 35 questions. The four final parts of the KET (part 6, part 7, part 8, and part 9) were not considered in the development of this study due to their focus on the assessment of writing skills, which is not a concerning issue in the impact of the research.

The table below shows each one of the five parts from the KET used in the pre, ongoing and posttest, as well as the number of questions included in each part. In the second column, the corresponding reading comprehension competences expected for learners to acquire by the MEN.

Table 6.

*Test analysis of reading comprehension competences assessed by KET*

<b>KET</b>	<b>Reading Comprehension Competencies Expected by the end of 8th grade according to National Standards- MEN</b>
<b>Part 1</b> Questions 1-5.	Comprendo la información implícita en textos relacionados con temas de mi interés.  <i>I understand implicit information in texts which are related with topics of my personal interest.</i>
<b>Part 2</b> Questions 6-10.	Identifico relaciones de significado expresadas en textos sobre temas que me son familiares.  <i>I identify relations of meaning express in text about topics that are familiar for me.</i>



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<b>Part 3:</b> Questions 11-15.	Comprendo relaciones de adición, contraste, orden temporal y espacial y causa-efecto entre enunciados sencillos  <i>-I understand relations of addition, contrast, temporal and spatial order and cause-effect between simple statements.</i>
<b>Part 3</b> Questions 16-20.	Diferencio la estructura organizativa de textos descriptivos, narrativos y argumentativos.  <i>I establish differences of the structure and organization of descriptive, narrative and argumentative texts.</i>
<b>Part 4:</b> Questions 21-27	Reconozco el propósito de una descripción en textos narrativos de mediana extensión.  <i>I recognize the purpose of a description in narrative texts of middle extension.</i>
<b>Part 5</b> Question 28-35.	Identifico relaciones de significado expresadas en textos sobre temas que me son familiares.  <i>I identify relations of meaning express in text about topics that are familiar for me.</i>

\*The reading comprehension competences were taken directly in Spanish language from MEN National Standards and were translated into English language by the researcher.

This correlation between national standards established by MEN and the KET instrument selected for measuring participants' reading comprehension performance allowed the researcher to fit the purpose of the study with the frame of the intervention.

### **MARSI Questionnaire**

The MARSI (Metacognitive Awareness of Reading Strategies Inventory) is an instrument designed to assess adolescent and adult readers' metacognitive awareness and perceived use of reading strategies while reading academic or school related materials into three different strategy subscales or factors: global reading strategies

(GLOB), problem solving strategies (PROB) and support reading strategies (SUP) (Mokhtari & Reichard, 2002). This inventory includes a set of 30 statements about what people do when they read academic or school related materials. To each one of the statements, participants answer using a 5-point Likert-type scale ranging from 1 (I never do this) to 5 (I always do this).

For the purpose of this study, the test was translated into Spanish by the researcher for students to have a better and clear understanding about what they were being asked. The MARSII (See *Appendix B*) was applied to the 35 participants of the study with a paper based resource. It is important to mention that the reason why this instrument was applied after students took the pre-test was in order to avoid any influence on the use of reading strategies by participants. It is also relevant to clarify that two different versions of the KET (A and B) were used during the implementation of the study, one of them for the pre-test and post-test (A) and the other one for the ongoing-test (B), completing this way the four above mentioned instruments.

### **Teacher's Journal**

Defined by Burns (1999) as an observational, interpretive and qualitative method which can be used to collect data in action research, diaries or journals serve to gather information about activities and events related with teaching/learning plans, including feelings, reactions, and/or reflections. This type of instrument allows the researcher to complain and liberate pressures generated regarding research issues. Significance of keeping a journal or diary is given by different actions taken by the researcher during the research cycle such as reflect on the research, step back and look again at the scenes in order to generate new ideas and theoretical directions (Hitchcock & Hughes, 1995 Cited in Burns, 1999. Pg. 89).

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The teacher's journal was an instrument used along all stages of the process of this study. This instrument was really useful as a qualitative source, since it provided the researcher with a lot of relevant information. As mentioned by Sagor (2005), data collected through observation by the researcher in a journal will serve as a complement to other instruments and will provide more information when analyzing data, which facilitates validation processes. At the end of every face to face session during the intervention stage, the researcher registered information in the teacher's journal, such information was registered in a specific format (*see Appendix C*). The format included basic information about date and topic of the session as well as number of students who attended the session. In addition, and with the purpose of reflecting about students' strengths and challenges related to strategy knowledge, strategy use, students' interests and motivation, positive aspects; aspects for improvement and suggestions for improving were also taken into consideration in the design of the teacher's journal format. Supplementary, a space for additional comments was also included.

Information compiled in the teacher's journal allowed the researcher to compare and contrast it with information registered in other instruments, at the same time it provided the researcher with useful information, not just about participants' performance during intervention sessions but also with relevant insights about pertinence and effectiveness of the intervention itself in terms of reading strategies, blended environment and metacognition, which served as a reference to reflect about and understand the teaching of reading strategies.

### **Learners' Journal**

Alternative to teacher's journals, learners' journals include responses and feelings of students' learning experiences. According to Friesner & Hart (2005), learning journals or learning logs are formats with some pre-determined questions or items used to know

about readers' insight. Areas of difficulty in learning can be discovered through students' thoughts about classroom tasks, learning processes and strategies (Burns, 1999). For the purpose of this study, a set of 5 questions (see *Appendix D*) were provided for participants to answer. They were asked to answer these after the two sessions (face to face, computer assisted) that corresponded to each one of the six strategies. At the end of the computer assisted session, students were asked to self-reflect within their learning journals. In order to facilitate comprehension of the questions and clear and accurate answers by the participants, it was allowed to write the entries for this instrument using the first language of the participants, in this case, Spanish language. Information registered in these journals allowed participants to write their reflections about their achievements on the goals established for each session as well as their performance and feelings about the tasks developed in each one of the modalities of instruction. The different insights registered by the participants in their answers allowed the researcher to consider adjustments in the design and implementation of the intervention sessions. Finally, a third qualitative collecting data instrument was used with participants at the *post-intervention* stage and it is described as follows:

### **Participants Interview**

As mentioned by Nunan (1992), interviews for research purposes can be characterized in terms of their degree of formality from unstructured through semi-structured to structured. Unstructured interviews are guided by the responses of the interviewee rather than the agenda of the researcher and its direction is relatively unpredictable. On the other hand, in structured or formal interviews, the researcher works through a set of pre-planned questions in a fixed order and the agenda is totally determined by the researcher. For the purpose of this study, a type of semi-structured interview was used, considering the great deal of flexibility it gives the interviewer and the

degree of power and control over the course of the interview it gives the interviewee, providing a more equal balance in the research relationship (Nunan, 1992). Moreover, Nunan (1992) states that semi-structured interviews differ from the other two types of interviews in the way that it is open-ended, which make them more flexible.

In the case of this particular study, a set of five questions (*see Appendix E*) were asked to a group of 12 participants, who were selected randomly. The interviews were undertaken with groups of 4 interviewees at a time, with the purpose of reducing the time taken for that task. Additionally, Burns (1999) considers that data collected from group interviews are often far richer than that collected from individuals, due to the possibility they have to trigger additional, and more productive responses from each other.

### **Ethical considerations**

During the development of this research project, some ethical considerations were taken into account at different stages of research. Before starting the research process, a consent letter was handed to the principal and academic coordinator of the institution Carlo Federici School in which they were informed about this study's intentions and pedagogical implications as well as the impact and benefits that the study could bring to the institution and to the group of students who would take part in the development of the research project (*see Appendix F*). Moreover, another consent letter (*see Appendix G*) was given to the parents of the students who were engaged in the study. The purpose of that consent letter was to ask parents for approval of students' participation in the research project and explain them the role their children would play.

Considering their right to privacy and confidentiality, identity of participants was hidden in the process of analysis of data and results, by assigning them randomly a letter and a number from F1 to F35,

## **Validation of Instruments**

### **Validation of quantitative instruments**

#### **KET (Key English Test)**

Thanks to an analysis of the test carried out by the researcher, the relationship of each one of the five selected parts from the KET with the reading comprehension competences of Ministry of Education (MEN) in Colombia was determined, and this served as a foundation to decide to use this test as an instrument for the pre and posttest as well as for the ongoing test. Another reason for the selection of this particular instrument is because SABER examinations are aligned with the type of questions and structure of KET. Furthermore, the pre and posttest was applied with the same KET sample (see Appendix A) in order to allow a comparison of students' progress after intervention sessions, which makes it a valid data collection instrument for this study. The ongoing test carried out by the midterm of the intervention sessions was a different sample of the KET, including a set of 35 questions taken from Part 1 (reading and writing). Because students are familiarized with the KET exam, this allowed the implementation of the pre and posttest to go smoothly.

#### **MARSI Questionnaire**

MARSI came from a study developed by Mokhtari and Reichard (2002), researchers from Oklahoma State University, whose purpose was to develop and validate a self-report instrument that helped students increase awareness of their own reading strategies. MARSI was developed to assess 6th through 12th grade students, which fits the target population selected for the development of the present study and it has been tested and used for research compared with other instruments designed for the purpose of identifying awareness of metacognitive activity, such as the one designed by Jacobs and Paris (1987), called *Index of Reading Awareness*, which served to measure metacognitive

awareness or the Reading Strategy Use (RSU) developed by Pereira-Laird and Deane (1997) to assess the perceptions of adolescent students' use of cognitive and metacognitive strategies when reading narrative and expository texts. MARSII has been reported to support strong validity and reliability, which supports its consideration as a validated instrument within this study.

Additionally, there were some other implications for considering MARSII as an instrument for assessing metacognitive awareness and use of reading strategies in this study and it is the fact of the uses proposed by Mokhtari & Reichardt (2002), which involves enhancing assessment, planning instruction and conducting classroom research, all of them key stages through the development of the study.

### **Validation of qualitative instruments**

In order to validate qualitative instruments used during this study, it was necessary to apply a coding technique in order to analyze and categorize the information obtained in three data collection instruments: learners' journal, teacher's journal and participants interview. Information obtained was coded based on Grounded Theory developed by Glasser & Strauss (1967). Grounded Theory allows the researcher to identify variables, called categories and their interrelationships. According to Corbin and Strauss (1990), the coding processes are "the operations by which data are broken down, conceptualized and put back together in new ways" (p.57). As suggested by Scott (1996), this technique involves three stages for analyzing qualitative data: open coding, axial coding and selective coding.

As part of the validation process, data was collected, compared and analyzed through a triangulation process, considering the research question and the research objectives posed in this study. According to McDavid & Hawthorn (2006) corroboration of

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findings from the quantitative analysis with analysis from qualitative data, allows validation of data collected.

In the next chapter, a detailed description of the pedagogical intervention is presented.



### Chapter 4: Pedagogical intervention and implementation

This chapter presents a description of the procedures carried out while the research was being implemented. After the head teacher, academic coordinator, parents and students were informed about the intention of the development of the research project in the institution, the stages of *pre-intervention*, *intervention* and *post-intervention* took place.

The implementation and intervention of the study included 16 sessions and it was carried out in a period of 2 months, considering one academic term as it was permitted by the academic coordination of the institution. In order to have a clear path to be followed through this process, a schedule was set up and it is presented in Table 7.

Table 7.

*Timeline of the implementation of the study*

STAGE	SESSION	TOPIC – ACTIVITY	BLENDED MODALITY
<b>PRE Intervention</b>	1	Presentation of the study – workshop	Face to Face
	2	<b>PRE-TEST KET(A) and MARSII Questionnaire</b>	Computer
<b>INTERVENTION</b>	3	Strategy Instruction ( <b>Asking questions</b> )*	Face to Face
	4	Strategy Instruction ( <b>Asking questions</b> )	Computer
	5	Strategy Instruction ( <b>Predicting-inferring</b> )	Face to Face
	6	Strategy Instruction ( <b>Predicting-inferring</b> )	Computer
	7	Strategy Instruction ( <b>Identify main idea</b> )	Face to Face
	8	Strategy Instruction ( <b>Identify main idea</b> )	Computer

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	9	<b>ONGOING-TEST KET(B)</b>	Computer
	10	Strategy Instruction <b>(Analyzing text structure)</b>	Face to Face
	11	Strategy Instruction <b>(Analyzing text structure)</b>	Computer
	12	Strategy Instruction <b>(Vocabulary cognates)</b>	Face to Face
	13	Strategy Instruction <b>(Vocabulary cognates)</b>	Computer
	14	Strategy Instruction <b>(Summarizing)</b>	Face to Face
	15	Strategy Instruction <b>(Summarizing)</b>	Computer
<b>POST Intervention</b>	16	<b>POST-TEST KET(A)</b> <b>PARTICIPANTS INTERVIEW</b>	Computer  Face to Face

The table above shows four columns, from left to right, the first column shows the stage in which the activity took place. In the second column, the number of the session in which the activity was developed is presented. The third column introduces the topic of instruction given in the corresponding session and other activities carried out along the study. Finally, column four presents the means of instruction in which the activity was delivered according to the blended-learning methodology approach.

**Pre-intervention stage**

After the identification of the problem, which was the low scores obtained in standardized EFL test by eighth grade students at Carlo Federici I.E.D. School, the second step was to obtain relevant information about its possible causes.

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Initially, an introductory session for clearly presenting the aims of the study and roles and duties of participants and researcher was carried out. In that initial session, the interest and willingness of students to participate in the development of this research project were evident. During that fact finding phase, the second session included the application of two instruments. The first instrument applied as a pre-test to participants, in order to find out their ability of reading comprehension, was version (A) of the KET, which included the first five parts of the original test, with a total of 35 questions. They took the test on a computer-based modality in the technology room of the school. That specific version of the KET was retrieved from (<http://www.cambridgeenglish.org/exams/key/exam-format/>) and then adapted to be answered through the **Modular Object-Oriented Dynamic Learning Environment** (MOODLE) platform, which was used as a Learning Management System (LMS) tool in which students recorded their answers by clicking on the answer they considered was correct (*See Appendix A*). The group of students had 60 minutes to answer KET version A, and it is important to say that previous to the application of these computer based pre-test, the group of students had been previously exposed several times to this type of computer based tests in English and in other subjects, which means, they were familiarized with that type of computer based tests. While students were answering the KET (A), they showed encouragement in interacting with a computer for academic purposes.

After the pre-test was applied, the MARSİ questionnaire was administered with the purpose of establishing participants' awareness on reading metacognitive strategies, considering the age and educational level (8th grade-secondary school) of participants, as well as the conditions of validity and reliability found in this questionnaire as supported by Mokhtari & Reichard (2002).

In order to avoid any influence on students' awareness of the use of reading strategies, the MARSİ questionnaire was applied as a second instrument only after

participants had finished answering the KET (A). MARSII questionnaire was translated into a Spanish version by the researcher and applied under a paper-based modality. The time given for answering the MARSII questionnaire was 30 minutes.

Results obtained in these two instruments (*See chapter 5: Data Analysis*) became the basis for the definition of the six metacognitive reading strategies to be taught through direct instruction during the intervention stage.

### **Intervention stage**

Taking into account intensive reading features and its influence in reading comprehension skills development, the present study incorporated the intensive reading approach during the implementation process considering that the researcher was the one in charge of deciding the texts to be read during the intervention sessions, the chronogram in which the sessions and activities were developed and the metacognitive reading strategies to be taught based on findings provided by data collection instruments

This phase of the study involved twelve sessions of direct instruction, six of those sessions were taught in a face-to-face modality while the other six were delivered in a web-based modality. Participants were instructed in six metacognitive reading strategies, which were selected for instruction after analyzing results of MARSII questionnaire and pre-test KET version A. These results revealed the scarce use of some specific reading metacognitive strategies, as well as the low performance in some of the five parts of the KET pre-test. It was also possible to establish a relationship between the reading abilities tested in each one of the five parts of the KET and the use of the strategies selected for instruction.

The following table shows an overview of the relationship between the reading metacognitive strategy selected for instruction, the strategies less used by participants

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according to their responses given in the MARSİ questionnaire, and the corresponding reading ability tested in the KET.

Table 8.

*Relationship between intervention strategies and collected results*

<b>Less used strategies according to MARSİ results</b>	<b>Strategy selected for Instruction</b>	<b>Reading ability tested in KET</b>
<p><b>28 (SUP):</b> I ask myself questions I like to have answered in the text.</p> <p><b>29 (GLOB):</b> I check to see if my guesses about the text are right or wrong.</p>	<i>Asking questions</i>	<b>PART 3.</b> Read and identify appropriate response.
<p><b>18 (PROB):</b> I stop from time to time and think about what I'm reading.</p>	<i>Predicting and inferring</i>	<b>PART 1.</b> Understand the main message of a sign.
<p><b>14 (GLOB):</b> I decide what to read closely and what to ignore.</p>	<i>Identifying main idea</i>	<b>PART 4.</b> Understand the main ideas and some details of longer texts.
<p><b>23 (GLOB):</b> I critically analyze and evaluate the information presented in the text.</p> <p><b>22 (GLOB):</b> I use typographical aids like bold face and italics to identify key information.</p>	<i>Analyze text structure</i>	<b>PART 5.</b> Knowledge of grammatical structure and usage in the context of a reading text.
<p><b>19 (GLOB):</b> I use context clues to help me better understand what I'm reading.</p>	<i>Vocabulary cognates</i>	<b>PART 2.</b> Knowledge of vocabulary.
<p><b>6 (SUP):</b> I summarize what I read to reflect on important information in the text.</p> <p><b>20 (SUP):</b> I paraphrase (restate ideas in my own words) to better understand what I read.</p>	<i>Summarizing</i>	A direct relationship of this strategy with the reading abilities tested in KET was not found, but due to its scarce use by participants and its importance in reading comprehension processes, it was included.

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From left to right, Table 8 shows in the first column the reading metacognitive strategies which, according to the MARS questionnaire results, were used scarcely by participants. The second column presents the strategies that were selected for intervention due to their scarce use. Finally, third column shows the corresponding reading abilities tested in KET for each one of the reading strategies taught during the intervention stage.

These six selected strategies were grouped into three groups of metacognitive strategies (planning, monitoring and evaluating). Two of the strategies were planning strategies (*asking questions* and *analyzing text structure*), two of them were monitoring strategies (*predicting - inferring* and *vocabulary cognates*) and two of them were evaluating strategies (*identifying main idea* and *summarizing*), as they are defined as follows:

### **Planning Strategies**

**Asking questions:** According to Duke & Pearson (2002), the ability to generate mental questions while reading not only boosts attention and alertness, but also strengthens comprehension. Asking questions is a strategy that can be used before, while and after reading a written text. Questions asked to comprehend a text better can include thick questions, which help to answer general information about the text as main ideas and large universal concepts. On the other hand, questioning can incorporate thin questions, which refer to the search for information related to the meaning of specific words and / or details about names of characters in a story, place where actions are being developed or particular dates inside a text (Harvey & Gavis, 2007).

**Analyze text structures:** text structure refers to how authors present and organize information in a passage. The information is organized for the reader in a variety of structures which, according to Dymock (2005), includes: 1) Descriptive structure (detailed description of something to give the reader a mental picture), 2) Sequence structure (gives readers a chronological of events or a list of steps in a procedure), 3) Compare/Contrast

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structure (examines the similarities and differences between two or more people, events, concepts, ideas, etc.) 4) Cause/Effect structure (presents the causal relationship between an specific event, idea, or concept and the events, ideas, or concept that follow.), and 5) Problem-Solution structure (sets up a problem or problems and presents solutions).

### **Monitoring Strategies**

**Predicting and inferring:** Making predictions about the possible content or important information from the text is considered a strategy that helps readers make connections between their prior knowledge and the new information being learned (Vásques & Suarez, 2011). Vasquez & Suarez (2011) stated that some of the tasks involved in predicting and inferring include careful examination of the cover, chapter titles, and headings, as well as any summary materials that may be presented; it also includes the search for graphs or pictures that can bring up clues for text understanding.

**Vocabulary cognates:** Cognates are words in two languages that share similar meaning, spelling and pronunciation. Around 30 to 40% of all words in English have a related word in Spanish. This reason, along with research, suggests that Spanish speaking students can be taught to recognize cognates and use cognate information to comprehend English texts (Lubliner & Grisham, 2012).

### **Evaluating Strategies**

**Identifying main ideas:** Main ideas are defined as the main details in a selection and are considered as more specific than the topic (Gunning, 2010). Activities such as fulfillment of graphic organizers, grouping words and identification of supporting details for main ideas are characteristic when applying this strategy.

**Summarizing:** This reading comprehension strategy promotes a more concise understanding of written texts by taking a large selection of a text and reducing it to the main points. Identification of main ideas and supporting details are included among relevant tasks when learners work with this strategy (Jones, 2007).

Pre, while and post reading strategies were taught through direct instruction during implementation sessions for the development of this study.

As previously explained in chapter 2, a blended methodology was selected as a means of instruction. Some factors influenced the selection of blended-learning as a means of instruction for the development of this study. The first factor is that, although face-to-face and web-based modalities of instruction have shown independently to have a positive impact in the development of reading comprehension abilities, one of these modalities can be considered as a complement to the other one (Arismendi, Colorado & Grajales 2011). In that sense, a web-based course as a sole mode of instruction was not considered for the implementation of this study, considering that participants are not accustomed to studying autonomously; furthermore, the web-based mode of instruction served as a motivating factor considering the interest that the participants have towards this modality of learning, supporting in that way that a blended-learning methodology of instruction can provide a positive impact in the development of metacognitive reading strategies.

The blended learning model selected for the purposes of this study was Rotation Model: Flipped-classroom model (Horn & Staker, 2015), a way of instruction in which, within a given course or subject, students rotate on a fixed schedule between face-to-face teacher-guided practice inside the standard school day and online delivery of content and instruction of the same subject from a remote location (often home) after school. This particular study made use of the English class website “Federenglish” (<http://professorredwar.wixsite.com/federenglish>) to lead the online process of the



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intervention. Federenglish is a class-website created by the teacher researcher with the purpose of supporting students' learning and assigning some homework in which tasks required the use of technology. The website included a special session called "*resources*", in which participants accessed by clicking on it. Once there, they were linked to a Learning Management System (LMS), specifically the Moodle platform of Carlo Federici School, located at: <http://aulavirtual.iedcarlofederici.co/>. This school website is used as a means for communication of important news and events in the school community and also for academic and pedagogical purposes such as homework assignments and presentation of end of term examinations in some content subjects such as technology, mathematics, social studies, physics, philosophy and English. The website <http://aulavirtual.iedcarlofederici.co/> was used for the implementation of the reading course designed for the intervention stage in this study, due to its good source of possibilities for academic and educational course design, as it provides students with opportunities for answering tests online, sharing ideas in forums, answering surveys, and developing computer assisted learning activities, among other virtual learning facilities.

Participants had been working with this classroom web-site since one year before the starting of this study and that familiarity of the learners with the website was one the factors to be considered when deciding to use this tool as an entrance point to the blended environment used during the intervention stage.

Every session in the intensive reading blended course, face-to-face as well as computer assisted sessions, were designed and adapted considering Duke's (2001) view of direct instruction regarding the five components of explicit teaching comprehension strategies (1.an explicit description of the strategy and when and how it should be used, 2.teacher and/or student modeling of the strategy in action, 3.collaborative use of the strategy in action, 4.guided practice using the strategy with gradual release of responsibility and 5.independent use of the strategy).

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Both, face-to-face and computer-based environments involved four main moments which provided participants with scaffolded information, tasks and activities aimed at leading a successful learning process. The first moment was called "*What is it?*" and in it, information such as name and number of the session, expected goals by the end of the session and time available for the development of the session were presented. The second moment was called "*How do I do it?*" In this part, participants could find a description of the strategy to be used and additionally, a model of how to use the strategy was presented in this second moment. The next moment, third moment, was named "*Let's practice*". This was the moment in which participants developed tasks and activities aimed at the appropriation of the strategy taught, as presented in Table 9. Finally, a moment for self-reflection was considered. This fourth moment, named "*Now I reflect*", served for participants to record their feelings about the whole session and for them to reflect about their own performance during their participation in the course session and at the same time it served as a data collection instrument which was defined as learners' journal.

An overview of the topics and main concerns regarding the development of each one of the intervention session is presented in the table below. In the first column the strategy taught is presented, the second column shows information about face-to-face sessions, while the column on the right includes outcomes from the computer assisted sessions.

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Table 9.

*Intervention sessions*

<b>Reading Strategy</b>	<b>Face-to-Face</b>	<b>Computer Assisted</b>
Asking questions	<b>Session #: 3</b> <b>Reading:</b> “Animals in danger”. Adapted from: New Reading English is Fun. Fondo Educativo Panamericano. Pg 49-50.	<b>Session #: 4</b> <b>Reading:</b> Texting “health risk for teenagers” By Helen Briggs Health reporter, BBC News Retrieved from: <a href="http://www.bbc.co.uk/news/health-11720546">http://www.bbc.co.uk/news/health-11720546</a>
Predicting – inferring	<b>Session #: 5</b> <b>Reading:</b> “Welcome to my blog”. Adapted from: Reading keys 1. Macmillan. Pg 52-54	<b>Session #: 6</b> <b>Reading:</b> “How happy are you?” Adapted from: reading keys 2. Macmillan. Pg 52-54.
Identify main idea	<b>Session #: 7</b> <b>Reading:</b> “The blade runner”. Adapted from: Reading keys 1. Macmillan. Pg 16-18.	<b>Session #: 8</b> <b>Reading:</b> “Death penalty”. Adapted from: Reading keys 1. Macmillan. Pg 36-40.
Analyzing text structure	<b>Session #: 10</b> <b>Reading:</b> “The bat”. Adapted from: New wave literacy Book E. R.I.C. publications. Pg 25.	<b>Session #: 11</b> <b>Reading:</b> “The bike ride”. Adapted from: New wave literacy Book F. R.I.C. publications. Pg 14.
Vocabulary cognates	<b>Session #: 12</b> <b>Reading:</b> “Web page”. Adapted from: Reading keys 1. Macmillan. Pg 42	<b>Session #: 13</b> <b>Reading:</b> “Diary extract”. Adapted from: Reading keys 2. Macmillan. Pg 106.
Summarizing	<b>Session #: 14</b> <b>Reading:</b> “the history of rock and pop”. Adapted from: New Reading English is Fun. Fondo Educativo Panamericano. Pg 24-27.	<b>Session #: 15</b> <b>Reading:</b> “The 90’s”. Adapted from: New Reading English is Fun. Fondo Educativo Panamericano. Pg 28-30.

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

For each one of the intervention sessions a lesson plan was proposed. Every lesson plan included the setting of language and reading comprehension goals, as well as assessment criteria to find out if participants would have reached the set goals. The lesson plan template used for interventions was suggested by Universidad de La Sabana. (See *Appendix H*).

During the intervention stage, session 3 (face to face) and session 4 (computer mediated) included the instruction of the use of *asking questions strategy*. Then, the strategy taught during sessions 5 and 6 was *predicting and inferring*, followed by the instruction of the use of *identifying main idea strategy* in sessions 7 and 8. For session 9, an ongoing-test was carried out. The ongoing-test applied to participants was the KET (*version B*), a 35 questions test which included the same five parts as in KET (*version A*). For the development of this session, participants were gathered in one of the technology rooms of the institution and they had 60 minutes to answer the computer based ongoing-test. Results obtained by participants in that ongoing test are described in Chapter 5.

After participants were assessed with the ongoing-test, six more sessions of direct instruction of metacognitive reading strategies were delivered. The three strategies taught at the end of intervention stage were: *analysis of text structure*, *vocabulary cognates* and *summarizing*.

### **Post-intervention**

Once participants were instructed in how and when to use six metacognitive reading strategies and after they had the opportunity to use these strategies through practical exercises, they were exposed to a post-test. The post-test instrument used at this final stage was KET (*version A*). For this final post-intervention session, participants were gathered at one of the technology rooms of the school and they had 60 minutes to answer the post-test, which was applied in a computer assisted modality.

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

Finally, after all the data was collected from students in the pre-test, ongoing-test and post-test, an analysis was carried out regarding the effects that direct instruction of metacognitive reading strategies had on participants' performance in ESOL examination, which will be presented in the following chapter.

## **Chapter 5: Data Analysis and Findings**

In this chapter, outcomes from the different data collection instruments are presented. The analysis of data obtained in each one of the data collection instruments is presented in a statistical and descriptive way. For the purposes of the present study, quantitative as well as qualitative data collection instruments were applied and analyzed in order to fit the mixed method design suggested by Burns (1995) in which analysis of both type of data are contrasted to provide validity. Initially, quantitative analysis is presented, followed by the analysis of qualitative data through content analysis procedures in which relevant coding categories emerged from the data collected and were set up.

### **Quantitative Analysis**

This analysis includes detailed information of statistical results from two instruments: MARSI questionnaire and KET (pre, ongoing and post) test. The first instrument analyzed is the MARSI questionnaire, considering its importance and influence in the selection of the reading metacognitive strategies to be taught during the intervention sessions. Then, an analysis of each one of the KET tests (*pre, ongoing, post*) is presented and contrast of information is described throughout this analysis.

### **MARSI (Metacognitive Awareness of Reading Strategies Inventory)**

As mentioned previously, the MARSI is an instrument used to assess learners' metacognitive awareness and use of reading strategies while reading academic materials. It is divided into three different strategy subscales: global reading strategies (GLOB), problem solving strategies (PROB) and support reading strategies (SUP) (Mokhtari & Reichard, 2002). MARSI includes a set of 30 statements about what learners do when

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

they read, which is answered using a 5-point Likert-type scale ranging from 1 (I never do this) to 5 (I always do this).

**Global Reading Strategies.** The first factor of MARSI questionnaire to be analyzed is (GLOB); it involves 13 items and represents a set of reading strategies oriented towards a global analysis of text. The following table describes the thirteen items included in the MARSI questionnaire, whose aim was to find out how much global reading strategies (GLOB) were used by participants.

Table 10.

*MARSI - Global Reading Strategies*

Question #	Strategy
1	<i>I have a purpose in mind when I read</i>
3	<i>I think about what I know to help me understand what I read</i>
4	<i>I preview the text to see what it's about before reading it</i>
7	<i>I think about whether the content of the text fits my reading purpose</i>
10	<i>I skim the text first by noting characteristics like length and organization</i>
14	<i>I decide what to read closely and what to ignore</i>
17	<i>I use tables, figures, and pictures in text to increase my understanding</i>
19	I use context clues to help me better understand what I'm reading.
22	<i>I use typographical aids like bold face and italics to identify key information</i>
23	<i>I critically analyze and evaluate the information presented in the text</i>
25	<i>I check my understanding when I come across conflicting information</i>
26	<i>I try to guess what the material is about when I read</i>
29	I check to see if my guesses about the text are right or wrong.

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

The five answer choices given to students for answering the MARS questionnaire were: *never*, *occasionally*, *sometimes*, *usually* and *always*.

In order to decide which reading strategies to select for the intervention stage, the researcher decided to include the strategies that were less used by participants. Thus, 'less used strategies' were considered the ones whose answers reflected that 50% or more participants used the reading strategy *sometimes*, *occasionally* and/or *never*. To illustrate a better idea of what the researcher did in order to decide on which reading strategies to select for intervention, an example with strategy 7 is presented below.

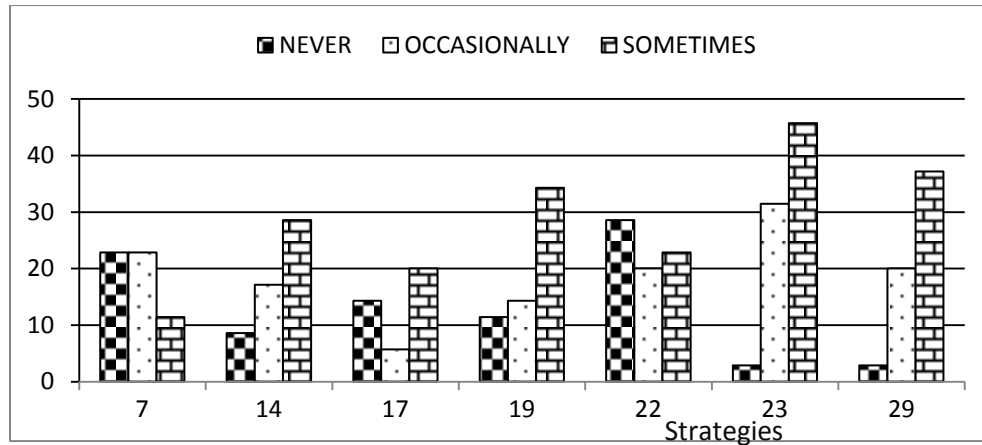


Figure 2. Results of the use of Global Reading Strategies.

By looking at Figure 2, it can be seen that in the Strategy 7, the addition of the options *never* (23%), *occasionally* (23%) and *sometimes* (11%) is equal to more than 50%, which indicates the scarce use of the strategy by more than half of the participants. That way, table 10 shows the strategies that were *never*, *occasionally* and/or *sometimes* used by more than 50% of participants. Outcomes obtained indicated that the Global Reading Strategies less used by participants were:

Strategy 29 (89%). *I check to see if my guesses about the text are right or wrong.*

Strategy 23 (79%). *I critically analyze and evaluate the information presented in the text*



## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

Strategy 22 (71%). *I use typographical aids like bold face and italics to identify key information.*

Strategy 19 (59%). *I use context clues to help me better understand what I'm reading.*

Strategy 7 (57%). *I think about whether the content of the text fits my reading purpose*

Strategy 14 (52%). *I decide what to read closely and what to ignore.*

After finding out the least used reading strategies by participants, reading strategies for instruction during intervention stage were suggested. (See Table 9).

However, looking at the results in Figure 3, the strategies that were not considered for intervention are presented, as more than 50% of the participants *usually* and/or *always* used them.

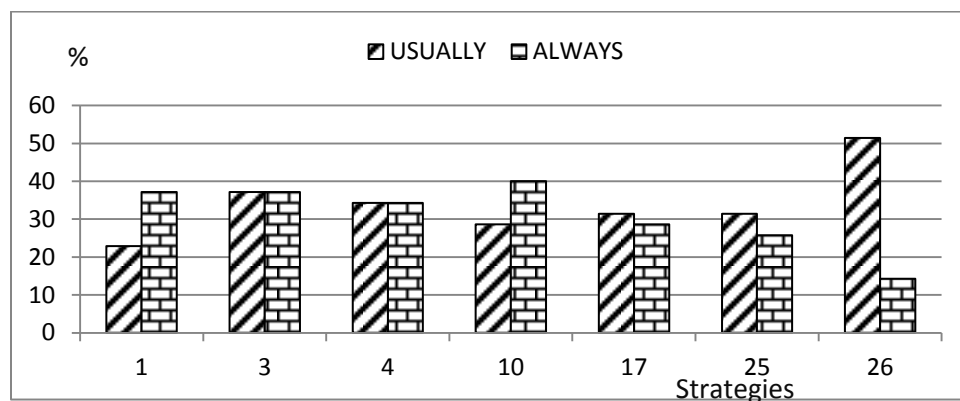


Figure 3. Results of Global Reading Strategies NOT considered for intervention

**Problem Solving Strategies.** The second factor involved in MARSI is Problem-Solving Strategies (PROB), which contain 8 statements that appeared to be oriented around strategies for solving problems when text becomes difficult to read (Mokhtari & Reichard, 2002). The items included in this factor are described in Table 11.

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

Table 11.

### MARSI – Problem Solving Strategies

Question #	Strategy
8	I read slowly but carefully to be sure I understand what I'm reading.
11	I try to get back on track when I lose concentration.
13	I adjust my reading speed according to what I'm reading.
16	When text becomes difficult, I pay closer attention to what I'm reading.
18	I stop from time to time and think about what I'm reading.
21	I try to picture or visualize information to help remember what I read.
27	When text becomes difficult, I re-read to increase my understanding.
30	I try to guess the meaning of unknown words or phrases.

After analyzing the answers given by participants regarding the use of problem solving strategies and considering the baseline established by the researcher for the purpose of selecting the reading strategies to be intervened, the results contained in Figure 4 and Figure 5 emerged.

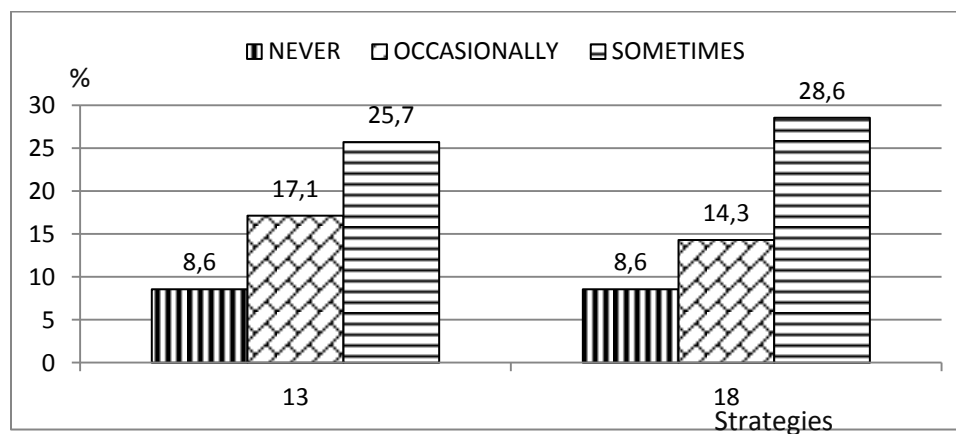


Figure 4. Results of the use of Problem Solving Reading Strategies

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

Results shown in Figure 4 demonstrate the scarce use of two Problem Solving Strategies: strategy 13 (I adjust my reading speed according to what I'm reading), which was *never*, *occasionally* and/or *sometimes* used by 51.4% of the participants. Similarly, strategy 18 (I stop from time to time and think about what I'm reading) was *never*, *occasionally* and/or *sometimes* used by 51.5% of the participants. Results obtained in this factor also evidenced that problem solving strategies are significantly used by participants. Figure 5 includes the results of the strategies which were not considered for intervention.

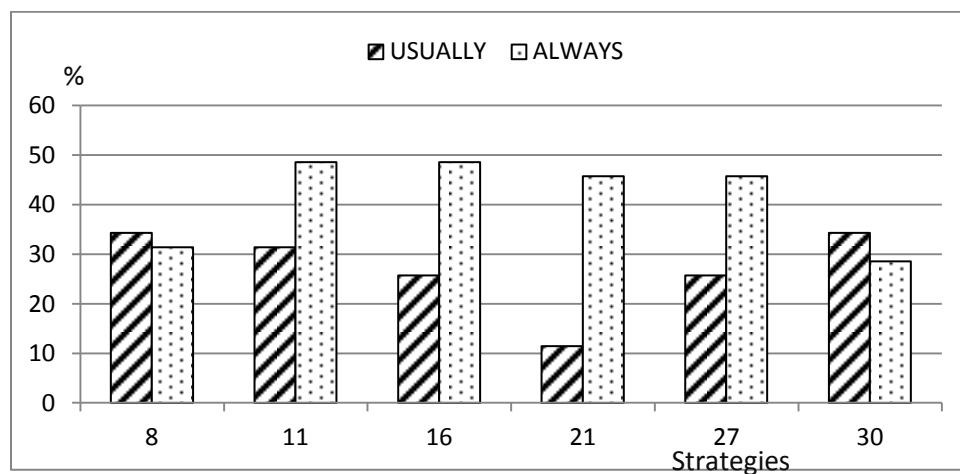


Figure 5. Results of Problem Solving Reading Strategies NOT considered for intervention

As presented in figure 5, strategies 11 (I try to get back on track when I lose concentration), 16 (When text becomes difficult, I pay closer attention to what I'm reading) and 27 (When text becomes difficult, I re-read to increase my understanding) were *always* and/or *usually* by more than 70% of participants and in a percentage higher than 50%, strategy 8 (I read slowly but carefully to be sure I understand what I'm reading) and strategy 30 (I try to guess the meaning of unknown words or phrases) were also used, reason why the researcher did not consider them for intervention.

**Support Reading Strategies.** The last factor analyzed in MARSİ questionnaire was Support Reading Strategies (SUP). This factor contained 9 items which, according to Mokhtari & Reichard (2002), primarily involves the use of outside reference materials, taking notes, and other practical strategies that might be described as functional or support strategies. These strategies are presented in Table 12.

Table 12.

*MARSİ – Supporting Reading Strategies*

Question #	Strategy
2	I take notes while reading to help me understand what I read.
5	When text becomes difficult, I read aloud to help me understand what I read.
6	I summarize what I read to reflect on important information in the text.
9	I discuss what I read with others to check my understanding.
12	I underline or circle information in the text to help me remember it.
15	I use reference materials such as dictionaries to help me understand what I read.
20	I paraphrase (restate ideas in my own words) to better understand what I read.
24	I go back and forth in the text to find relationships among ideas in it.
28	I ask myself questions I like to have answered in the text.

Answers provided by participants in this factor of the MARSİ questionnaire revealed a general scarce use of supporting reading strategies, as shown in Figure 6.

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

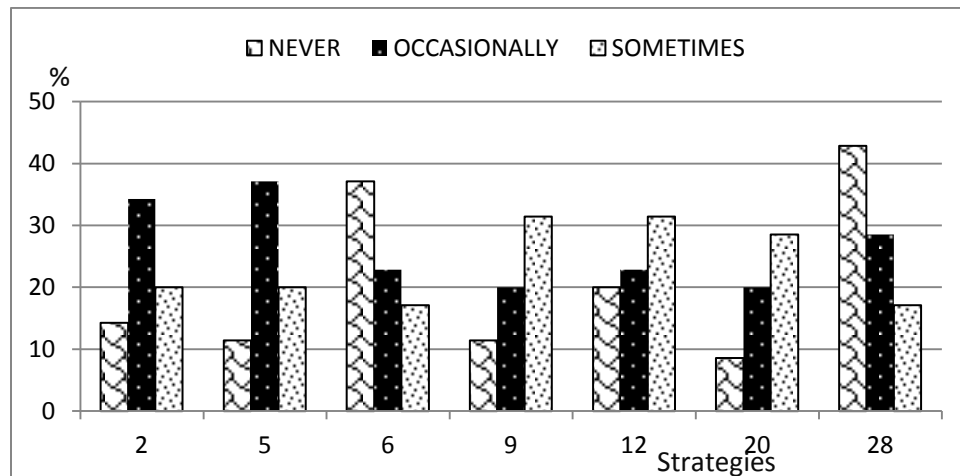


Figure 6. Results of the use of Supporting Reading Strategies.

It is evident that the least used strategy is strategy 28 (I ask myself questions I like to have answered in the text) with more than 40% of the participants who never use it, 28% who use it occasionally and 18% who use it sometimes. These results clearly evidence the necessity to include the strategy *asking questions*, for instruction during the intervention stage. Another reading strategy to be considered for instruction during intervention stage, after analyzing the data, was *summarizing*. This decision was made after noticing the scarce use of strategy 6 (I summarize what I read to reflect on important information in the text) and strategy 20 (I paraphrase, restate ideas in my own words, to better understand what I read). On the other hand, strategies 2 (I take notes while reading to help me understand what I read), 5 (When text becomes difficult, I read aloud to help me understand what I read), 9 (I discuss what I read with others to check my understanding) and 12 (I underline or circle information in the text to help me remember it), were not considered for instruction during intervention stage due to the fact that more than the 50% of participants used them sometimes or occasionally before starting the development of this study.

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

Finally, results presented in Figure 7 demonstrate good use of strategy 15 (I use reference materials such as dictionaries to help me understand what I read) and strategy 24 (I go back and forth in the text to find relationships among ideas in it).

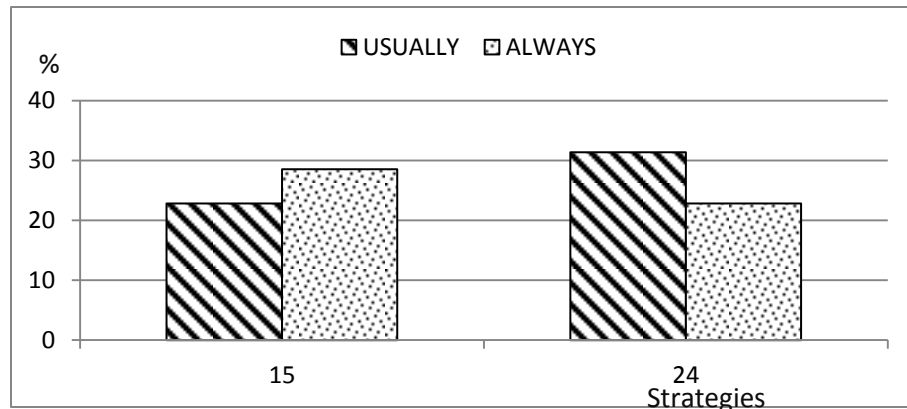


Figure 7. Results of Problem Solving Reading Strategies NOT considered for intervention

The second instrument analyzed in the quantitative analysis is the KET. This instrument allowed the researcher to determine the starting point of students' application of strategies through the test, which would then be compared at the end of the intervention to determine the effects of the intervention stage on students reading comprehension performance. By comparing and contrasting results obtained by participants in the KET pre, ongoing and post-tests results, it was possible to determine if the average scores were statistically different at the beginning and at the end. The analysis is presented according to the results obtained by students in each one of the five parts of the KET. Figures illustrate participants' results in the pre-test, ongoing-test and post-test. The results found in the pre-test helped the researcher to define the metacognitive reading strategies to be used during the intervention stage according to the relationship established by the researcher between reading abilities tested in this part of the KET and the strategy used (See Table 9). Then, the results obtained in the ongoing-test and post-test allowed to contrast the performance on students' reading comprehension in these type of EFL tests, while and after the intervention stages.

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

For each one of the five parts of the KET, the analysis includes a comparison of the amount of students who answered correctly a specific number of questions according to the total of questions in each part. Thus, the number of correct answers becomes the basis for the intention of this analysis. As one of the purposes of this study is to improve results on reading comprehension ESOL tests, it was not considered to analyse individual questions results, however, the strategy connected to each part of the test, the reading ability test in KET and the competences expected learners to acquire by the MEN were taken into consideration along the analysis of the results, as shown in Table 8.

**Part 1.** This part tests the ability that students have to understand the main message of a sign, which at the same time is related to the reading comprehension competence, “*I understand implicit information in texts which are related with topics of my personal interest*”, and it is connected with the strategy; *Predicting and inferring*. Figure 8 summarizes the results obtained by students in Part 1 of the KET instrument. The horizontal axis of the graph shows the number of right answers obtained by participants, while the vertical axis shows the number of participants who answered them.

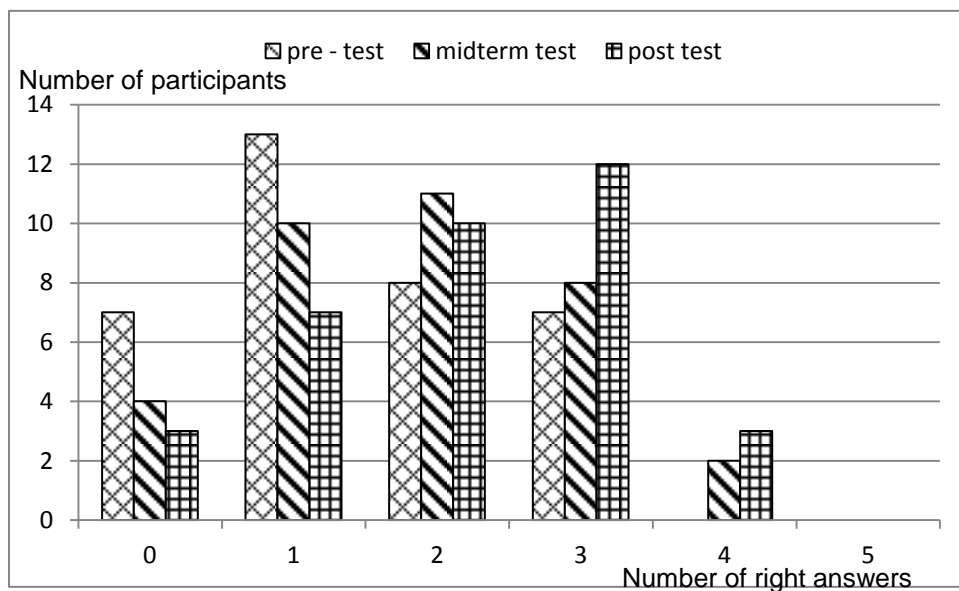


Figure 8. KET results part 1

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

In the pre-test, results of Part 1 show that more than 50% of the students, answered correctly one or less questions, it can also be seen that 37% of them answered correctly just one of the five questions and that none of them answered properly more than three questions, which indicates the low performance of reading comprehension that participants have when knowledge of vocabulary is required to succeed. These findings suggest that students needed to develop skills which helped them to understand implicit information in written texts. Due to the reading abilities required to succeed in this part of the KET and its corresponding reading strategies established by the researcher in Table 9, the researcher considered to incorporate for intervention the monitoring top-down strategy ***predicting and inferring*** in order to find out its effects on their reading comprehension performance in this part of the test.

Regarding the findings obtained in Part 1 of the ongoing and post-test, it can be seen that after students received instruction on predicting and inferring strategies, their results slightly improved. While in the pre-test more than 50% of students answered just one or less questions, this percentage reduce in the ongoing to 40, 1% and in the post-test to 28, 57%. Another important piece of information to be contrasted in this part is the fact that in the pre-test not a single student answered more than three questions correctly, while in the ongoing test 5, 71% of them answered properly four questions and in the post-test 8, 57% reached four correct answers. This means that although the increase was less than 10%, students' performance on this particular reading comprehension test was better.

### **Part 2**

Part two tests vocabulary knowledge that students have, and it is related to the reading comprehension competence "*I identify relations of meaning express in text about topics that are familiar for me*". The strategy connected with this part of the KET is; vocabulary cognates. Figure 9 shows scores obtained by students in Part 2 of the KET.



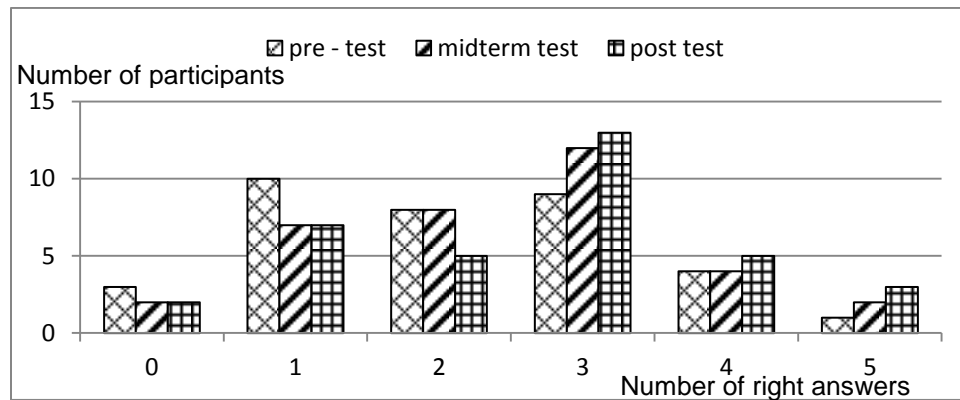


Figure 9. KET results Part 2

Part 2 of the KET includes five questions; it is focused on the task of reading and identifying appropriate vocabulary. Results in this part show that in the pre-test 11.4% of the sample group answered correctly four questions and one student (2.86%) answered correctly all of the five questions, different from the pre-test (Part 1), in which none of the students answered correctly all the questions. It can be observed that more than half of the sample group, 51,43% of students, answered just one or two questions correctly, which evidenced the difficulties that participants may have in order to succeed in reading tasks that require knowledge of vocabulary. These findings also revealed the need to support students on **vocabulary** strategies which would help them improve their ability to establish relations of meaning expressed in written texts. Further, a comparison between results of Part 2 in the pre-test with the ongoing-test and the post-test allowed to establish a positive effect in the improvement of the scores obtained by participants after intervention sessions. Based on these results, it can be concluded that instruction on vocabulary strategies helped participants to improve their knowledge of vocabulary.

**Part 3**

Part 3 includes a total of 10 questions; it tests students' ability to understand functional language of the routine transactions of daily life by reading and identifying appropriate responses. The reading competence associated to this part of the KET is "*establish differences of the structure and organization of descriptive, narrative and argumentative texts*", and the metacognitive reading strategy connected to this part is; *asking questions*.

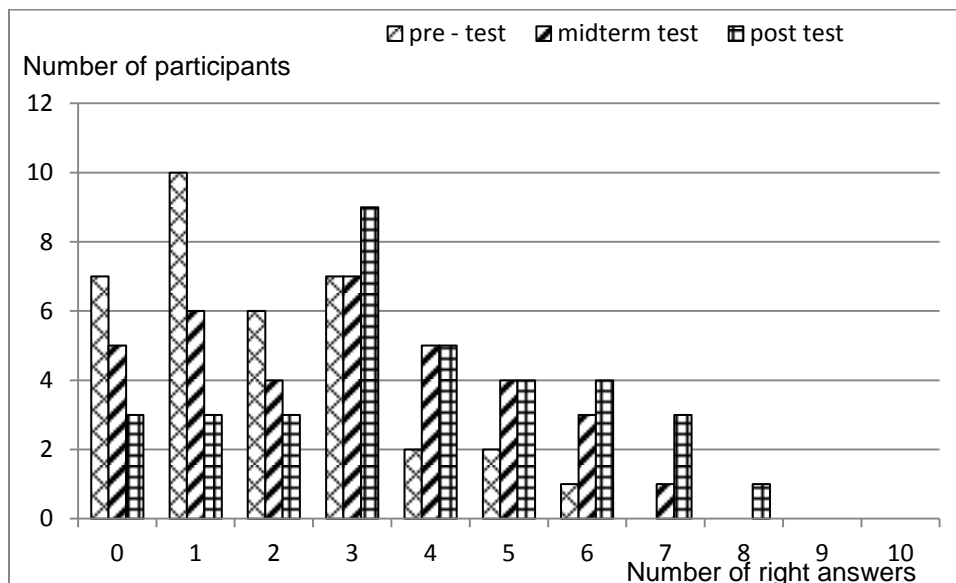


Figure 10. KET results Part 3

Considering the pre-test scores presented in Figure 10, a general poor performance of the students in this part of the KET can be found. Nearly half of the sample group (48, 57%) did not have any correct answer or had just one correct answer from the total of ten questions included.

It is also important to mention that none of the students answered correctly more than six of the ten questions and that just two of them answered properly five or six questions. These low scores obtained by participants in part 3 of the pre-test reflect their

difficulty for understanding the language of routine transactions. Taking into account asking and answering questions as one of the skills involved in using English for transactions (Richards, 2016) and the scarce use of strategy 28 (SUP): “*I ask myself questions I like to have answered in the text*” and strategy 29 (GLOB): “*I check to see if my guesses about the text are right or wrong*”, as shown in MARSII results (see Figure 6 and Figure 2), the researcher decided to include instruction on **asking questions** strategies in order to fulfill students’ needs on the development of skills which help them improving in the abilities required to succeed in this part of the KET

After receiving direct instruction on asking questions as a reading metacognitive strategy, results on the ongoing-test and post-test in Part 3 evidenced significant improvement on students’ reading comprehension performance. In the pre-test, 48,57% of students got zero to one correct answers, while in the ongoing test this number was reduced to 31.43% and in the post-test was reduced to 17,14%. Other numbers that show improvement of reading comprehension tests performance of students were the ones referring to the percentage of students who answered correctly more than six questions which in the pre-test was 0%, in the ongoing-test was 2,86% and in the post-test this number arose to 11,43%, demonstrating effectiveness and relationship between the use of the strategies taught and the performance of students in this part of the KET.

#### **Part 4**

Part 4 shows evidence of students’ ability to identify main ideas when reading texts. The competence connected to this part of the KET is “*I recognize the purpose of a description in narrative texts of middle extension*”. It includes seven questions and it is related to the use of the reading metacognitive strategy; **identify main ideas**. Figure 11 illustrates results obtained by students in part 4 of the pre, ongoing and posttests.

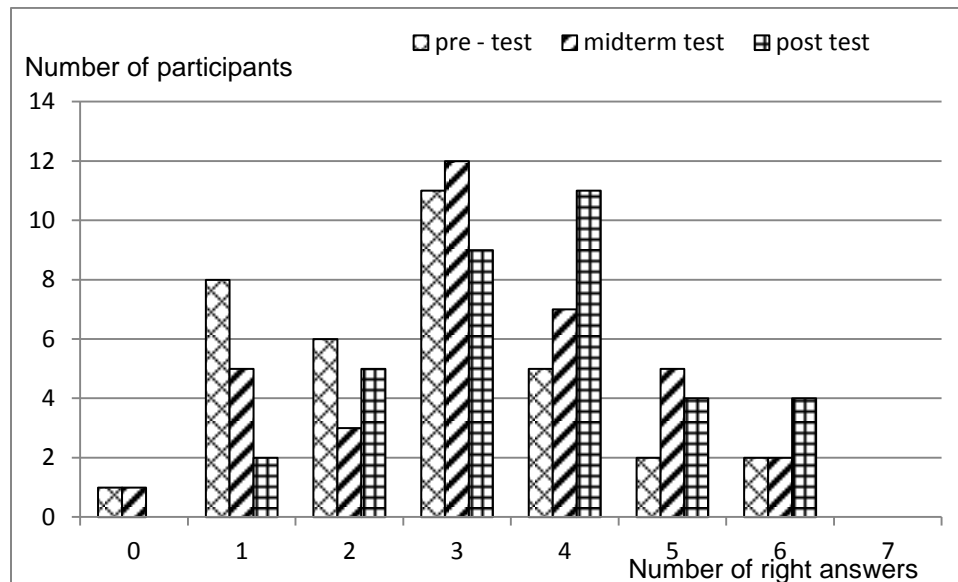


Figure 11. KET results Part 4

Results obtained in the pre-test reflect a poor performance by the sample group in this part. From the 35 students who participated in the pre-test, 31 of them (nearly 90%), answered correctly four or less than four questions. None of the participants answered correctly the seven questions involved in this session and just 11, 4% of them answered five or six questions properly. Additionally, it can be seen that the third part of the sample group (74,29%) answered correctly just three or less than three questions, demonstrating weakness in reading to understand detail or main ideas and an urge to provide students with instruction on reading strategies that may help them in their ability to **identify main ideas** in a written text.

Results from ongoing-test and post-test in Part 4 show a reduction in the percentage of students who answered three or less correct answers, which passed from 74,29% in the pre-test to 60,01% in the ongoing-test and 45,75% in the post test, reducing that amount of students from the quarter part to less than the half of the whole group.

Regarding students who answered five or six correct answers, the situation is even better, since the percentage of students who answered this number of questions correctly was doubled from 11,41% in the pre-test to 22,86% in the post test. Another number which was doubled from the pre-test to the post-test was the percentage of students who answered correctly more than four questions, which increased from 11.42% in the pre-test to 22,86% in the post test, indicating that although none of the students got right the total of questions in this part, there was improvement of students' scores and consequently, improvement on the effective use of reading metacognitive strategies.

**Part 5**

Finally, part 5 of the KET includes a set of eight questions aimed at testing the learners' knowledge of grammatical structure and usage in the context of a reading test. The specific competence linked to this part of the KET is; *"I identify relations of meaning express in text about topics that are familiar for me"*, and it is connected to the strategy; *Analyze text structure*.

Results obtained by participants in this part of the KET pre, ongoing and posttest can be seen in Figure 12.

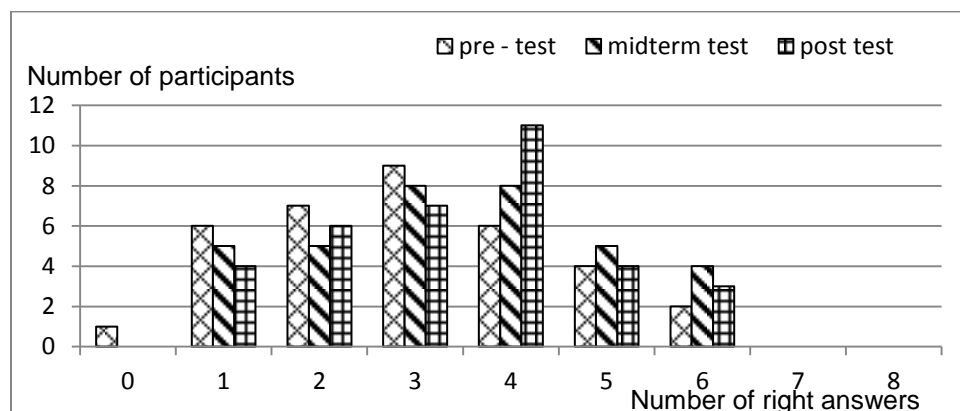


Figure 12. KET results Part 5

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

Outcomes found in the pre-test Part 5 evidence that the fourth part of the sample group answered correctly three of the eight questions included. There were no students who answered correctly seven or eight questions and just six of the thirty-five students (17.14%) answered correctly five or six of the questions. Something important to be considered in the analysis of the results on Part 5 is the fact that more than a half of the sample group (65.71%) answered just less than four questions correctly, demonstrating low reading comprehension performance when abilities for analyzing text structures are required. Once again, considering the relationship between the abilities tested in KET and the strategy use established by the researcher (see Table 9), along with the results found in MARSII, which evidence the scarce use of strategy 23 (GLOB): “I critically analyze and evaluate the information presented in the text” and strategy 22 (GLOB): “I use typographical aids like bold face and italics to identify key information”, it was decided to include the instruction on ***analyzing text structure***, as a reading metacognitive strategy during the intervention stage.

After comparing participants' scores obtained in the pre, ongoing and posttests in this part of the KET, it was possible to establish that, although there were no students who answered seven or eight questions correctly in none of the three tests, some other findings show improvement on students' performance in Part 5 of the reading comprehension test. The greatest evidence that supports this issue is seen when contrasting the amount of students who answered less than four correct answers, which in the pre-test was nearly the third 65,71%, but it decreased to 51,44% in the ongoing-test and to 48,57% in the post-test. On the other hand, the percentage of students who answered four or more of the eight questions properly increased from test to test, showing 34,28% in the pre-test, 48,58% in the ongoing test and 51,43% in the post test, indicating that there was definitely a slight improvement of the student's ability to identify appropriate lexical items as required

in this part and demonstrating positive effects on improvement of participants reading comprehension performance after direct instruction of reading metacognitive strategies.(See Appendix J)

### **Qualitative Analysis**

The qualitative data collected in the present study was analyzed considering the Grounded Theory analysis technique in which the definition of coding categories was required. The purpose of setting up relevant coding categories is to reduce the large amounts of qualitative data collected by making meaningful interpretations of this data (Burns, 1999). As expressed by Bailey (1990), this classification of data using content analysis increases the reliability of the analysis as others can check the way the researcher has classified data.

**Open coding:** This is the initial stage, in which after reading and rereading the information registered in the data collection instruments, the researcher generates initial concepts related to the research question and objectives, by identifying, naming, categorizing and describing phenomena found in the data. Codes and categories which merged from the three instruments mentioned above are presented in Table 13 and samples taken from some of these instruments are also presented in the same table.

**Axial coding:** Strauss and Corbin (1990) highlight that axial coding permit to reassemble data that were fractured during open coding. The purpose of axial coding is to establish relationships and connections among categories which merged from the previous stage.

**Selective coding:** It is used to organize the relationships found during axial coding process into one single core category which is related to all the other categories and subcategories. This means that one category is chosen to be the core category; all other categories are then related back to that core category.

## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

This particular study involved the open-coding stage, in which codes were established according to information found in the participants' interview, learners' journal and teacher's journal. Then information was grouped into three main categories: metacognitive strategies, use of B-learning to develop reading metacognitive strategies and Socio-affective factors.

For this particular study, three instruments served for the establishment of coding categories: teacher's journal, learners' journal and participants' interview. Table 13 presents samples of data which were found in these three instruments, which allows to visualize how codes and categories were established by the teacher-researcher. It is important to clarify that although answers given by participants in the learner's journal and participants' interview were given in Spanish language, they were translated by the researcher into English language in order to facilitate understanding for the readers.

Table 13.

*Codes and categories emerged from qualitative data*

<b>CATEGORIES</b>	<b>CODES</b>	<b>SAMPLES</b>
Metacognitive Strategy Awareness	<ul style="list-style-type: none"> <li>• Becoming a conscious learner.</li> </ul>	<ul style="list-style-type: none"> <li>• "I learned the vocabulary related with the internet." (F17 <i>Learners' journal Session 12</i>).</li> <li>• "To recognize what I have to do". (F6 <i>learners' journal Session 7</i>).</li> <li>• "Read and look for the words that are alike to Spanish, then understand the paragraphs" (F23 <i>Learners' journal Session 12</i>).</li> <li>• "Look the objectives of the session, look carefully the explanation of the strategy and then practice with the Activities" (F8 <i>learners' journal Session 13</i>).</li> <li>• "Now I use the strategies in the spanish class to help me understand texts better" (F20 <i>Participants interview</i>).</li> </ul>



## IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

		<ul style="list-style-type: none"> <li>• “Yes, I try to look for key words or words that I already know to try to understand texts better” (F11 <i>Participants interview</i>)</li> <li>• “Now, if I don’t understand a paragraph I try to find the main idea in order to understand it” (F 33 <i>Participants interview</i>).</li> </ul>
Usefulness of B-learning in the development of reading metacognitive strategies.	<ul style="list-style-type: none"> <li>• Course structure</li> <li>• Learning support</li> </ul>	<ul style="list-style-type: none"> <li>• “It was easy because in the computer we just followed step by step” (F 35 <i>Learners journal Session 3</i>).</li> <li>• “Through internet we can ask the teacher if we have any doubt” (F9 <i>Participants interview</i>).</li> <li>• “The teacher is important in order he to lead us” (F 33 <i>participants’ interview</i>).</li> <li>• “I liked the activities made in the computer” (F 20 <i>Participants interview</i>).</li> </ul>

After analyzing qualitative data collected, the categories identified in relation to the research question and objectives proposed in this study were: *metacognitive strategy awareness* and *use of blended-learning to develop reading metacognitive strategies*

The first category, metacognitive strategy awareness, refers to the data collected regarding students’ behavioral changes when performing reading tasks for comprehension. Within this category one sub-category emerged: becoming a conscious learner, which relates to the learners’ awareness of personal strengths and weaknesses (Strong & Krause, 2000). The second category, *use of b-learning to develop reading metacognitive strategies*, indicated learners’ ability to develop reading tasks and activities through a mixed methodology involving computer based as well as face to face instruction. Moreover, it involves two sub-categories: a) course structure, which refers to the content presented along the 16 session planned, the stages included for the development of tasks

and activities assigned as well as the resources and assessment tools provided in each one of the sessions in the course; and b) learning support, which is related to teacher or tutor monitoring of students learning process and follow up through it.

The results of the data analysis are presented below.

### **Category 1: Metacognitive strategy awareness**

In order to provide answer to the research question set up in this study regarding the effects of using a b-learning course on reading metacognitive strategies aimed at developing planning, monitoring and evaluating strategies, the analysis took into account the use of this type of strategies by the participants before and during the implementation stage. The subcategory defined from category 1 was: becoming a conscious learner.

***Becoming a conscious learner:*** Activities like the planning and monitoring of learning tasks and the evaluation of learning outcomes help learners to increase their reading metacognition (Pintrich, Wolters & Baxter, 2000). This type of metacognitive control strategies, which were taught through direct instruction during the implementation stage in this study, served to enhance participants' consciousness on the manner they read.

Based on the information gathered from the learners' journal, it could be determined that most of the learners increased their awareness about the way they approach a written text for understanding. This idea is supported by more than 80% of participants' logs included in the learners journal.

For instance, when participants were asked about the steps they followed to accomplish the tasks proposed in the different sessions, F23 stated the steps followed were to "read and look for the words that are alike to Spanish, then understand the paragraphs" (F23 *Learners' journal Session 12*). In a similar way, F7 described the procedure followed when using the *asking questions* strategy saying he could "Imagine

what the text was about and ask questions that would be answered in the text.” (F7 *Learners’ journal Session 4*). These findings were echoed in the answers given by F20, F11, F9 and F30 during the participants’ interview, in which learners were asked if they had changed the way they read after receiving direct instruction on reading metacognitive strategies. Most of the answers given by participants suggested that there was definitely an impact on the way they approach written texts for understanding. One example of this is the answer provided by F33 who said: “Now, if I don’t understand a paragraph I try to find the main idea in order to understand it (F 33 *Participants’ interview*). Additionally, F11 mentioned the new strategies used for better understanding of written texts: “Yes, I try to look for key words or words that I already know to try to understand texts better (F11 *Participants interview*), which strongly supports this insight. Finally, reflections registered in the teacher’s journal gave account of the increase in the awareness of the use of reading strategies. The teacher’s journal, session 11 included notes regarding learners’ awareness of the steps followed in the development of the reading tasks: “learners listed the steps followed to accomplish with the task proposed and they shared and compared those steps among their classmates” (*teacher’s journal session 11*). This suggests that participants evaluated the way they were performing the reading act.

In addition to the development of planning, monitoring and evaluation strategies during the reading process, learners were able to develop skills such as setting objectives and self-assessment, in order to improve comprehension of written texts. This development of skills helps learners to start a transition from being unskilled readers who do little monitoring of their own memory and other metacognitive tasks, to take the first step to become skilled readers (Flavell, 1979). Considering collected information from qualitative data instruments, it was possible to establish the progress of learners in the

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development of setting objectives and self-assessment skills through the analysis of the evidence presented below.

To question number 4 “what were the steps you followed to accomplish the task successfully?” included in the learners’ journal (see appendix C), F6 answered: “to recognize what I have to do” (*F6 learners’ journal session 7*), which provides evidence of awareness of the goals to be accomplished during the development of the reading task suggested. This response is mirrored by F25, F10 and F17 who agreed on the relevance of analyzing objectives and self-assessing procedures to accomplish reading tasks successfully. Consistently, answers provided by participants in the interview (see appendix E) evidence that after the intervention stage, learners considered the establishment of a strategy or a set of strategies to be used before they approach a reading text. Moreover when they were asked in the interview if they considered they had changed the way they read by applying the strategies learnt, when they read texts in English and other subjects, F9 answered: “ Yes, now I think about which strategy to use for better understanding” (*F9 participants’ interview*) and F20 stated: “Yes, now I go back and forward through the text when I feel that I am not understanding” (*F20 participants’ interview*), which demonstrates an increase in the development of monitoring and assessment skills for reading comprehension.

In light of the above, it is worth saying that, together with the analysis of the results from the MARS1 questionnaire, the interview to participants and the learners’ journal, it was possible to conclude that after the intervention stage took place, more than a half of the participants felt they had acquired consciousness about the way they approach reading text for comprehension.

**Category 2: Usefulness of B-learning in the development of reading metacognitive strategies:**

The sub-categories defined for this category were; course layout and learning support. The first sub-category refers to issues related to the content and organization of the reading course suggested for the intervention stage, it includes participants' perception about the usefulness of the topics as well as features of navigation and accessibility of the blended course. The second sub-category, learning support, refers to the appropriateness of blended-learning approach as a means of instruction for the development of reading metacognitive strategies and the benefits of using technology to support learning.

**Course layout:** As described previously in chapter 4, the course included direct instruction on six reading metacognitive strategies which were set up according to learners' needs found in MARS1 results. In regard to the organization of the course, it involved four moments: *What is it? How do I do it? Let's practice and now I reflect* (see chapter 4).

Thanks to participants' logs included in the learners' journals and answers given by participants in the interview that took place after intervention stage, it was possible to find out that what they liked the most of the blended course., a great number of them, nearly 80% considered aspects such as organization clarity and facility to navigate through the platform as strengths of the blended reading course implemented in this study.

Some evidence supporting this findings could be determined through detailed analysis of qualitative data as is the case of information registered by participants in the learners' journal, leading to conclude that participants liked the content included in the course; answers given in question 2 of the learner's journal, "Did you like the topic of the reading?", (see appendix C) confirmed this fact. In this regard, F4 answered: "I really liked today's topic because I love animals" (F4 *learners' journal session 3*). In the same way,

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F18, F28, and F7 (F18, F28, F7 *learners' journal session 3*) agreed on the appropriateness of the topics. In addition to the affinity shown by participants with the content included in the blended course, they also considered the ease to navigate through the Moodle platform. F16 stated “the easiest part of the task was to follow the steps to accomplish it since they were clearly set in the platform”. These insights were compared with information from the participants' interview, finding similar opinions regarding these issues. An example of this similarity is the answer given to question 5: “What did you like the most about the development and implementation of the course in reading metacognitive strategies for improving reading comprehension?” (See appendix E) by F20: “I liked the activities made in the computer because they were well organized (F20 *participants' interview*). Another similar impression about the strengths of the content and organization of the computer sessions is the answer given to the same question by F23: “what I liked the most were the topics and the strategies learnt, because they will help me to read better not just in the English class, but in other subjects as well” (F23 *participant's interview*). Finally, and in order to triangulate information analyzed regarding this sub-category, the notes of the researcher in the teacher's journal were taken into account. Notes written in the teacher's journal after session 7 suggest the familiarity that participants had with the structure of the online course. “Learners have shown ability to navigate through the course and to develop the activities properly” (*teacher's journal session 7*).

The next sub-category highlights the importance of the role of the teacher as a tutor in a blended learning environment.

**Learning support:** According to Salmon (2012), an e-moderator should accomplish with the role of promoter and facilitator of effective learning processes. To achieve this, the e-

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moderator must tutor and support the use of learning materials in order to familiarize participants with the development of learning tasks.

Evidence regarding this sub-category was taken from the teacher's journal and the participants' interview. While working on the intervention stage, some students were constantly approaching the researcher in order to ask for clarification regarding the activities set in the online course, as registered in the teacher's journal: "Students ask question about how to develop the tasks and activities of the computer assisted component" (*teacher's journal session 8*), which indicates that some type of learners needed additional online support to get a better understanding of tasks and activities to be developed on the computer assisted component.

In relation to the importance of follow-up provided by the teacher or tutor for a better reading comprehension, all participants who were interviewed considered a key factor the fact that they received support from the tutor while developing reading comprehension tasks in the online component as well as in the face to face component. To question 3 in the participants' interview: "how important do you consider the support of the teacher or tutor for reading comprehension when you are reading a text in English?", (see appendix E) F20 answered: "it is very important for clarification of any doubt and for counselling" (*F20 participants' interview*), to the same question F9 answered: "it is important to get guidance if we do not understand" (*F9 participant's interview*) and F33 referred to the possibility to send an e-mail for getting support in case they had any doubt about the development of online activities, which evidence claim for the information exchange stage suggested by Salmon (2012).

Through analysis of the teacher's journal, and participants interview, it was possible to establish that a high number of students were able to develop the tasks and activities proposed in the blended course implemented and were committed with the

assignments, as registered in the teachers' journal: "students worked on the assigned computer assisted activities before this face to face session" (*teacher's journal, session 11*).

Findings after participants' interview analysis demonstrated that learners considered essential the face to face support offered by a teacher or tutor in order to facilitate comprehension when they are reading texts in English language, issue which gives account of the importance of learning support as a crucial factor to achieve effective learning processes.

Despite the positive outcomes mentioned above, there were comments from two participants who were not engaged enough in the tasks and activities, expressing that in general they do not like the English language. When they were asked in the learners' journal if the reading tasks had been easy or difficult and the most difficult or the easiest part of the task, F19 and F3 agreed that the most difficult part had been the understanding of the language. When the researcher noticed that reluctant attitude coming from this couple of students, he asked them about the issue in order to consider their thoughts and feelings in order to increase their interest towards the course, however, they said that there was not the reading course at all, but instead they stated that they were not willing to learn another language. This information was registered as additional comment in the teacher's journal on session 8, although due to the reduced number of participants who stated non-compliance with the intensive reading course, such information was not considered relevant for deep analysis. Nevertheless, suggestions for further research include the factor of motivation for learning a foreign language.

In the next chapter, conclusions emerged from this study will be presented. In the same way, pedagogical implications regarding the development of the whole study and its



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limitations will be described. Finally, suggestions and recommendations for future in the field of this study will be shared.

## Chapter 6: Conclusions

The purpose of this study was to design and implement an intensive reading course carried out through direct instruction in a blended learning environment aimed at the development of six reading metacognitive strategies for improvement of reading comprehension performance. The objective was to find out if direct instruction of reading metacognitive strategies through blended learning could help students to develop *planning, monitoring* and *evaluating* metacognitive reading strategies for improving results in reading comprehension EFL tests. Findings indicate that the outcomes of the intensive reading course in general were successful and participants incorporated a strategic reading approach into their reading practice. In the following lines, conclusions will be presented considering the research question and objectives.

### Teaching of reading strategies in a b-learning environment

After conducting this study, it can be concluded that the inclusion of computer assisted activities created a more dynamic and differentiated option for reading, which engaged learners (Prenksy, 2005) in the development of reading metacognitive strategies. Participants and researcher recognized the benefits of using a blended methodology in order to achieve the objectives set for this study. This outcome corroborates findings from the study carried out by Schechter, Macaroon, Kazakoff and Brooke (2015), in which a positive impact of a b-learning approach in the improvement of reading comprehension performance was demonstrated. Additionally, the data collected and analyzed evidenced that besides motivation as a factor to foster learning of reading strategies, blended-learning also promoted the development of metacognitive skills as participants were engaged during the leaning process (Pearson and Gallagher, 1983). In addition to learners' preference and interest for developing activities on a computer assisted basis,

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they recognized the importance of teacher support to facilitate learning, demonstrating that face to face modality of instruction can be considered as a complement to the web-based modality to achieve effective learning (Arismendi, Colorado and Grajales, 2011).

Moreover, participants highlighted the usefulness of the blended-learning model for facilitating their learning process.

Data analysis along with the conclusions presented above demonstrate that the intensive reading course designed and implemented for this study affected positively the reading performance and metacognition awareness of most of the participants.

### **Direct instruction and the development of reading metacognitive strategies**

While working on the implementation stage, participants were directed towards a strategic reading approach. The data analysis conducted indicated that, session after session, awareness of participants increased in relation to the use of strategies to comprehend written language more effectively (Chamot and O'Malley, 1994). Participants listed the steps they followed to develop each task and they felt motivated about controlling their own improvement in the performance of reading comprehension (Swanson, 1994). Planning, monitoring and evaluating strategies were emphasized throughout the course and the analysis of participants' reflections in the learners' journal allowed to evidence that the use of explicit instruction of comprehension strategies favored learners understanding of information in written texts (Duke, 2001).

Teaching reading strategies directly encouraged the use of reading strategies such as *analyzing text structure*, *asking questions* and *summarizing*, which suggest the achievement of objectives proposed for this study.

### **Influence of the use of reading metacognitive strategies in reading comprehension performance**

Some of the main issues which can be discussed after the development of this study are the ones related to the improvement of the results obtained by students in ESOL tests. They showed that instruction on reading metacognitive strategies influence students' performance in understanding written texts.

Improvement of participants' performance in reading comprehension was reflected in the post-test outcomes.

The higher improvement after intervention was evident in the use of three reading metacognitive strategies: *analyzing text structure*, *asking questions* and *summarizing* aimed at the development of the ability to establish differences of text structure and organization of texts and, at the same time, to the understanding of relations of addition, contrast, temporal and spatial order and cause-effect between written texts. Even though statistics did not show the same significant increase regarding the use of the other reading metacognitive strategies, it can be concluded that in all the cases there was improvement.

Finally, it is important to mention that by the end of the process a development of awareness and understanding of reading as a process which involves the use of strategies and strategic reading was demonstrated. Consequently, logs registered by participants in the learners' journal indicated that most of the participants were aware of the use of the strategies as they could list consciously the steps followed while developing tasks during the intervention sessions.

Recognition and identification of planning, monitoring and evaluating strategies also increased after instruction, this could be demonstrated when all students were able to list at least three reading metacognitive strategies describing what those strategies consist of.

### **Pedagogical implications**

Considering the findings in this study, some pedagogical implications can be proposed:

- Interest and motivation of learners increase when using computer assisted activities.
- Reading instruction requires teacher's efforts on developing efficient reading strategies in their learners such as selecting, adapting and implementing the activities to be taught.
- Different aspects of a foreign language such as vocabulary and structures can be learnt through reading.

### **Limitations**

There were some factors that may be considered as limitation throughout the development of this study. One of those factors is the one related to the time available for the development of the research project. Pressley, Beard El-Dinary and Brown (1992) estimates that it takes several months, perhaps as long as a year or more for learners to become strategic readers, which suggest that the time expended for the development of the study might not be sufficient for successfully achieving the whole objectives proposed.

Some other limitations deal with the pace of the course due to the time available. Some learners felt they were working beyond their own learning pace. Finally, a point to be considered as a limitation is the learners' language proficiency, which in some cases seemed to be behind the proficiency required to develop the reading activities proposed by the researcher in the implementation stage.

### **Further research**

Developing a research proposal into the field of reading comprehension in a foreign language involving a cutting edge teaching model, as is blended-learning was demanding and at the same time rewarding. The use of direct instruction to teach reading strategies in order to develop metacognitive awareness is highly recommended. However, after literature review carried out in this area it is worth to mention that there is lack of learning materials such as textbooks which focus specifically on the teaching of reading comprehension strategies in an explicit way. Considering the previous insight, it would be recommended to go deeper in the field of materials design which involves teaching of reading comprehension strategies.

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Appendices

Appendix A (1 Of 7)

Pre and Post Test

**Questions 1 – 5**

Which notice (A – H) says this (1 – 5)?




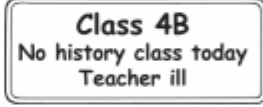
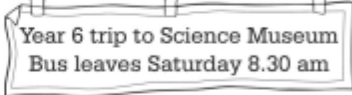

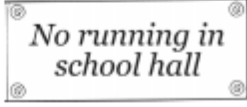
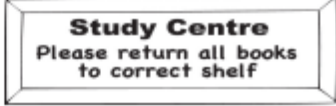
For questions 1 – 5, mark the correct letter A – H on your answer sheet.

**Example:**

0 You cannot use your phone.

Answer:

0	A	B	C	D	E	F	G	H
0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- |  |          |  |
|--|----------|--|
| <p><b>1</b> You should put things back in the right place.</p> | <b>A</b> |    |
| <p><b>2</b> Go here if you have lost something.</p>            | <b>B</b> |    |
| <p><b>3</b> You must walk in this place.</p>                   | <b>C</b> |   |
| <p><b>4</b> These students do not have a lesson.</p>           | <b>D</b> |  |
| <p><b>5</b> You cannot go in through here.</p>                 | <b>E</b> |  |
|  | <b>F</b> |  |
|  | <b>G</b> |  |
|  | <b>H</b> |  |

Appendix A (2 of 7)

**Reading and Writing • Part 2**

**Questions 6 – 10**

Read the sentences about an internet café.  
 Choose the best word (**A**, **B** or **C**) for each space.  
 For questions **6 – 10**, mark **A**, **B** or **C** on your answer sheet.



**Example:**

**0** Last month an internet café ..... near Ivan's house.

- A** opened      **B** began      **C** arrived

Answer:

<b>0</b>	<b>A</b>	<b>B</b>	<b>C</b>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**6** The internet café quickly became ..... with Ivan and his friends.

- A** favourite      **B** popular      **C** excellent

**7** It only ..... Ivan five minutes to get to the café.

- A** takes      **B** has      **C** gets

**8** Ivan often ..... his friends there after school.

- A** waits      **B** meets      **C** goes

**9** The café has different ..... of computer games that they can play.

- A** things      **B** ways      **C** kinds

**10** Ivan thinks there is a lot of ..... information on the internet.

- A** certain      **B** sure      **C** useful



Appendix A (3 of 7)

**Reading and Writing • Part 3**

**Questions 11 – 15**

Complete the five conversations.  
For questions 11 – 15, mark **A**, **B** or **C** on your answer sheet.

**Example:**

**0**

Where do you come from?

A New York  
B School  
C Home

Answer: **0**

- |   |  |
|---|--|
| <b>11</b> Why didn't you come to the pool yesterday?    | <b>A</b> I didn't see them there.<br><b>B</b> It was a great time.<br><b>C</b> I was doing something else. |
| <b>12</b> I have to go home now.                        | <b>A</b> Have you been before?<br><b>B</b> It's still quite early.<br><b>C</b> How long was it for?        |
| <b>13</b> Whose phone is that?                          | <b>A</b> It's not there.<br><b>B</b> Wasn't it?<br><b>C</b> I'm not sure.                                  |
| <b>14</b> There weren't any more tickets for the match. | <b>A</b> That's a pity.<br><b>B</b> It isn't enough.<br><b>C</b> I hope so.                                |
| <b>15</b> Shall we play that new computer game?         | <b>A</b> It's all right.<br><b>B</b> Yes, it is.<br><b>C</b> If you'd like to.                             |

Appendix A (4 of 7)

**Questions 16 – 20**

Complete the telephone conversation between two friends.

What does Josh say to Matt?

For questions **16 – 20**, mark the correct letter **A – H** on your answer sheet.

**Example:**

*Matt:* Hi, Josh. It's Matt.

*Josh:* **0** .....**C**.....

*Answer:*

<b>0</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Matt:* Oh, sorry. I'm phoning about the skateboarding competition this afternoon.

*Josh:* **16** .....

*Matt:* Really? There was some information about it in our club magazine.

*Josh:* **17** .....

*Matt:* Just from 2.30 till 5 pm. They give out the prizes at 6 pm.

*Josh:* **18** .....

*Matt:* The prizes are better this time. The top prize is a skateboard.

*Josh:* **19** .....

*Matt:* You're much better than you were last year!

*Josh:* **20** .....

*Matt:* Great! See you then.

**A** I'd like a new one but I don't think I'm good enough to win.

**B** I didn't see it. Is the competition on all afternoon?

**C** Hi. You're calling early!

**D** Do the winners get CDs like last year?

**E** I wasn't very good then.

**F** I didn't know that was today.

**G** I haven't got one of those.

**H** Maybe, we'll see. Shall we meet in the park at 2.00?





## Appendix A (5 of 7)

**Reading and Writing • Part 4****Questions 21 – 27**

Read the article about a young swimmer.

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

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

For questions **21 – 27**, mark **A**, **B** or **C** on your answer sheet.

**Ana Johnson**

Ana Johnson is a 13-year-old swimmer who lives in Melbourne in Australia. Her dream is to swim for Australia in the next Olympics.

She swims in both long and short races and she has already come first in many important competitions.

As well as spending many hours in the pool, Ana also makes time for studying and for friends. 'I have lots of friends who swim and we're very close. It's much easier to have friends who are swimmers because they also have to get up early to practise like me and they understand this kind of life. But I'm not so different from other people my age. In my free time I also enjoy going to the movies and parties. There are also some good things about swimming for a club. I travel a lot for competitions and I've made friends with swimmers from other Australian cities and from other parts of the world.'

Ana is becoming well known in Australia and she believes it is important to get more young people interested in swimming. 'I don't mind talking to journalists and having my photograph taken. But last year I was on TV and that was much more fun.'



Appendix A (6 of 7)

**Example:**

**0** Ana's home is in Melbourne.

**A** Right    **B** Wrong    **C** Doesn't say

Answer:

<b>0</b>	<b>A</b>	<b>B</b>	<b>C</b>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**21** Ana hopes she will become an Olympic swimmer.

**A** Right    **B** Wrong    **C** Doesn't say

**22** Ana knows that she is better at short races than long ones.

**A** Right    **B** Wrong    **C** Doesn't say

**23** Ana has won a lot of swimming competitions.

**A** Right    **B** Wrong    **C** Doesn't say

**24** It is difficult for Ana to make friends with other people who swim.

**A** Right    **B** Wrong    **C** Doesn't say

**25** Ana likes doing the same things as other teenagers.

**A** Right    **B** Wrong    **C** Doesn't say

**26** Ana has met people from different countries at swimming competitions.

**A** Right    **B** Wrong    **C** Doesn't say

**27** Ana prefers speaking to journalists to being on television.

**A** Right    **B** Wrong    **C** Doesn't say



---

**Reading and Writing • Part 5**

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**Questions 28 – 35**

Read the article about a circus.

Choose the best word (**A**, **B** or **C**) for each space.

For questions **28 – 35**, mark **A**, **B** or **C** on your answer sheet.

---

**A famous circus**

The circus, Cirque du Soleil, began **(0)** ..... Montreal, Canada.

It was started **(28)** ..... the Canadian Guy Laliberté in 1984.

When he left college, Laliberté travelled around Europe and earned

money **(29)** ..... music in the streets. Not long after he returned home, he started Cirque

with **(30)** ..... friend, Daniel Gauthier. During the 1990s, Cirque grew quickly. It now

does shows **(31)** ..... over the world and the number of people working for it has grown

from 73 to **(32)** ..... than 3,500.

The Cirque does not have any animals, but **(33)** ..... is music and dance and each show

tells a story. **(34)** ..... show, which is called Varian, is about a man who could fly. The

show starts with him falling from the sky and tells the story of how he **(35)** ..... to learn to fly again.



Appendix B

Metacognitive Awareness Reading Strategies Inventory – MARSİ (1 of 2)

Metacognitive Awareness of Reading Strategies Inventory  
(MARSİ) Version 1.0

Konider Mokhtari and Carla Reichard © 2002

**DIRECTIONS:** Listed below are statements about what people do when they read academic or school-related materials such as textbooks, library books, etc. Five numbers follow each statement (1, 2, 3, 4, 5) and each number means the following:

- 1 means "I never or almost never do this."
- 2 means "I do this only occasionally."
- 3 means "I sometimes do this." (About 50% of the time.)
- 4 means "I usually do this."
- 5 means "I always or almost always do this."

After reading each statement, circle the number (1, 2, 3, 4, or 5) that applies to you using the scale provided. Please note that there are no right or wrong answers to the statements in this inventory.

TYPE	STRATEGIES	SCALE				
GLOB	1. I have a purpose in mind when I read.	1	2	3	4	5
SUP	2. I take notes while reading to help me understand what I read.	1	2	3	4	5
GLOB	3. I think about what I know to help me understand what I read.	1	2	3	4	5
GLOB	4. I preview the text to see what it's about before reading it.	1	2	3	4	5
SUP	5. When text becomes difficult, I read aloud to help me understand what I read.	1	2	3	4	5
SUP	6. I summarize what I read to reflect on important information in the text.	1	2	3	4	5
GLOB	7. I think about whether the content of the text fits my reading purpose.	1	2	3	4	5
PROB	8. I read slowly but carefully to be sure I understand what I'm reading.	1	2	3	4	5
SUP	9. I discuss what I read with others to check my understanding.	1	2	3	4	5
GLOB	10. I skim the text first by noting characteristics like length and organization.	1	2	3	4	5
PROB	11. I try to get back on track when I lose concentration.	1	2	3	4	5
SUP	12. I underline or circle information in the text to help me remember it.	1	2	3	4	5
PROB	13. I adjust my reading speed according to what I'm reading.	1	2	3	4	5
GLOB	14. I decide what to read closely and what to ignore.	1	2	3	4	5
SUP	15. I use reference materials such as dictionaries to help me understand what I read.	1	2	3	4	5
PROB	16. When text becomes difficult, I pay closer attention to what I'm reading.	1	2	3	4	5
GLOB	17. I use tables, figures, and pictures in text to increase my understanding.	1	2	3	4	5
PROB	18. I stop from time to time and think about what I'm reading.	1	2	3	4	5
GLOB	19. I use context clues to help me better understand what I'm reading.	1	2	3	4	5
SUP	20. I paraphrase (restate ideas in my own words) to better understand what I read.	1	2	3	4	5
PROB	21. I try to picture or visualize information to help remember what I read.	1	2	3	4	5
GLOB	22. I use typographical aids like bold face and italics to identify key information.	1	2	3	4	5
GLOB	23. I critically analyze and evaluate the information presented in the text.	1	2	3	4	5
SUP	24. I go back and forth in the text to find relationships among ideas in it.	1	2	3	4	5
GLOB	25. I check my understanding when I come across conflicting information.	1	2	3	4	5
GLOB	26. I try to guess what the material is about when I read.	1	2	3	4	5
PROB	27. When text becomes difficult, I re-read to increase my understanding.	1	2	3	4	5
SUP	28. I ask myself questions I like to have answered in the text.	1	2	3	4	5
GLOB	29. I check to see if my guesses about the text are right or wrong.	1	2	3	4	5
PROB	30. I try to guess the meaning of unknown words or phrases.	1	2	3	4	5

Reference: Mokhtari, K., & Reichard, C. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of Educational Psychology, 94* (2), 249-259.

IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

Appendix B (2 of 2)

Metacognitive Awareness of Reading Strategies Inventory  
SCORING RUBRIC

Student Name: \_\_\_\_\_ Age: \_\_\_\_\_ Date: \_\_\_\_\_  
Grade in School:       6<sup>th</sup>  7<sup>th</sup>  8<sup>th</sup>  9<sup>th</sup>  10<sup>th</sup>  11<sup>th</sup>  12<sup>th</sup>  College  Other

1. Write your response to each statement (i.e., 1, 2, 3, 4, or 5) in each of the blanks.
2. Add up the scores under each column. Place the result on the line under each column.
3. Divide the score by the number of statements in each column to get the average for each subscale.
4. Calculate the average for the inventory by adding up the subscale scores and dividing by 30.
5. Compare your results to those shown below.
6. Discuss your results with your teacher or tutor.

Global Reading Strategies (GLOB Subscale)	Problem-Solving Strategies (PROB Subscale)	Support Reading Strategies (SUP Subscale)	Overall Reading Strategies
1. _____	8. _____	2. _____	GLOB _____
3. _____	11. _____	5. _____	
4. _____	13. _____	6. _____	PROB _____
7. _____	16. _____	9. _____	
10. _____	18. _____	12. _____	SUP _____
14. _____	21. _____	15. _____	
17. _____	27. _____	20. _____	
19. _____	30. _____	24. _____	
22. _____		28. _____	
23. _____			
25. _____			
26. _____			
29. _____			
_____ GLOB Score	_____ PROB Score	_____ SUP Score	_____ Overall Score
_____ GLOB Mean	_____ PROB Mean	_____ SUP Mean	_____ Overall Mean
<b>KEY TO AVERAGES:</b> 3.5 or higher = High      2.5 – 3.4 = Medium      2.4 or lower = Low			

**INTERPRETING YOUR SCORES:** The overall average indicates how often you use reading strategies when reading academic materials. The average for each subscale of the inventory shows which group of strategies (i.e., global, problem-solving, and support strategies) you use most when reading. With this information, you can tell if you are very high or very low in any of these strategy groups. It is important to note, however, that the best possible use of these strategies depends on your reading ability in English, the type of material read, and your purpose for reading it. A low score on any of the subscales or parts of the inventory indicates that there may be some strategies in those parts that you might want to learn about and consider using when reading (adapted from Oxford 1990: 297-300).

IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

Appendix C

Teacher's Journal

COLEGIO CARLO FEDERICI I.E.D.  
TEACHER'S JOURNAL  
RESEARCH PROJECT UNIVERSIDAD DE LA SABANA  
PROFESOR EDUAR PRIETO

SESSION #: \_\_\_\_\_ DATE: \_\_\_\_\_ TOPIC : \_\_\_\_\_ # OF STUDENTS: \_\_\_\_\_

SESSION STAGE	POSITIVE ASPECTS	ASPECTS FOR IMPROVEMENT	SUGGESTIONS FOR IMPROVING
What is it?			
How do I do it?			
Let's practice			
Now I reflect			

ADDITIONAL COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Appendix D

Learners' Journal

1. How much time did you spend to develop the whole reading task?
2. Did you like the topic of the reading?
3. Was the reading task easy or difficult? What was the most difficult and the easiest part of the task?
4. What were the steps you followed to accomplish the task successfully?
5. Do you think your reading comprehension process is improving or is it the same?

Appendix E

Participants Interview

1. ¿Considera que ha cambiado su forma de leer aplicando las estrategias aprendidas cuando de lee textos en Inglés y otras asignaturas?
2. ¿Qué considera que es lo mas dificil para generar el habito de emplear estrategias metacognitivas para la comprensión de lectura?
3. ¿Qué tan importante considera el apoyo del instructor (profesor) para la comprensión de lectura en el momento en el que lee un texto en Ingles?
4. ¿Cuál de las estrategias aprendidas considera mas util para una mejor comprensión de lectura?
5. ¿Qué fue lo que mas le gusto acerca del desarrollo e implementación del curso de estrategias metacognitivas para el mejoramiento de la comprension lectora?



Appendix F

Principal Consent Letter

Bogotá Agosto 19, 2014

Señor Alirio Quintero Briceño  
Rector Colegio Carlo Federici I.E.D  
Cc: Carmen Beatriz Torres – Coordinadora Académica

Estimado Rector:

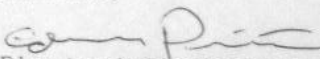
Cordialmente solicito su autorización para llevar a cabo la ejecución de un proyecto de investigación en la institución con estudiantes del grado octavo de la jornada mañana. Como es de su conocimiento, actualmente estoy cursando el programa de Maestría en Didáctica del Inglés para el Aprendizaje Auto-dirigido de la Universidad de La Sabana y como parte del currículo y énfasis del programa en promover el componente investigativo en educación; estoy interesado en identificar los efectos de emplear una metodología dual que involucre herramientas tecnológicas junto con sesiones presenciales en búsqueda de promover el aprendizaje de la lengua inglesa y contenido en ciencias naturales mediante el planteamiento de actividades encaminadas hacia el desarrollo de estrategias de metacognición para la comprensión lectora.

La comprensión de lectura constituye un área relevante en la enseñanza y aprendizaje de contenidos y a través de mi proyecto espero enseñar a los estudiantes diferentes estrategias de metacognición que les permita fortalecer sus habilidades de lectura y a su vez afianzar su conocimiento en temas referentes a las ciencias naturales de acuerdo con los contenidos programáticos correspondientes a su ciclo de aprendizaje.


El desarrollo de dicho proyecto se iniciará el 1 de septiembre, 2014 y su ejecución tardará dos meses hasta el 7 de noviembre. Se velará por la integridad en la recolección de datos y en los procedimientos de análisis de los mismos con el fin de garantizar un estudio de investigación válido, confiable y ético. Las identidades de los participantes serán protegidas al momento de escribir los correspondientes reportes y resultados que arroje la investigación. Adicionalmente los estudiantes participantes serán informados y el consentimiento de sus padres para su participación en el proyecto será solicitado.

La investigación acción propende por el mejoramiento de las prácticas educativas en el contexto local y por la construcción de una comunidad de aprendizaje reflexiva. Partiendo de esta idea, los resultados de este proyecto de investigación estarán disponibles para toda la comunidad educativa.

Atentamente,

  
Edwar Antonio Prieto Rodríguez  
Docente de Lengua Extranjera (Inglés)  
Básica Secundaria y Media Vocacional  
email:edwarprieto@gmail.com

*Por favor Coordinar con  
La Sra. CARMEN BEATRIZ.  
Alirio*

 **COLEGIO CARLO FEDERICI**

No. Radicado:	658
Fecha Radicado:	Agosto 20/2014
Hora Radicado:	10:45am
No. Filiación:	2
Recibido por:	<i>[Signature]</i>

Appendix G

Parents Consent Letter

COLEGIO CARLO FEDERICI I.E.D.

Bogotá Agosto 19, 2015

Apreciados Padres de Familia  
Estudiantes Grado Octavo

Cordial Saludo,

Como parte de los estudios que adelanto en la Maestría en Didáctica del Inglés para el Aprendizaje Autodirigido en la Universidad de la Sabana, tengo el interés de iniciar un proyecto investigativo en el grado que su hijo(a) cursa actualmente. Dicho proyecto busca identificar los efectos de emplear una metodología dual que involucre herramientas tecnológicas junto con sesiones presenciales en búsqueda de promover el aprendizaje de la lengua inglesa y contenido en ciencias naturales mediante el planteamiento de actividades encaminadas hacia el desarrollo de estrategias de metacognición para la comprensión lectora. De igual manera, las estrategias implementadas para esta clase contribuirán al desarrollo académico del estudiante en la medida que fortalecen sus habilidades de pensamiento.

La información que se obtenga de este proyecto investigativo servirá solamente fines educativos y las identidades de los estudiantes se mantendrán en estricta confidencial. Para recolectar la información se utilizarán encuestas, exámenes y talleres desarrollados por los estudiantes.

El proyecto tendrá una duración de dos meses, al final de los cuales busco contribuir al mejoramiento en las habilidades de comprensión lectora en inglés de los estudiantes en el marco del proyecto de educación hacia el bilingüismo que se desarrolla en la institución.

Agradezco de antemano su colaboración e interés,

Edwar Prieto Rodríguez  
English Teacher  
Grado Octavo

Yo \_\_\_\_\_  
padre/madre

de \_\_\_\_\_


autorizo a mi hijo (a) hacer parte del proyecto de investigación "Desarrollo de la comprensión lectora a través de estrategias de metacognición y uso de nuevas tecnologías."

Fecha \_\_\_\_\_

Firma \_\_\_\_\_

Appendix H

Lesson Plan Template for Interventions


**MASTER IN**  
**ENGLISH LANGUAGE TEACHING**  
FOR SELF-DIRECTED LEARNING

**DEPARTMENT OF LANGUAGES AND CULTURES**

**DEFINING AND IMPLEMENTING TEACHING STRATEGIES TO FOSTER SELF-DIRECTED LANGUAGE LEARNING IN COLOMBIA RESEARCH PROJECT PART 2**  
**(On-going Work) 2012**

**LESSON PLAN TEMPLATE FOR INTERVENTION**

Adapted from Dr. Juan Pablo's Lesson Planner, CEBT lesson plan Template and Weekly Planner 2011-02 Department of Language and Culture, Universidad de La Sabana

<b>Name of co-researcher:</b> <b>University Code Number:</b>											
<b>Institution:</b>											
<b>Date of Class:</b> DAY    MONTH    YEAR  <b>Week No. _____</b>	<b>Time of Class:</b> <b>Length of class:</b>  <b>Time Frame:</b> <small>(Within which to accomplish the lesson; could take more than one class period)</small>										
<b>Class/grade:</b>	<b>Room:</b>										
<b>Number of students:</b>	<b>Average age of Students:</b>										
<b>Number of years of English study:</b>	<b>Level of students</b>  <span style="text-align: center;">A1 A2 B1 B2 C1 C2</span>										
<b>Lesson Number</b> <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td style="width: 25%;">1</td> <td style="width: 25%;">2</td> <td style="width: 25%;">3</td> <td style="width: 25%;">4</td> </tr> <tr> <td>5</td> <td>6</td> <td>7</td> <td>8</td> </tr> </table>	1	2	3	4	5	6	7	8	<b>Research Circle Leader:</b>		
1	2	3	4								
5	6	7	8								
<b>Set Lesson Goals</b> <small>(Select kind of genre or text you will work on and consider learners' language level. Describe the session task)</small>											

Appendix I

Rubric for Blended Model Selection

## CHOOSE THE MODEL

Analyze your circumstances across six dimensions

For each question in the first column, circle the answer(s) that match your preferences and constraints the best.

Question	Station Rotation	Lab Rotation	Flipped Classroom	Individual Rotation	Flex	A La Carte	Enriched Virtual
1. What problem are you trying to solve?	Core problem involving mainstream students	Core problem involving mainstream students	Core problem involving mainstream students	Nonconsumption problem	Nonconsumption problem	Nonconsumption problem	Nonconsumption problem
2. What type of team do you need to solve the problem?	Functional, lightweight, or heavyweight	Lightweight or heavyweight	Functional or lightweight	Autonomous	Autonomous	Autonomous	Autonomous
3. What do you want students to control?	Their pace and path during the online portion of the course	Their pace and path during the online portion of the course	Their pace and path during the online portion of the course	Their pace and path throughout most all of the course	Their pace and path throughout most all of the course	Their pace and path throughout almost all of the course, with the flexibility to skip in-person class at times	Their pace and path throughout almost all of the course, with the flexibility to skip in-person class at times
4. What do you want the primary role of the teacher to be?	Delivering face-to-face instruction	Delivering face-to-face instruction	Providing face-to-face tutoring, guidance, and enrichment to supplement online lessons	Providing face-to-face tutoring, guidance, and enrichment to supplement online lessons	Providing face-to-face tutoring, guidance, and enrichment to supplement online lessons	Serving as the online teacher-of-record	Providing face-to-face tutoring, guidance, and enrichment to supplement online lessons
5. What physical space can you use?	Existing classrooms	Existing classrooms plus a computer lab	Existing classrooms	A large, open learning space	A large, open learning space	Any safe, supervised setting	A large, open learning space
6. How many internet-enabled devices are available?	Enough for a fraction of the students	Enough for a fraction of the students	Enough for all students to use in class and have at home or after school	Enough for all students throughout the entire class period	Enough for all students throughout the entire class period	Enough for all students to use in class and have at home or after school	Enough for all students to use in class and have at home or after school

Totals: \_\_\_\_\_

IMPROVING READING COMPREHENSION THROUGH METACOGNITIVE STRATEGIES

Appendix J

Results of pre, mid and post test scored over 35 points

<b>Student</b>	<b>pre-test</b>	<b>mid-term</b>	<b>post-test</b>
F1	14	11	15
F2	12	10	18
F3	6	8	9
F4	12	14	14
F5	10	10	10
F6	9	10	9
F7	5	8	8
F8	10	12	13
F9	5	10	12
F10	10	12	13
F11	14	12	12
F12	9	14	14
F13	13	13	13
F14	13	14	15
F15	8	7	16
F16	12	15	15
F17	21	22	23
F18	14	16	18
F19	13	15	16
F20	11	14	12
F21	10	10	13
F22	13	13	16
F23	14	14	16
F24	20	20	21
F25	9	11	16
F26	10	8	10
F27	12	15	15
F28	11	14	16
F29	11	12	14
F30	15	15	15
F31	9	6	10
F32	11	11	13
F33	7	20	17
F34	7	9	12
F35	9	9	12