Institute of Literature and Language

Department of Foreign Languages

Branch: English

Investigating Students' Perceptions about the Effect of Metacognitive Strategies on Reading Comprehension

The Case of Third Year EFL Students at Mila University Center

A Dissertation Submitted in Partial Fulfillment for the Requirement of the Master

Degree in "Language Sciences and Didactics of Language"

Presented by   **Supervisor**

Sonia Fethi   Miss Boughouas Lemya

Rima Bouhaddad

Board of Examiners

Chairman: Miss Sabah Bouguern

Supervisor: Miss Lemiya Boughouas

Examiner: Miss Leila Zourez

Academic year 2016 - 2017

Dedication

My deepest and most sincere thanks go to the Almighty "Allah" for

giving me the opportunity to carry out my studies

To the spirit of my beloved grandmother

I dedicate this work to:

To my parents

To my brothers, and sisters-in- law

To all my cousins

To my dearest friend Rahima, who has been of a great support for me,

in all aspects of my life

And To the cutest babies ever, my nieces; Soujoud and Miral

Sonia

Dedication

They say behind every great man a great woman; I say behind every success there is great support and great people that I would really like to thank. The first ones are my dear parents, my father and my mother to whom I send the deepest waves of love, may Allah the almighty sustain my effort to reward them. The second are certainly my sisters and brothers Iman, Amel, Nassima, Bilel, Kamel and Hakim. Without naming the others whose mere smile I consider a great aid, I say to all thanks my dears; I will never forget your favour, and to Allah I say praise to your majesty merciful god, without your mercy those people would never have been able to help me.

Rima

Acknowledgment

We would like to address our most sincere thanks to **Miss Boughouas** for her great help and support and to all the members of the jury who accepted to read our work. We would also like to thank all the teachers and students who accepted to answer the questionnaires.

Abstract

Reading is an important skill to be implanted in the students' educational spirit; thus, it is still perceived as a very complex paradigm. Due to the complexity of acquiring this skill, many students still face reading comprehension problems. To address this issue, the current research has been initiated to raise learners' awareness about the use of metacognitive strategies as a tool that might improve their reading comprehension ability. The hypothesis states that using metacognitive strategies appropriately would enhance students' reading comprehension and the more students have a positive perception about metacognitive strategies, the more likely they would use them to improve their reading comprehension. To test this hypothesis two questionnaires were administered; one for teachers and the other for students. The former was given to know the teachers' opinions about their learners' reading comprehension level and whether they teach them how to implement these strategies; whereas, the latter was handed out to know if students implement metacognitive strategies while reading. The data gathered demonstrate that third year English as a Foreign Language (EFL) students in Mila university center have a positive perception about metacognitive strategies though they do not use them frequently and they are not completely aware of their cognition, and ability to adjust their cognitive resources to achieve good reading outcomes. From the results, the research proves that more attention should be given to metacognitive strategies in the classroom, and that reading should be included in the curriculum. This modest study can provide a platform for future implementation of metacognitive strategies in Mila university center; it predicts the readiness of the third year EFL students to receive instruction in metacognitive strategies. Furthermore, it encourages the teachers to include reading in the curriculum as a separate module where learners can have ample time to learn and practice these strategies.

List of Abbreviations

1.APICPEM: Analyzing Planning Implementing Comprehending Problem-solving Evaluating Modifying.

2. CALLA: Cognitive Academic Language Learning Approach.

3. EFL: English as a Foreign Language.

4. ESP: English for Specific Purposes.

5. Etc: et cetera.

6. FL: Foreign Language.

7. IELTS: International English Language Testing Service.

8. L1: First Language.

9. L2: Second Language.

10. MSI: Metacognitive Strategy Instruction.

11. RAND: Research and Development.

12. RT: Reciprocal Teaching

13. SD: Standard Deviation.

14. SRSL: Self-Regulated Approach for Strategic Learning.

15. TEFL: Teaching English as a Foreign Language.

16. %: percentage.

List of Figures

List of Tables

Table of Content

Chapter Two: Reading Comprehension and Metacognitive Strategies

Chapter Three: Fieldwork investigation

Introduction

Reading has stirred the interest of many disciplines such as linguistics, psycholinguistics, cognitive psychology and sociolinguistics. As one of the four skills, reading was long identified as merely the ability to recognize words. A learner's reading proficiency was measured by his ability to read quickly. At first, reading was used as a means to enrich the learners' knowledge of vocabulary; meaning and comprehension were completely neglected. As a matter of fact, the old approaches sought to teach reading by simply identifying, memorizing and then implementing the unfamiliar words found in the text in the learner's speech. In contrast, nowadays, reading is more than vocabulary knowledge; it is an opportunity for the learner to interact with the text and gain some world knowledge. In this new view, reading is tightly related to comprehension, and a necessary skill that fosters the learner's language proficiency. However, understanding a foreign text is not always an easy task to do. To make comprehension more accessible, learners need to implement some metacognitive strategies to help them overcome their reading comprehension problems. "Metacognitive strategies involve thinking about the learning process, planning for learning, monitoring the learning task and evaluating how well one has learned" (Chamot & Kupper, 1989, p.248). These strategies are used at different stages of the reading process to incapacitate comprehension problems that might occur at every stage of reading.

1. Statement of the Problem

EFL students encounter many difficulties to comprehend foreign texts. They think that knowing the meaning of every single word in the text is crucial for understanding and they are unconscious about the existence of compensatory strategies that would help them to better build their comprehension. Pressley et al. (1998) found that students' comprehension improves not only by reading more texts, but it improves also by the use of even one single

strategy. For that reason, learners should be aware of the existence of metacognitive strategies to overcome their comprehension problems and develop their selves as good strategic readers.

2. Aim of the Study

The implementation of metacognitive strategies in reading comprehension is of paramount importance for EFL learners. The aim of this study is to investigate how 3rd year Mila university center students perceive the effect of metacognitive strategy use on their reading comprehension. Moreover, it seeks to know their awareness about the use of these strategies, that is, if they use them consciously or unconsciously. In addition, this study aims to know if teachers implement these strategies during the reading activities. All in all, this study aims to raise both teachers' and learners' awareness about the importance of using metacognitive strategies to develop higher order thinking.

3. Research Questions

➢ Are learners aware of the existence of metacognitive strategies as tools that can facilitate their reading comprehension?

➢ Do learners have a positive perception about metacognitive strategies?

4. Hypothesis

In the light of the previous questions and in line with the current research intentions, It is hypothesized that:

∫ Developing students' positive perceptions about the use of metacognitive strategies in EFL classes would likely lead to the improvement of text comprehension.

5. Methodology

In a descriptive study aiming to test the research hypothesis, two questionnaires will be used. The first questionnaire will be administered to third year university students and the other will be handed out for the university teachers. The two questionnaires aim at

investigating teachers' and students' perceptions about the use of metacognitive strategies as a means to enhance reading comprehension in English language classrooms.

6. Structure of the Dissertation

This dissertation is made up of three chapters: two theoretical and one practical. The first chapter is about metacognition and strategic reading. It includes a definition of metacognition, the interplay between cognition and metacognition, Flavell's model of metacognition, components of metacognition, metacognitive strategy use in reading comprehension and approaches for teaching metacognitive strategies. The second chapter sheds light on reading comprehension in foreign language learning. It includes a definition of reading, its components, models, and the factors affecting it. Furthermore, it provides a definition of comprehension and reading comprehension as well as the effectiveness of metacognitive strategy use in reading comprehension sessions. The third chapter is a field work investigation. It describes, analyses and discusses the teachers' and students' questionnaires and then it provides some recommendations and suggestions for both of them.

Chapter One

Metacognition and Strategic Reading

Chapter One: Metacognition and Strategic Reading

Chapter One: Metacognition and Strategic Reading

Introduction

Metacognition brought a new view to learning where the learner can do a lot to change and promote his learning, and the teacher is merely a guide and a facilitator. Reading which is found as one of the least developed skill according to Educational Testing Service, Test of English as a Foreign Language, Internet Based Test, International English Language Testing Service (IELTS) (in Meniado, 2016), can be developed by the use of metacognitive strategies. The idea is that the learner, who speaks to himself during the attempt to understand a text, seems to be more reflective and tends to question the author's ideas and doubt about them. These behaviors are thought to be very effective in helping the learner to construct his understanding of the text. This chapter offers an overview of metacognition, its definition, its interaction with cognition, Flavell's model of metacognition, components of metacognition, and it also provides a view of metacognitive strategies and their application in the classroom.

1. Definition of Metacognition

It is a concept that is composed of two words, the prefix "meta" which means after and the root "cognition" which refers to the cognitive processes like understanding and thinking that are involved in a particular cognitive task or activity (Aebersold & Field, 1997). This definition means to explore what was happening after every accomplishment of a cognitive activity; that is, how can some people understand or recall information they studied and others cannot. It is the secret power that enables some learners to accomplish a particular task successfully.

According to Korotaeva (2014), metacognition is neither a skill nor a personality trait. She describes it as one aspect of self- regulation in which actions or orders are given from the interior of the student depending on his knowledge of himself, she said:

Metacognition is closely related with the concept of self-regulated learning, it can be seen as an internal management process of self –regulation which can not be seen as a personality trait or a specific skill, student guided by knowledge of his personality, uses the necessary strategies of learning. Learning in this sense is not something that aimed at student but comes from students themselves. (p.40)

Flavell who is known as the first to introduce the term "metacognition" tried to understand the interaction between cognition and consciousness. He identifies metacognition as one's knowledge of one's own mental processes and the ability to regulate them to achieve the learning goals. Flavell (1976, cited in Iway, 2011) comments that metacognition is: "one's knowledge concerning one's own cognitive processes and outcomes or anything related to them […] The active monitoring and consequent regulation and orchestration of these processes in relation to the cognitive objects or data on which they bear, usually in the service of some concrete goal or objective" (p.232), or it is simply awareness of cognition and its adjustment *(*Flavell, 1979; Çubukçu, 2008).

Metacognition is widely defined as: "cognition of cognition" (Takollou, 2011; Koda, 2004; Day & Bamford, 1998). Metacognition is generally one's knowledge of one's own thinking or cognitive processes during task performance.

In reading, Kelly and Clausen-Grace (2013) say that metacognition takes place when a person tries to make his thoughts visible during reading. In other words, the reader speaks to himself about what he is reading. In their own words: "metacognition also means to make thinking visible or to take silence out of reading" (p.4).

2. The Interplay between Metacognition and Cognition

Metacognition was considered for many years as a concept separable from cognition, but now researchers need to take into consideration metacognition as one factor to understand a person's performance in particular cognitive task (Beall & Baker, 2009). Veenman et al. (2006) provide a clear account concerning the tight relation between metacognition and

cognition, they contend that metacognition is the series of self-instructions that are carried out by cognition, and in addition the person's cognitive activities are under the supervision and control of metacognition. This indicates that one cannot imagine metacognition without cognition and vice versa; they work together to achieve the learning goals.

This strong relation is apparent in the attempt to distinguish between metacognitive strategies and cognitive strategies in reading activities. Williams and Atkins (2009) confirm that this distinction is impossible, because there is no reading activity that is purely metacognitive or that is purely cognitive. Even book's designers cannot make a clear cut between both. Sometimes they consider some activities as metacognitive and other times as cognitive.

3. Flavell Conceptualization of Metacognition

Flavell (1979) provides a model of metacognition which is considered as the basis of research in metacognition. He divided metacognition into four major components: metacognitive knowledge, metacognitive experience, goals and actions.

3.1. Metacognitive knowledge

It is primarily used to refer to a person's awareness of his cognition as well as his knowledge of the person, task and strategy factors around him that may affect his comprehension during the performance of a particular activity (Flavell, 1979). Devine (1993) points out to the importance of metacognitive knowledge, which he relates to successful language learning. He says that "a successful learner is one who has ample metacognitive knowledge about the self as learner, about the nature of the cognitive task and about the appropriate strategies for achieving goals" (cited in, El-Kouny, 2004, p.6).

3.1.1. The Person Variable

According to Flavell (1979), it is the learner's knowledge of his abilities and weaknesses as a reader or processor. It can be clear, as Philip and Kim Hua (2006) exemplify,

in the learner's tendency to use underlining instead of note taking because he knows that he is good at underlining and poor at note-taking

3.1.2. The Task Variable

It is the knowledge of the task's nature, demands, type, purposes, length ….etc (Flavell, 1979; Philip & Kim khua, 2006). The reader must be aware of the characteristics of the text he is going to read.

3.1.3. The Strategy Variable

It refers to the learner's knowledge or awareness of the metacognitive strategies that help him in the accomplishment of the task at hand (Flavell, 1979). He should learn the strategies that are used by good readers like making inferences, summarizing, previewing …ect.

3.2. Metacognitive Experience

Flavell (1979) defines it as "any conscious cognitive or affective experiences that accompany and pertain to any intellectual enterprise" (p. 906). Thus it can be understood as what the learner knows about his cognition and feeling during reading. The learner knows that he has or has not understood the written material, and that he feels anxious, motivated, and satisfied or that he loses his concentration.

3.3. Goal

It is the purpose or the goal for doing an activity. It is what aimed as achievement from doing something, like reading for the gist or for particular details (Flavell, 1979). Thus, the reader should set an objective for reading before he initiates the act of reading.

3.4. Actions

It is the use of strategies like metacognitive strategies to monitor and control the cognitive activities, and to evaluate the degree of success in task performance or in achieving the planned goal.

4. Components of Metacognition

Researchers agree that metacognition has two dimensions. They said that metacognition is composed of both knowledge of cognition and regulation of cognition (Flavell, 1976, in Iwai, 2011; Philip & Kim Hua, 2006; McCormick, 2003).

4.1. Knowledge of Cognition

Philip and Kim Hua (2006) define it as "knowledge about one's own cognitive resources and knowledge about how compatible the demands of learning situations are with one's own resources" (p. 4). It is the awareness of the mental processes and how well they are used to carry out the task. In reading, it is the awareness of the reading purpose and the strategies that help in achieving that purpose (Meloth, 1990). Knowledge of cognition is divided into three types mainly, declarative knowledge, procedural knowledge and conditional knowledge.

4.1.1. Declarative Knowledge

McCormick (2003) defines it as the "knowledge of a person about his or her abilities and the salient learning characteristics that affect cognitive processing" (p.80). It is the person's knowledge of his abilities concerning a particular learning task and his awareness of what he should have as characteristics to accomplish it successfully. In addition to his knowledge about his strengths, the person who has declarative knowledge also knows about his weaknesses, self efficacy and motivation during the task performance (Zimmerman & Risemberg, 1997). It also incorporates learners' knowledge of different strategies. In reading, for example, he knows about skimming, scanning, inferring …etc. (Iwai, 2011).

4.1.2. Procedural Knowledge

It is the knowledge and ways of how to apply metacognitive strategies (McCormick, 2003; Iwai, 2011). They are also called skills because they are distinctive from declarative knowledge in that they refer to the person's ability to use metacognitive strategies to regulate

his comprehension. It gives the learner feedback about his performance which is a real judgment about his ability to plan and regulate his reading comprehension (Veenman et al., 2006).

4.1.3. Conditional Knowledge

It is the knowledge about when, where and why to use metacognitive strategies, or the selection of the appropriate time and situation for implementing metacognitive strategies (Hudson, 2007; Iwai, 2011; McCormick, 2003).

4.2. Regulation of Cognition

It is the regulation and control of our mental processes in relation to a particular goal (Zhang & Wu, 2009). In addition, it is the subsequent planning, monitoring and evaluation of the implemented strategies to achieve the goal (Flavell, 1979; Veenman et al., 2006; McCormick, 2003).

Philip and Kim Hua (2006) divided regulation of cognition into two components respectively: strategic formulation and strategic implementation. Strategic formulation is the examination of the conditions and the context in which the task's performance is actually taking place and the planning of the potential strategy that help in the successful accomplishment of the task. Strategic implementation is the application of the selected strategy and the evaluation of its effectiveness regarding the goal's achievement.

Philip (2005) develops an approach self-regulated approach to strategic learning (SRSL) whereby he provides a path for learners in their strategy use and describes what actually happens in the regulation of cognition. First, the learner makes some predictions about the text by skimming, looking at the titles, and pictures in the text. In addition, the learner should be aware of his reading goal, task demands and the circumstances around him such as his feelings, abilities and weaknesses. It is also important in this first stage that the learner makes decisions about the strategy or strategies he/ she is going to use in reading the

text. For instance, the learner might decide to use underlining, inferences, note-taking as strategies to understand the main ideas. Second, as he starts reading, the learner monitors and evaluates these strategies to see if they helped him to achieve his desired goal; in case he failed, he modified his plan and re-implements new strategies. In a curricular way, the learner follows the same first steps analyzing, planning, implementing, comprehending, problem solving, evaluating and modifying (APICPEM) until he can reach his goal. These steps are presented in figure (1).
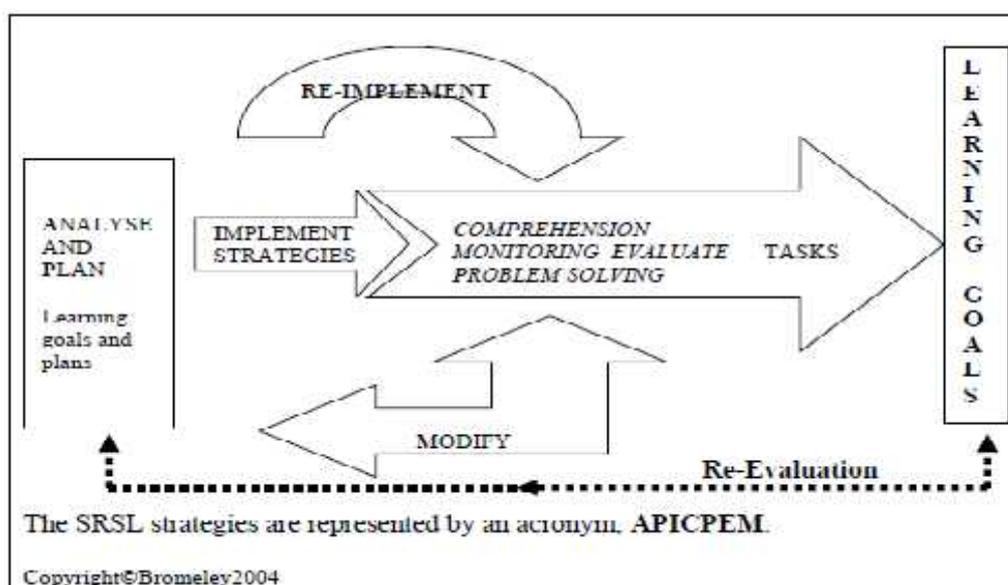
Figure1: SRSL Processing Framework (Philip, 2005).

5. The Use of Metacognitive Reading Strategies

Metacognitive strategies are implemented as strategies that can improve learners' comprehension of the texts. They are classified into three main classes according to the period of reading.

5.1.   Metacognitive Strategy use in Reading Comprehension

Their name for many researchers is associated with the processes of planning, monitoring and evaluating the learning process (Tavakoli, 2015; Pei, 2014; Chamot & Kupper, 1989; Santana, 2014).

They were described as a sign of high mental engagement or practices (Tavakoli, 2015) because they make use of high cognitive processes like predicting, inferring, hypothesizing …etc. (Ismail & Tawalbeh, 2014). Because they were described as intentional (Sheory & Mokhtari, 2001) and self-regulatory strategies (Kupper & Chamot ,1989); they can help the learner to evaluate and be aware of his learning (Santana, 2014; Kupper & Chamot, 1989; Tavakoli, 2015).

For many researchers, the credit for promoting effective reading and developing good readers must be given to metacognitive strategies (Ismail & Tawlbeh, 2014; Santana, 2014). Learners who do not use metacognitive strategies are unguided and without clear goal, as O'Malley and Chamot (1990) put it: "Students without metacognitive approaches are essentially learners without direction or opportunity to plan their learning, monitor their progress, or review their accomplishments and future learning directions" (p.8).

A wide range of metacognitive strategies are mentioned by many researchers (Aebersold & Field, 1997; Pie, 2014; Hudson, 2007; Duke & Pearson, 2001). The most common ones are listed below:

➢ **Using background knowledge:** The learner activates or recalls what he already knows about the topic that is initiated by the author in order to understand new information (Duke & Pearson, 2002)

➢ **Setting a purpose for reading:** It is the reason behind reading a particular text which can be for complete understanding, for particular details, or for getting the gist (Aebersold & Field, 1997).

➢ **Previewing the text (title, subtitle, pictures, graphs, tables):** Looking at the title, picture, graphs help the learner to have an idea about the text because they all reflect the text's content (Aebersold & Field, 1997).

- **Using the text's structure:** Knowing the structure of a text. For the learner, knowing that a story has a setting, a problem, a resolution, a theme … helps him to relate parts of the text together and organize ideas in his mind in a meaningful way, which in turn, helps him to recall or remember information or events in the story easily (Duke & Pearson, 2002).

- **Making inferences:** It is an attempt to interpret the text. Based on what the author stated in his text and included as contextual clues, the reader guesses the meaning of unfamiliar words and tries to understand the author's intention or message. For example, identifying the pronoun of the referent in the text (Pressley & Gaskins, 2006).

- **Rereading:** The reader pays more attention to a particular part of a text or to the whole of it. It is, in fact, a monitoring strategy because it enables the learner to adjust his reading comprehension as he feels that he does not understand the main ideas or loses his concentration during reading (Pressley, 2002).

- **Focusing on the important ideas and skipping the unimportant ideas:** The reader gives more time and attention to particular statements or ideas or even passages in the text that seem relevant to his goal (Pressley, 2002).

- **Skimming and Scanning:** In fact they are interrelated strategies. As the learner skims the text, he will locate the important ideas, as well as, he can have an idea about the content and the general features of the text like its length, structure, difficulty …etc (Pressley, 2002).

- **Making predictions and confirming them:** The reader can form predictions about the text's content either before or during reading with the aid of his background knowledge. Updating and changing these predictions as the learner encounters every new statement help him to build his understanding of the author's ideas step by step (Pressley, 2002). Thus the reader will add to his background knowledge new information or question it or even change it.

➢ **Asking questions about the text and answering them:** The reader asks questions about confusing statements or passages to confirm or disconfirm his predictions, and to be able to make a link between different parts of the text and virtually to understand the text appropriately (Duke & Pearson, 2001).

➢ **Evaluating information in the text in relation to prior knowledge and world knowledge:** Interesting, boring, credible are the adjectives that the reader might use to evaluate the text he reads (Pressley, 2002; Pressley & Gaskins, 2006). The information presented by the author should not be taken for granted and accepted by the reader, but they should be compared to what the reader already knows about the topic; the reader should also evaluate the author's ideas, if they were well presented in a good way and supported with enough arguments (Abersold & field, 1997).

➢ **Making a summary or an outline of the text:** They are one of the ways used by good readers along with paraphrasing, underlining and note-taking to represent the main ideas of the text (Pressley, 2002). In outlining, the reader states the order of the ideas as they are expressed by the author (Aebersold & Field, 1997). Summary involves a synthesis of the main ideas in a written version similar to the original text (Dole et al., 1991).

➢ **Create a mental picture of the text (mental imagery):** In a story, for example, the reader imagines how the characters and the scene would be like according to the author's description. This allows him as Duke and Pearson (2001) say: "… to add in all those little details that authors have left unsaid" (p. 454). This in turn, as they noted, helps him to understand and recall what he has read.

➢ **Making personal connections to the text:** By using this strategy, the reader makes a link between what he has read and his personal and academic experiences. As Duke and Pearson (2001) exemplify, the reader can compare characters, incidents to aspects of his experience.

- **Monitoring comprehension:** It involves both awareness and regulation of reading comprehension. The reader is aware of all the surrounding conditions or factors that might influence his reading comprehension. For example, he is aware of the text's difficulty, of the relevance of the text to his goal and prior knowledge, of when he loses his concentration during reading, and when he understands or does not understand the author' ideas. This awareness allows him to adjust his strategies to regulate his comprehension. Furthermore, he might reread the text, search for other texts …etc (Pressley, 2002; Pressley & Gaskins, 2006).

5.2. Classification of Metacognitive Strategies

Researchers tend to categorize metacognitive strategies in reading comprehension into three types. They divide them into before, during and after reading strategies. Thus, each of the previous mentioned strategies falls under one of the categories (Pressley, 2002; Pressley & Gaskins, 2006; Duke & Pearson, 2001; Hudson, 2007).

5.2.1. Before Reading Strategies (Planning)

They are also called planning strategies, because they help the learner to prepare a clear plan to deal with the text, or to predetermine the appropriate strategy and all the necessary steps and procedures to accomplish the task successfully (Phakiti, 2006). The strategies that can be put within this category are:

- Setting a purpose for reading.
- Using text's structure.
- Activating background knowledge.
- Making hypotheses or predictions about the text's content.
- Deciding which part of the text to focus on and which one to ignore.
- Previewing and skimming the text.

(Pressley, 2002; Pressley & Gaskins, 2006; Duke & Pearson, 2001)

Pressley and Gaskins (2006) conclude that a good reader will have at the end an idea about the text he is going to read. They say: "The good reader leaves the preview with an idea about what is to come in the text" (p.100).

5.2.2. During Reading Strategies (Monitoring)

They are activated as the reader actually starts reading (Pressley, 2002). It is the learner's regulation of his reading comprehension if he sees that there is a contradiction or a mismatch between his predictions or understandings and the author's ideas (Aebersold & Field, 1997).

The learner might also monitor his reading to check the relevance of the text's content to his goal and to his prior knowledge and when he feels that he loses his concentration during reading. This regulation can be achieved by adjusting his strategies like rereading, slowing down his reading, searching for other texts (Pressley, 2002; Pressley & Gaskins, 2006). Researchers mention many strategies that can be grouped under this category (Pressley, 2002; Pressley & Gaskins, 2006; Duke & Pearson, 2001).

- Rereading.
- Inferring.
- Linking information in the text to prior knowledge.
- Relating the parts of the text to each others to get the overall meaning.
- Making and modifying predictions.
- Skipping the unimportant ideas and focusing on the main ideas.
- Evaluating the information presented in the text.
- Reacting emotionally and intellectually to the text.
- Monitoring comprehension.
- Summarizing.

5.2.3. After Reading Strategies (Evaluating)

They are also called self-assessment strategies (El-Kouny, 2004). After finishing reading, the reader assesses and judges his understanding of the information presented by the author in relation to his background knowledge, life experiences and peer's understanding and if the information he extracted from the text are presented in a logical way and whether they are supported by enough details and by a famous author (Aebersold & Field, 1997).

The reader might also reprocess the text; he might reread some parts of it, and continue to reflect upon it. He can also monitor his reading to see if he has understood the text appropriately. More interestingly, he might think of how to apply the information he learned to new situations (Pressley, 2002; Pressley & Gaskins, 2006).

Duke and Pearson (2001) add other strategies:

➢ Deciding if the goals are achieved.

➢ Making personal connections to the text.

➢ Updating and confirming predictions.

➢ Summarizing the major ideas.

➢ Seeking additional information.

➢ Reacting intellectually or emotionally to the text.

The summary of metacognitive strategies is provided in figure (2).
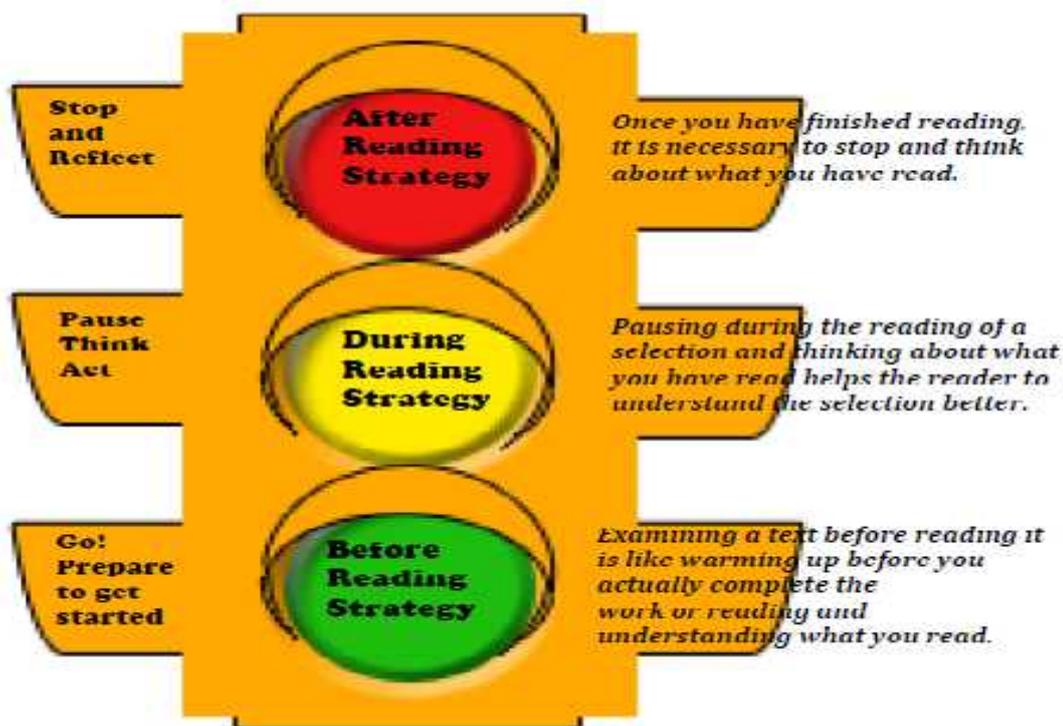
Figure2: Active Reading Strategies (Helgeson, 2010).

6. Metacognitive Strategy Instruction

It seems that teaching metacognitive strategies would alleviate the teacher's burden of explaining, clarifying and reviewing every text for his/her learners, before, during or after reading, as Nuttal (1996) contends:

> It is impossible to familiarize them (students) with every text they will ever want to read; but what we can do is give them techniques for approaching texts of various kinds, to be used for various purposes. That is the essence of teaching reading. (p.38)

One of these techniques that are suggested by many researchers are metacognitive strategies. They help the learner to understand the text (Phakiti, 2006; Tavakoli & Koosha, 2015). In their studies; for example, Phakiti (2006) and Tavakoli (2014) and Koosha (2015) found that students who use metacognitive strategies perform in a good way in the reading test and course.

In fact, researchers do not agree on the number of strategies that should be taught; some would defend the teaching of multiple strategies, while others do not. The aim of that is to enable the learners to select the appropriate strategies from a large repertoire of strategies in a particular situation (National Reading Panel, 2000; Palincsar & Brown, 1984). Others stand against this option and insist on teaching only few strategies for better reading comprehension (Pressley, 2002; Duke & Pearson, 2001, 2002). As Duke and Pearson (2001) put it: "comprehension is best when it focuses on few well taught, well-learned strategies" (236).

There are several steps for teachers to follow in their teaching of metacognitive strategies which are as follows:

6.1. Explicit Strategy Instruction

First, the teacher describes and explains how, when, and where to use the intended strategies. It is important in this presentation stage that he shows his learners the importance of each strategy in solving comprehension problems, because the more learners know about the value of a particular strategy, the more likely they will be motivated to implement it in their readings (Iwai, 2011; Duke & Pearson, 2001; Chamot & Kupper, 1989).

6.2. Modeling

It is the time when the teacher shows his students how to apply the learned strategies, generally by using think-aloud protocol (Takallou, 2011; Iwai, 2011). He models the strategy use and demonstrates to his learners how to deal with the text.

6.3. Practice

Under the teacher's guidance, the learners would practice the strategies either collaboratively or independently. This will allow them to receive feedback from their teacher and peers regarding their strategy use. It is noteworthy in this phase that the learner has ample time to practice the strategies (Veenman et al., 2006), and that teacher gradually reduces scaffolding as his learners begin to employ the strategies independently and gain some

experience in using them (Tavakoli & Koosha, 2015; Iwai, 2011; Takallou, 2011; Chamot & Kupper,1989; Santana, 2014; Duke & Pearson, 2001; Kraayenoord, 2010). The strategy instruction starts as more teacher-centered approach and ends as a learner-centered one as in shown in figure (3).
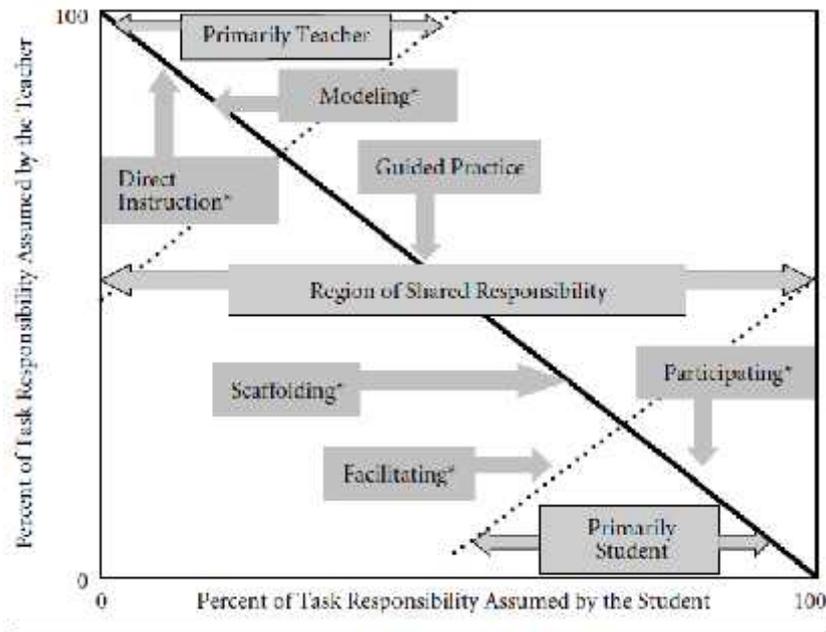
Figure3: Gradual Release of Responsibility (Duke & Pearson, 2002).

The effectiveness of metacognitive strategy instruction cannot be guaranteed unless it is integrated into regular classroom activities, that is to say, teaching learners how to use and apply different strategies while they are learning or acquiring the input, and while the teacher is accomplishing the courses' objectives (Takallou, 2011; Tavakoli & Koosha, 2015). In addition, strategy instruction cannot be successful unless teachers take into consideration individual differences in the classroom when planning for and teaching metacognitive strategies (Vennman et al., 2006; Kraayenoord, 2010). In this respect, Kraayenoord claims that it has been shown that instructions in metacognitive knowledge, monitoring, control improve comprehension, but it is not always the case for all students, like students with disabilities, second language learners….etc. Instruction should be varied in a way as to respond to students' needs.

7. Models of Teaching Metacognitive Strategies for Improving Reading Comprehension

There are many approaches to strategy instruction for teaching reading comprehension, but the most common ones in the literature are cognitive academic language learning approach (CALLA) and reciprocal teaching models (RT):

7.1. Cognitive Academic Language Learning Approach

It is based on explicit and direct strategy instruction (Pei, 2015; Takallou, 2011). The teacher who uses CALLA should follow five steps as was explained by many researchers (Koosha & Tavakoli, 2015; Takallou, 2011; Çubukçu, 2008).

7.1.1. Preparation

The teacher shows his students the advantages of using metacognitive strategies in reading and that it fosters comprehension, and enables them to discover the strategies they are using, and explains to them how their own cognitive abilities would help them to succeed in their learning.

7.1.2. Presentation

The teacher presents the strategies to his learners and explains to them when, where and how to use them. At the end of this phase, the learner can acquire the three types of metacognitive knowledge. That is, the declarative knowledge, the conditional knowledge and the procedural knowledge.

7.1.3. Practice

Learners, in this stage, are given opportunities to practice the strategies that were introduced by their teacher as an integral part of the lesson. It means to apply the strategies on the content, the input or texts that are given by the teacher and which are part of the curriculum.

7.1.4. Evaluation

After practicing the learned strategies, the learners are encouraged to reflect upon their performance in the reading task, and evaluate the effectiveness of their strategy use. They see whether the strategies they have used during the task, helped them to better understand the text.

7.1.5. Expansion

Learners are encouraged to apply the learned strategies to new contexts and to justify their strategy use. In this way learners will be strategic in solving all types of tasks.

7.2. Reciprocal Teaching

This approach to strategy instruction is based on developing four strategies that are believed to be used by expert readers: clarifying, predicting, summarizing and questioning (El-Kouny, 2004; Palincsar & Brown, 1984; Kraayenoord, 2010).The selection of the four strategies was not random. In summarizing and questioning, the learner is asked to focus on the main idbeas and check if he has understood the content. Furthermore, asking the learner to clarify his answers is in turn an attempt to engage them in critical thinking. Making predictions helps learner to set hypotheses about the content of the text and testing them in every new sentence or content (Palincsar & Brown, 1984).

After the teacher's explanation and modeling of these strategies, both he and his learners would practice them on texts by taking turns in dialogue to discuss their strategy use (Kraayenoord, 2010; Palincsar & Brown, 1984). In their study, Palincsar and Brown (1984) found that the four strategies can develop sophisticated readers. They concluded that these strategies promote both comprehension and comprehension monitoring; the learner is not only aware of his understanding, bu he is also able to regulate it, they say:

> in summary, these four strategies were selected because they provide a dual
> function, that of enhancing comprehension and the same time affording an

opportunity for the students to check whether it is accruing .That is, they can be both comprehension-fostering and comprehension –monitoring activities if purely used. (p.4)

8. Definition of Perception

According to Noë (2004), perception is not an internal process that happens in the mind, but rather a skillful activity which depends on human senses. In other words, there is no perception without the ability to see, touch, smell, taste, or hear. She says: "perception is not something that happens to us or in us, it is something we do" (p.1). Rooks and Willson (2000) add that perception is the recognition and interpretation of the input or stimuli that comes from the environment. They say: "perception refers to how we make sense of our environment" (p.2). Furthermore, Gould (1990) defines perception as the process of making hypotheses about the stimuli that comes from both the internal and the external world and the testing of these hypotheses and the selection of the one that best suit the individual. He claims that the person is not aware of this process which is described as an individualized experience that can be wrong, incomplete and unreliable.

Conclusion

The use of metacognitive strategies in reading allows learners to reflect upon the text, monitor, regulate and evaluate their reading comprehension. During the attempt to understand a text, learners seems active, they make inferences; they paraphrase, summarize the main ideas, underline the important sentences, evaluate and criticize the ideas of the author. Thus, implementing these strategies can improve the learners' reading comprehension and help them to get rid of their bad habits like dictionary overuse and the focus on word and sentence meaning. Though, in the new approaches of teaching, the teacher is just a facilitator and a guide, his role remains difficult. In addition to the burden of preparing and explaining the

lesson, his role in implementing metacognitive strategy instruction is asked to be more effective.

Chapter Two

Reading Comprehension and Metacognitive Strategies

Chapter Two: Reading Comprehension and Metacognitive Strategies

Introduction

Reading is one of the four skills necessary for acquiring a language. The reading ability is of extreme importance for second language (SL) and foreign language (FL) learners; researchers consider it as the most important skill to develop for it fosters the improvement of other skills. The reading activity is not carried out randomly, instead; readers must adopt some strategies and skills that will enable them to comprehend what lies beneath the written word. This chapter deals both with reading and comprehension; it tries to explain each term separately, and then it tackles the interrelation between both concepts. First, it discusses the definition of reading, factors affecting reading, and models of reading. Second it defines comprehension in relation to reading. Finally, the last element dealt with in this chapter is reading comprehension as a metacognitive process.

1. Definition of Reading

The views of researchers towards reading have evolved through time. At first, reading was solely viewed as the process of putting written symbols into sounds or word recognition. Then, it was viewed as a process of identifying words and their meanings. During that period, reading was simply perceived as a passive skill in which the reader is only a receiver of information from the text. Nowadays, reading is perceived differently; it is the ability to derive meaning from a printed material (Alyousef, 2006). In other words, the reader tries to build his understanding of the author's ideas and messages. More deeply, it is considered as an "interactive, constructive and contextualized process" (Usó-Juan & Martínez-Flor, 2006, p.261).This means that reading cannot be understood only in the specific context, where it actually takes place and where many factors interact to influence the reader's comprehension of the text. Taking a similar perspective, Dutcher (1990) says that reading is the process through which the dynamic interaction of the reader's background knowledge, the

information inferred from the written material, and the reading situation work together to build understanding of the text.

From a cognitive perspective, reading is considered as a cognitive activity (Flavell, 1979). It entails the use of higher cognitive processes such as thinking, reasoning and evaluating, as Gates (1949, in Stuart & Stainthorp, 2016) states: "reading is a complex organization of patterns of higher mental processes…that should embrace all types of thinking, evaluating, judging, imagining, reasoning and problem solving" (p.23). Similarly, Goodman (1967) describes reading as a psycholinguistic process. For him it consists of the reader's ability to make inferences with the aid of some cues without paying attention to every word in the text. This skill is critical in every reading activity, he says:

> More simply stated, reading is a psycholinguistic guessing game. It 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, most productive cues necessary to produce guesses which are right the first time. The ability to anticipate that which has not been seen, of course, is vital in reading, just as the ability to anticipate what has not yet been heard is vital in listening. (p.104)

Forrest-Pressley and Walle (1984) add that reading requires both cognition and metacognition. According to them, cognition is subsumed in metacognition. They say that many are not aware of the difference between the two concepts. They define cognition as the processes and strategies used by the reader such as memory use, attention, decoding …etc., whereas metacognition is both one's awareness of his or her cognitions and his or her ability to control them. So, in addition to the reader's use of these cognitive abilities and strategies to perform the reading task, the reader should be aware of his cognition and be able to control and regulate it. That is to say, he must be aware of his understanding, abilities and weaknesses, the task's demands and difficulties, and aware of the different strategies that help

him to perform the task. According to Flavell (1979), this awareness is what result in good reading outcomes.

2. Components of Reading

Overtime, many researchers have tried to decompose reading Gates (1949 ,cited in Stuart and Stainthorp, 2016). This componential approach to reading seeks to identify elements forming the reading process. This approach is also called "the Simple View of Reading". The most known version of it is proposed by Ghough and Tunmer (1986, in Cain, 2010), and then revisited by Hoover and Gough (1990, in Cain, 2010). These researchers' work claims that word recognition, linguistic comprehension, and reading comprehension are the three essential elements necessary for reading to occur. According to this view comprehension is the product of two components: decoding and language comprehension (Ghough & Tunmer, 1986; Hoover & Gough, 1990, in Cain, 2010).

2.1. Decoding

Decoding or phonics is "the efficient, context-free word recognition" (Cain, 2010, p.2014). It might also being referred to as fluency. It is the ability to recognize words rapidly and automatically without paying attention to the meaning of the words in the reading context. Put in another way, it is the ability to acknowledge the words in a very short time. Though, word recognition does not always mean comprehension, developing this skill allows the learner to allocate his time and energy exclusively to the text comprehension. The problem in foreign and second language reading is that the development of skilled decoding requires a long period of time and a lot of practice, as Pressley (2002) states:

> If a student is not fluent in word recognition, he/she is thinking about the sounds of the individual letters and letter combinations rather than using that energy to make sense of the text being read. In contrast, because a fluent reader dedicates

little capacity to word recognition, most of his/her capacity is available for comprehension. (p.292)

2.2. Linguistic Comprehension

Linguistic comprehension is "the ability to access word meanings and produce sentence and discourse interpretations" (Ghough & Tunmer, 1986; Hoover & Gough, 1990, in Cain, 2010, p.214). It involves both the ability to understand the literal and the intended meaning of sentences. In other words, the learner has to identify the meaning of the words and sentences in the text and predict what the author meant by using them in relation to the topic, the context and his background knowledge. Thus, comprehension does not only entail the ability to decode the words' meaning but also the ability to interpret them in the context.

The Simple View of Reading represents the reading comprehension process in a simple equation: $R = D \times L$. R is reading, D is decoding and L is linguistic comprehension. The figure 4 represents the Simple View of Reading:
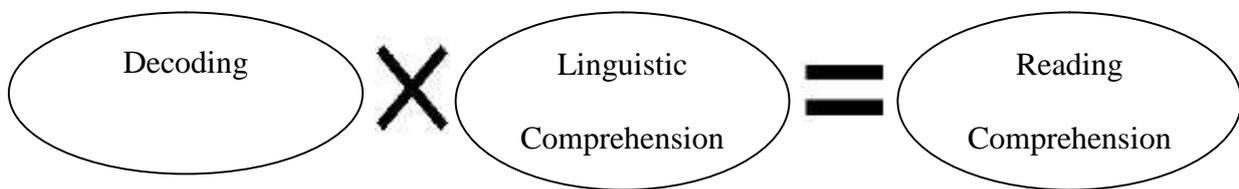
Figure4: The Simple View of Reading (Gough & Tunmer, 1986).

As shown in the figure (4), the relationship between decoding and linguistic comprehension is one of multiplication rather than addition. This entails that both elements are of equal importance. The value of each variable ranges from 0 to 1. It suggests that if the reader has poor skills in one of the two components, this will hinder his reading comprehension performance. So, in order to be able to comprehend a foreign text, the second language reader needs to have a certain level of automaticity in reading and in vocabulary knowledge to access successful comprehension.

3. Models of Reading

Reading models are an attempt "to explain how an individual perceives a word, processes a clause, and comprehends a text." (Singer & Ruddel, 1985, p.375, in Wu, 2016).Different models with different principles have been set through time. These models make the process of reading comprehension easier and help readers to interpret texts and solve their problems while reading (Eskey, 2005). Furthermore, they provide an overview on how comprehension is built during reading. There are three models: "bottom-up", "top-down" and "interactive" model.

3.1.   The Bottom-up Model (1950- 1960)

The bottom-up approach or the text driven approach relies on the decoding skills. This model simply focuses on putting into sound the written words. It draws heavily on the behaviourist learning theory established by B.F. Skinner. The bottom-up models "starts with the printed stimuli and work their way up to the higher level stages" (Samuels & Kamil, 1988, p. 31). It perceives the act of reading as a mechanical process of decoding words and sentences. In other word, reading in a bottom-up approach is linking words to form sentences, sentences to form paragraphs, and paragraphs to form texts. As demonstrated below in figure (5), the bottom-up approach moves from the identification and connection of words and phonemes to their pronunciation and last to building meaning.

Figure5: The Bottom-up Model of Reading (Cambourne, 1979 in Nunan, 1991).

Some of the shortcomings of the bottom-up theory are that it considers the learner as a passive recipient that has no contribution in the reading activity. It neglects his potential and ability to make predictions (Eskey, 1973, in Khaokaew, 2012). As a matter of fact, this might prevent him from learning and acquiring new information, as it might also be a barrier for using reading for learning purposes. This is mainly due to the fact that readers in this model just focus on improving their pronunciation skill without paying attention to gain knowledge from the texts they encounter.

3.2. The Top down Model (1970's)

The top down model or concept driven model came as a reaction to the bottom-up theory. This view of reading was proposed by Goodman who coined this model "reading as a psycholinguistic guessing game" (1967). This model emphasizes on the higher level processes of thinking. The reader makes inferences and predictions about the text and confirms them in continuous endeavor to understand the main ideas of the text, as Kamil and Samuel point out: "start with hypothesis and predictions and attempt to verify them by working down to the printed stimuli" (Samuels & Kamil, 1988, p.31). As the reader reads the text he processes it and compares it with what he already knows, he also might make connections with his personal experiences. All these previous mentioned strategies are what shape the predictions the readers make. At each stage of the reading passage, he stops and makes some presuppositions and predictions and along the way his predictions might be confirmed or disconfirmed.

The bottom-up approach focuses on what the reader brings to the process of reading (Goodman, 1967) as it considers him as the most important element for comprehension to occur. While reading, the reader relies on his background knowledge and his past experiences to build understanding of a text, and the written symbols are just considered as a means to

learn new information. According to Goodman (1988), readers employ five processes in reading: Recognition- initiation, prediction, confirmation, correction, termination (p.16).

➢ **Initiation:** It is the first stage where the reader starts the act of reading.

➢ **Recognition:** the reader identifies the written words.

➢ **Prediction:** the reader makes prediction or hypothesis during reading.

➢ **Confirmation and correction:** the reader confirms or corrects his predictions and hypothesis.

➢ **Termination:** it is the last stage where the reader stops reading either because the text finishes, or because he gets bored.

As shown in figure (6), in the top down approach the reading process starts with the past experiences of the reader. Then, it moves to the selection of some aspects of the written text, and finally builds meaning.
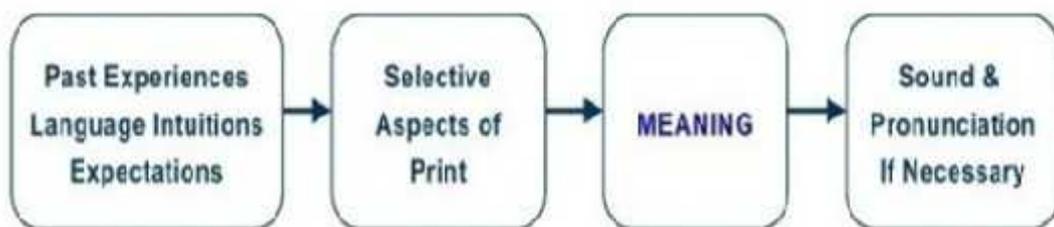
Figure6: The Top down Aspect of Reading (Cambourne, 1979 in Nunan, 1991).

The top-down approach has been very beneficial due to the shift it brought into the world of SL and FL reading, however; it has its limitations. Stanovish (1980) stipulates that the fact that learners may lack the background information of certain texts might pose problems. While calling for their background knowledge, learners may use the wrong schema or the wrong information and this might lead to comprehension breakdowns.

3.3. The Interactive Model (1980- 1990)

The interactive model is defined as the combination of the bottom-up and the top-down model. It focuses both on what is written in the text and on what the reader brings to it.

The ultimate aim of this approach is to have good readers who are both good decoders and good interpreters (Eskey, 1988). It is considered as the most complete model for L1 and L2 reading. Rumelhardt (1977), who is one of the main proponents of this model, declares that "both sensory and nonsensory come together in one place and the reading process is the conclusion of simultaneous joint application of all the knowledge sources" (p.735). Be that as it may, the reader needs his sensory skills, that is, his perceptual skills to decode the text and his nonsensory skills, that is, his cognitive processes to process the information and interpret it. This necessitates from the reader to activate both his lower and higher level processes.

Stanovich (1980), from his part, talked about the "compensation" phenomenon that exists in this interactive model. He explains this by saying that when a reader lacks the background information in the text, he will use the bottom-up approach to compensate for his lack, however; if a poor reader comes to read a text and find difficulty to understand it, he will use his higher level processes like activating his background knowledge and making inferences.

The figure (7) represents an interactive activation model as represented by Perfetti, Landi and Oakhill (2005). In this model reading comprehension is resultant and dependent on both world knowledge and linguistic knowledge. Reading in this model begins with a visual input of the text, then it move from word identification that relies on the linguistic knowledge, that is, his syntactic, morphological, semantic, pragmatic and phonological knowledge to comprehension that relies on inferences that are based on world knowledge.
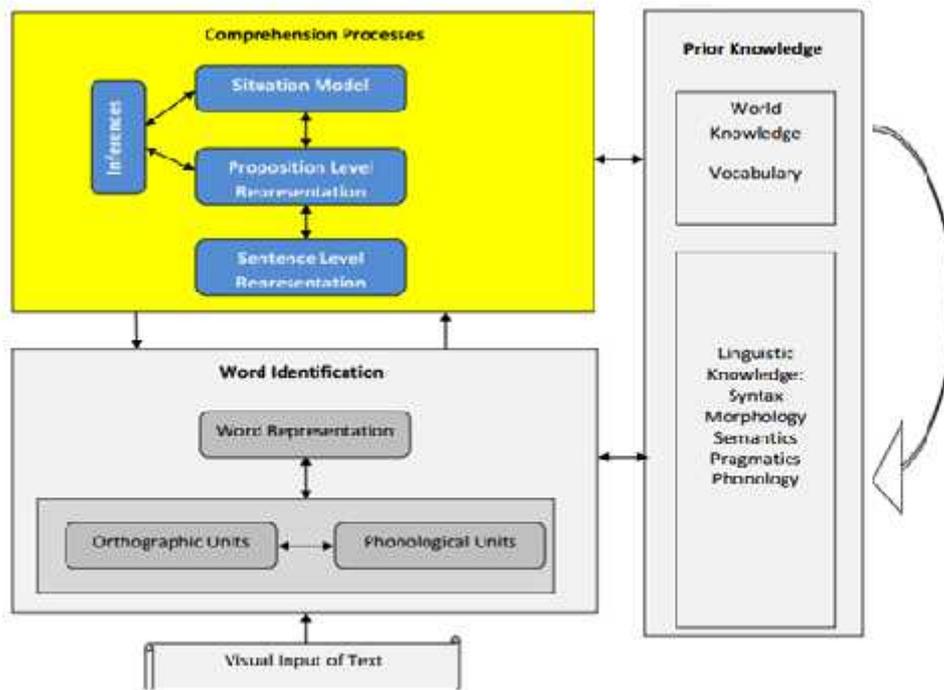
Figure7: An Interactive Activation Model Reading (Perfetti, Landi & Oakhill, 2005).

4. Factors Effecting Reading

Reading is all about comprehending a text. Not all learners have the same level in reading and understanding a given piece of information. Many factors come amid either to hinder or foster learners' reading comprehension, depending on whether the learner has control over them or not. Hudson (1996) identifies (5) factors that affect reading and understanding:

4.1. Automaticity in Word and Sentence Recognition

It refers to the rapidity with which a reader reads a text. Duke and Pearson (2001) state that: "Automaticity is the fast, effortless word recognition that comes in part with a great deal of reading practice" (p.424). Good readers are able to process words quickly, accurately, and as an automatic process (Stanovich, 2000). Automaticity in reading does not only require speed and there is a difference between both terms (Grabe, 2009). Automaticity is unconscious and unstoppable. Moreover, a reader needs to be accurate and respect prosody.

4.2. Content and Formal Schemata

Schemata refer to the knowledge that readers bring to a text. There are two types of schemata affecting the reader's performance: the content schema and the formal schema. First, content schema provides the readers with a foundation, a basis for comparison (Carrell, Pharis, & Libertto, 1989). It refers to what the reader knows about a given topic. Influenced by his culture, the reader might have different views, opinions, and perceptions about the topic initiated by the author (Aebersold & Field, 1997). Nutall (1996) shows that comprehension can happen because of a shared schema or assumption between the author and the reader and consequently misunderstandings can be caused by it being distinct. The background knowledge that the reader relies on is affected by his experiences. Second, formal schema refers to the organizational forms and rhetorical structures of written texts (Carrell, 1984). Aebersold and Field (1997) define it as the reader's knowledge of the text's structure, for example, his knowledge of the organizational patterns of an expository text, and his knowledge of the differences between an argumentative and a descriptive text. Research has proved that knowledge of text structure interacts with comprehension (Carrell, 1985, in Hudson, 1996). The reader might use the rhetorical devices that are used by the author in his text (like cause/ effect, comparison/contrast) to link between his ideas and identify the text's type.

4.3. Strategies and Metacognitive Skills

According to Alkhaleefah (2011) strategies are "… any physical or mental processes that are consciously and deliberately employed by EFL/L2 readers in order to either solve problems in and/or facilitate comprehension of texts during the reading task(s)" (pp.31-32). There exists a variety of metacognitive strategies. These latter facilitates the reading process; they are generally used by effective readers. Their use requires the activation of higher mental activities and differs depending on the period of reading: pre-reading strategies, during

reading strategies and post reading strategies. There is a multiplicity of strategies; the National Reading Report (2000) identifies several comprehension strategies: prediction/prior knowledge, think-aloud, text structure, visual representations, summarization, questions/questioning, comprehension monitoring, and cooperative learning. These remain the most commonly used by learner. (See chapter 1.)

4.4. Purpose

Setting a purpose before reading is a determinant factor for the success or failure of reading. There is a multiplicity of reasons for reading. Nuttal (1996) said that reading differs according to the purposes. Some people read to decode and identify the words and structures used by the author. Others read to practice speaking and enhance pronunciation; this second reason as Nuttal has noted is the most common reason in classrooms reading. The last and the most important reason is reading for understanding. Nuttal notes that the need for reading is very influenced by motivation; she says that even native speakers have different purposes for reading and this purpose, in itself, might be a source of motivation for learners to read. In addition, making reading more purposeful might be very helpful for teachers to promote reading in the classroom. She declares that "…by treating reading as a purposeful activity, we can make teaching more purposeful and classes livelier" (Nuttal, 1996, p.3).

4.5. Context

Hudson (1996) defines the context of reading as "the interactional environment in which the reading activity takes place" (p.4). He imagined the reading context as full of factors interacting as the reader starts reading. In this way, a slight noise from a friend sitting next to him can disturb the readers' attention and influences his reading comprehension. Aebersold and Field (1997) add that factors like family, community, educational environment in addition to individual characteristics like motivation, anxiety, and inhibition all form the persona of the reader. Thus the reader's comprehension outcomes are only the product of the

conditions around him that interact with one another and affect the way he deals with the text. Goldenberg (1991) points out to the importance of classroom discussion in providing a favorable environment for an effective reading because it allows the learner to expand his ideas and generate questions about the text. According to him class discussions help learners produce opinions and generate new questions. It is extremely important for teachers to create a relaxed and motivational environment for learners.

5. Definition and Assessment of Comprehension

The word "comprehend" comes from the Latin word *comprehendere*, which means "to grasp". This concept is related to all aspects of one's life. When related to the field of language learning, comprehension simply refers to understanding what you hear or read. Reading without comprehension is of no use. Either the reader reads for pleasure or for learning there must be some room for understanding.

Koda (2004) says comprehension might be assessed into two ways: as a product versus as a process and comprehension as sum of parts versus as a whole. In the first view comprehension might be perceived either as a product or as a process. As a product, it is viewed as an outcome of the long term memory. It is enough to stimulate the reader with false and true questions, multiple choice and free recall to make him recall what he has understood. In this view comprehension and memory are inseparable; memorizing cannot happen without understanding and vice-versa. Second, comprehension as a process means the extraction of meaning from the printed material, the learner builds his understanding of the text step by step and makes the link between its different parts and then organizes the ideas in his mind. It is important in this view that comprehension should be measured during activity and any delay can make it difficult to distinguish between what have been understood and the background knowledge that exists in the long term memory; it entails additional task during reading, like online verbal reports, think aloud verbal reports. In the second view, comprehension is seen

either as sum of part versus as a whole. First, in the holistic view, the deficiency in comprehension cannot result from a deficiency in one single component. Reading, like verbal communication, is said to be learned as whole and must be assessed as such. In contrast, the componential view to comprehension claims that comprehension problems might result from the deficit in one single component. Variation in comprehension can be the result/ attributed to individual differences; thus, the teacher should be able to identify each learner's source of poor comprehension and differentiate his course objectives accordingly. Comprehension here is composed of different components and it never takes place unless all its sequences are secured by the learner. In the same line with this, Durrell (1949 in Pearson & Cervetti, 2009, p.19) claims that some factors may affect the reader's comprehension such as the reader's knowledge, motivation, and attention. These have a great influence on comprehension. He presented some characteristics of skills program in reading comprehension:

➢ Selection of essential skills to be observed and taught: the teacher should select some strategies to be taught for his learners.

➢ Analysis of difficulties of those skills: the teacher should know why his learners fail to implement these strategies, or the problems they face when they use them.

➢ Intensive teaching of those skills through graded exercises in suitable material: the teacher should provide his learners with ample time to practice the selected strategies.

➢ A motivation program which shows the child the importance of those skills and enables him to see his progress them: the teacher should show his learners the benefits of using certain strategies in their reading to motivate them to use them to overcome their comprehension problems   and encourage them to assess their strategy use.

(Durrell, 1949, p.2000 in Israel & Duffy)

6. Reading Comprehension and Metacognitive Strategies in FL Reading

The previous parts tackled reading and comprehension as separate entities; however, it is quite impossible to separate both concepts. Whatever the purpose of reading, either for learning or for pleasure, comprehension has always to be part of it. The Reading Study Group (RAND) defines reading comprehension as: "the process of simultaneously extracting and constructing meaning through interaction and involvement with written language. The words extracting and constructing are used to emphasize both the importance and the insufficiency of the text as a determinant of reading comprehension" (Snow, 2002, p.11). Departing from the text and depending on his linguistic knowledge, like vocabulary, semantic and grammar knowledge, the learner can make inferences about what the author wants to convey to his readers. Though linguistic knowledge is the basis of understanding, it is not enough for the reader to understand the intention of the author; he further needs to engage his mental processes and use strategies to deal with text successfully.

According to Snow (2002), comprehension entails three elements: (1) the reader who is doing the comprehending process, (2) the text that is to be comprehended, and (3) the activity in which comprehension is a part. Reading comprehension is the combination of these three elements. In order to be able to comprehend a text, a reader must first possess some cognitive capacities like attention, memory, visualizing ability ….etc. Then he must be motivated to read. For that, the reader must set a purpose for reading and develop some self efficacy. Last, he must possess some knowledge. This includes vocabulary knowledge, domain and topic knowledge, linguistic and discourse knowledge and knowledge of comprehension strategies (Snow, 2002). In the same line with this, Flavell (1979) says that reading comprehension occurs as a result of the interaction among the reader, the text, and the context. He tries to show the tight relation between the three factors. For him, the reader is not alone during the performance of the reading activity but he is surrounded by many factors

such as the nature and demands of the task, his abilities and weaknesses as a reader, his emotions and feelings (anxiety and motivation), attitude of the society toward reading (peers, family, teacher). These factors can facilitate or hinder the process of comprehension. Thus reading cannot take place in void, but rather in an interactive environment where the learner struggles to understand the text and at the same time tries to deal with different factors successfully. The figure (8) represents a model for reading comprehension:
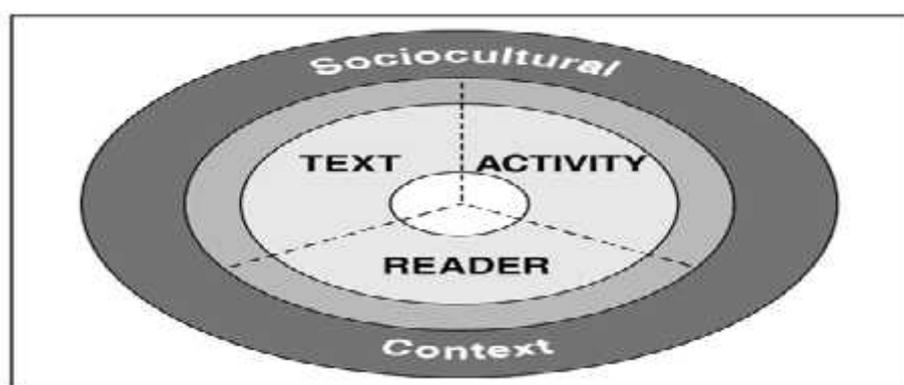
Figure8: A Heuristic for Thinking about Reading Comprehension

Reading comprehension is also defined by Veeravagu, et al (2010) as:

> A thinking process by which a reader selects facts, information or ideas from printed materials; determines the meanings the author intended to transmit; decides how they relate to previous knowledge and judges their appropriateness and worth for meeting the learner's own needs and objectives. (p. 206)

This previous definition explains that when reading, the reader only selects some information that he finds essential then he starts the comprehension process by making guesses about what the author may be wanted to convey as message then, the reader judges the appropriateness according to his learning objectives.

Reading comprehension is a very complex activity requiring a multiplicity of processes. Grabe and Stoller (2002) divided these processes into two equally main types, lower-level processes and higher-level processes. The lower level abilities are the decoding skills, while the higher level abilities are the comprehension skills. The former refer to word

recognition, whereas the latter refer to the use of cognitive strategies such as: activating the background knowledge, recognizing, guessing from the context, using a dictionary, visualizing, summarizing and using linguistic clues. Learners who are accurate in reading have a solid ground for comprehension. Metacognitive strategies are some of the factors that can enhance reading comprehension. The learners who use these strategies in their readings have been known to be more successful than other readers. The table (1) shows the difference between both good and poor readers. It explains the different strategies implemented by both types of readers.

Proficient Readers (Good Readers)	Ineffective Readers (Poor Readers)
Before reading	
- Build up their background Knowledge on the subject before they begin to read. - Know their purpose for reading. - Focus their complete attention on reading.	- Start reading without thinking about the subject. - Do not know why they are reading.
During Reading	
- Give their complete attention to the reading task. - Keep a constant check on their own understanding. - Monitor their reading comprehension and do it so often becomes automatic. - Stop only to use a fix-up strategy when they do not understand.	- Do not know whether they understand or do not understand. - Do not monitor their own comprehension. - Seldom use any of the fix-up strategies.
After Reading	
- Decide if they have achieved their goal for reading - Evaluate comprehension of what was read.	- Do not know what they have read. - Do not follow reading with comprehension self-check.

Table1: Characteristics of Proficient Readers (Irvin, 1990, p.29)

7. The Effectiveness of Metacognitive Strategies in Reading Comprehension

It is evident from the literature and from the conducted studies in metacognition and metacognitive strategies that these latter have a great role in enhancing reading comprehension and developing good readers (Hudson, 1996; Ismail & Tawelbah, 2015). In a study conducted by Philip and Kim Hua (2006), metacognitive strategies were found to contribute in developing sophisticated readers. Those readers are described as successful, because they employ high mental processes, unlike poor readers who depend merely on word recognition (Ismail & Tawalbeh, 2015). The implementation of these strategies helps them to understand the text appropriately (Mokhtari & Reichard, 2002; Habibian, 2015; Iwai, 2011).

There are three types of metacognitive strategies: planning, monitoring, and evaluating strategies. The effectiveness of each strategy is different from the other. First, planning strategies help the learners to determine the strategy that should be adopted to perform the reading task successfully. In this way, they will be able to direct their cognitive resources towards their target. In addition, they also identify the order of the actions that should be taken and the amount of the efforts that should be spent on a reading task. Second, monitoring strategies can help learners to compensate for their lack of linguistic knowledge like vocabulary and grammar knowledge (Yang, 2002). For that reason, teaching them can benefit both poor and good readers (Kim Hua & Philip, 2006). Also, monitoring and evaluating strategies allow the learner to check his progress during the attempt to comprehend the text and evaluate this progress and its outcome (Phakiti, 2006). In other words, by monitoring and evaluating, the learner is aware if he/ she understood the text and what he/ she can do in case he did not understood it. For example, he may reread, slow down his reading or reprocess and reflect upon the text. Ahmadi et al. (2013) states: "… self-monitoring and regulation is the main important factor in reading comprehension. These strategies not only

promote reading comprehension but also motivate readers to read more and understand better the written message/ messages."(p. 241).

Another advantage of metacognitive strategies is that they develop autonomous learners (Takallou, 2011).That is, learners who are able to take charge of their learning by subsequent planning, monitoring and evaluating of their reading, which is the purpose of every instruction. Furthermore, metacognitive strategies can also promote learner's self-efficacy which is believed to be the source of motivation and good learning outcomes (Koosha & Tavakoli, 2014). Learners who are well trained in using metacognitive strategies believe themselves to have the power to understand the text, and that they are more likely to be motivated to read it whatever its difficulty. Chamot (2006, Viswanathan, 2009) stated "students who think and work strategically are more motivated to learn and have a higher sense of self-efficacy or confidence in their own learning ability" (p.1).

Additionally, metacognitive strategies help learners to think about their cognitive processes (Boulware-Gooden et al., 2007), and thus organize their thinking, reading and learning (Habibian, 2015). In the same line, Anderson (2002) adds that this ability can change the way learners learn, that is to say, they become reflective and critical. He states that "metacognition results in critical but healthy reflection and evaluation of your thinking, both of which may result in specific changes in how you …learn" (p.1.).Interestingly, metacognitive strategies control other strategies (Philip & Phakiti, 2006). For example, by planning strategies the learner predetermines the cognitive strategy that would enable him to understand the text; therefore, he will be able to control and direct his cognition to achieve this goal (Philip & Phakiti, 2006).

Teaching metacognitive strategies or what is also called "Metacognitive Strategy Instruction" helps learners to select the appropriate strategy to solve comprehension problems. Through instruction, teachers would show their learners when, where, why to use them

"conditional knowledge" (Habibian, 2001). Learners might change the strategy used according to the nature of the task and the surrounding conditions that may affect their reading comprehension. Moreover, metacognitive strategy instruction (MSI) is advantageous in that it raises learners' awareness of new strategies (Pei, 2015), and it enables them to expand their knowledge of metacognitive strategies to new contexts or to use metacognitive strategies to solve different tasks (Çubukçu, 2008). Another benefit of MSI is that it can improve language learning like learning English as a second or a foreign language (Mokhtari & Reichard, 2002; Habibian, 2015), this is due to the fact that metacognitive strategies were found to be an effective tool that can be used to enhance many linguistic, cognitive and social skills like oral skills, writing, language acquisition and social interaction (Iwai, 2011). Last but not least, MSI teaches students not only to receive information but also to contribute in constructing meaning and building understanding of different texts (Habibian, 2015).

Conclusion

Metacognitive strategies ease and ameliorate the quality of learners' reading comprehension. They help them to develop their critical thinking and to become autonomous learners who are able to rely on themselves. For the previous reasons, learners need to learn when and how to use these strategies. To sum up, this chapter provides an overview on reading, its different theories and explains the effectiveness of these strategies on learners' reading comprehension.

Chapter Three

Fieldwork investigation

Chapter Three: Fieldwork investigation

Introduction

This study aims at investigating students' perceptions towards the implementation of metacognitive strategies in reading comprehension. To reach that purpose, two questionnaires were administered: one to students and the other to teachers. Both questionnaires were designed to either confirm, or reject the hypothesis. One the one hand, the aim from the students' questionnaire was to help us answer the hypothesis with regard to their opinions about the effectiveness of metacognitive strategies as tools that will help them to understand better the written materials. On the other hand, the teachers' questionnaire aims at providing more information about the students' behaviors during a reading activity and their awareness and use of different strategies. Moreover, it informs about the role that teachers play in raising their students' awareness about the importance of these strategies for their learning. This chapter will be devoted to the analysis of the two questionnaires, then to the discussion of the results and ends with recommendations and a general conclusion.

1. The Teachers' Questionnaire

1.2. Description of the Teachers' Questionnaire

To have an idea about the implementation of metacognitive strategies to teach reading comprehension in EFL classrooms, a questionnaire has been administered to 14 teachers in Mila University Center. The questionnaire is made up of three sections and composed of 16 questions. The first section (Q1- Q3) provides some background information about the teachers, the second section (Q4- Q11) seeks to know the teachers' implementation of the metacognitive strategies in classrooms and the third section (Q12- Q16) investigate about the teachers' perceptions about the use of metacognitive strategies in reading comprehension.

1.3. The Aim of Teachers' Questionnaire

This questionnaire is a set of open-ended and close questions that aim to collect some quantitative and quantitative data. It attempts to know teachers' perceptions about their students' use of metacognitive strategies in reading comprehension.

1.4. The Analysis of the Teachers' Questionnaire

Section one: Background Information

This section aims to investigate the teachers' background information about their specialty and their academic experience.

Question 1: How long have you been teaching?

	Frequency	Percentage
Less than one year	3	21.43%
1-5 years	4	28.57%
6-10 years	4	28.57%
More than 10 years	3	21.43%
Total	14	100%

Table 2: Teachers' Experience

According to the table, 3 teachers representing 21.43% have been teaching for less than one year, while 4 teachers representing 28.57% have taught from one to five years. The seven remaining teachers are divided; 4 teachers representing 28.57% have more than 6 years of expertise, whereas 3 of them representing 21.43% have more than ten years. The data gathered from this question would help to know if being an expertised or a novice teacher has an impact on teaching reading comprehension.

Question 2: What is your degree of qualification?

	Frequency	Percentage
Bachelor of arts	0	0%
Master	8	57.14%
Magister	6	42.86%
Doctorate	0	0%
Total	14	100%

Table 3: Teachers' Qualification

The table shows that the 8 teachers representing 57.14% have a Master degree, whereas 6 teachers representing 42.86% have a Magister degree. This question was asked to know the teachers' qualification.

Question3: What is your specialty?

The results of the analysis show that 8 respondents representing 57.14% are specialized in teaching English as a foreign language (TEFL), 3 teachers representing 14.28% in science of languages; one teacher is specialized in English for specific purposes (ESP). Finally, two teachers specialized in translation. This question was designed to investigate whether the teachers' specialty has an effect on teaching reading comprehension. Veenman et al (2006) note that most of the times teachers find it difficult to go beyond their expertise regarding the teaching of metacognitive strategies to their learners; for, they don't consider it to be their responsibility.

Section two: Teachers' Implementation of Metacognitive Strategies

This section aims at investigating the teachers' implementations of metacognitive strategies in their classrooms.

Question4: How would you define metacognitive strategies?

Almost all the teachers define metacognitive strategies as thinking about one's own way of thinking. They also define them as strategies to act on mental operations.

Question 5: When you give your students a text to read, do you ask them questions to help them reflect upon it?

	Frequency	Percentage
Yes	14	100%
No	0	0%
Total	14	100%

Table 4: Questions of Reflection Given by Teachers to the Students

According to the table, all the teachers ask their students questions about the texts they provide them.

Explanation

Teachers ask their learners questions about the text in order to stimulate their thinking and encourage them to reflect upon the ideas encountered in the text. Some of the teacher ask them questions before they read it, in order to know their knowledge about the topic and to push them to make some predictions about what the text might be discussing, whereas the majority of the teachers ask learners questions after reading the text to deepen their understanding. The teachers ask questions that introduce new lexis and new grammar structures. Moreover, they ask them to state the main ideas of the text, that is, the topical ideas, as well as, the sub-ideas.

Question6: How do you encourage your students to think about and assess their reading?

The ways used by teachers to encourage their learners to think and assess their readings are diverse. First, some teachers think that highlighting the importance of reading for their learners might encourage them to read more, while others think that classroom discussions with their peers can be a great aid for learners to improve their understanding and can also develop their critical thinking. In addition to classroom discussion, one teacher suggested that providing students with some feedback can be a very helpful tool for evaluating students' comprehension. Lastly and more importantly, teaching students about the use of cognitive and metacognitive strategies, where and when to implement them to improve their reading performance.

Question7: Do you draw your students' attention towards the importance of metacognitive strategy use on reading comprehension?

	Frequency	Percentage
Yes	10	71.43%
No	4	28.57%
Total	14	100%

Table 5: Teachers' Opinions towards the Use of Metacognitive Strategies

From the table, the majority of the teachers representing 71.43% draw their students' attention to the importance that metacognitive strategy use has on text comprehension, whereas 4 teachers representing 28.57% do not give it interest at all.

Explanation

The teachers, who answered by yes, explain different ways to raise their students' awareness about their cognition. Some of the teachers implement only one single strategy like think-aloud, or relying on the learners' background knowledge; others say that they do it by

using explicit instruction, by presenting, defining, and prompting the learners to use the strategies. It is believed that showing students the importance of metacognitive strategies is the way to motivate them to implement them to understand the text (Iwai, 2001).

Question8: Do you give your learners the opportunity to ask questions after reading a text?

	Frequency	Percentage
Yes	13	92.86%
No	0	0%
Missing	1	7.14%
Total	14	100%

Table 6: Learners' Rate of Questioning after Reading

As shown in the table, almost all the teachers, except one who did not answer, give their learners the opportunity to ask questions after reading a text. According to Smith (1988, in Dechant, 1991) the learner who did not understand a book, is the one who is unable to generate questions and answers about it. He further added, the questions that the teacher asks after the text are tests of the long-term memory and not comprehension. In the same line with this, Duke and Pearson (2001) say that the questions that are given by the teachers about the text can help learners to understand the text in various ways, but it is also equally important that the teacher give opportunity for his learners to generate their owns. This entails that the responsibility should be turned towards the learners.

Question 9: Do you use think-aloud protocol?

	Frequency	Percentage
Yes	5	35.71%
No	8	57.14%
Missing	1	7.1 4%
Total	14	100%

Table 7: The Frequency of Using Think-aloud Protocol

The table above shows that 5 of the respondents representing 35.71% use think-aloud protocol, whereas 8 respondents representing 57.14% do not use them in their classrooms. The majority of the teachers seem to implement this strategy, and this might be an indication that they are aware of its importance in improving the learners' way of reading. This Strategy is used as a means to teach learners explicitly how to think about the text. It is an explicit technique for teaching metacognitive strategies, as Duke and Pearson (2001) indicate: "think aloud remove the cloak of mystery surrounding how one comprehends" (p.446). It is through this tool that the teacher explains to his learners how to deal with the text. Though its importance, the majority of the teachers, as the table displays, don not use it.

Question10: How often do you ask your students if they agree upon the ideas in the text?

	Frequency	Percentage
Never	0	0%
Sometimes	1	7.14 %
Often	8	57.14%
Always	4	28.57%
Missing	1	7.14%
Total	14	100%

Table 8: Checking students' opinions about the text

The table demonstrates that 8 teachers representing 57.14% often ask their students if they agree upon the text's ideas, whereas 4 teachers representing 28.57% always ask them. Only one teacher answered with sometimes. It is very important that the teachers encourage their learners to develop a critical thinking, by making them aware that reading a text is not all about simply assimilating the author's ideas, but it is all about the ability to debate, evaluate and judge them. This skill lies at the heart of MSI. That is to say, the aim of teaching these strategies is to transform the learners from passive readers to active recipients of the text (Habibian, 2015).

Question11: Do you show your students where and when to use metacognitive strategies?

	Frequency	Percentage
Yes	9	64.29%
No	5	35.71%
Total	14	100%

Table 9: The Frequency of Teaching about the Conditional Knowledge

Departing from the table, 9 respondents representing 64.29% show their students when and where to use metacognitive strategies, whereas 5 teachers representing 35.71% do not. In view of that, one can assert that even though the majority of the teachers teach their learners about the conditional knowledge, that is, when, where and why to use a given strategy, an unexpected number of teachers do not give it interest. Kim Hua and Philip (2006) say that:"the conditional knowledge is what makes reading flexible. For this reason, it is of a paramount importance for teachers to give it more attention.

Section three: Teachers Perceptions about the Use of Metacognitive Strategies in Reading Comprehension

This section aims at investigating teachers' perceptions about the use of metacognitive strategies in teaching reading comprehension.

Question12: How would grade your learners in terms of their ability to comprehend texts?

	Frequency	Percentage
Poor	2	14.29%
Average	10	71.43%
Good	1	7.14%
Missing	1	7.14%
Total	14	100%

Table 10: The Teachers' Opinions about their Learners' Comprehension Level

From the table, 2 teachers representing 14.29% claim that their learners have poor levels of comprehension, while 10 teachers representing 71.43% say that they are average comprehension. Only one teacher says that his students are good at comprehension.

Explanation

The majority of the teachers consider their readers as having an average understanding. In their opinions, most of the students' answers to the texts are relevant and thoughtful. When talking about the learners' lack of comprehension, these teachers assigned their learners' source of poor comprehension to various reasons. The first reason is that most of the students do not read, and if they do so, they read superficially and do not go beyond the words level, and it is generally for academic purposes and not for personal gain. The second reason is the learners' lack of motivation, interest and strategy use.

Question13: Do you think that classroom discussions are beneficial for your learners to build their understanding of a text?

	Frequency	Percentage
Yes	14	100%
No	0	0%
Total	14	100%

Table 11: The Importance of Classroom Discussions in Improving Learners Text Comprehension

From the table, all of the teachers think that classroom discussions are beneficial for enhancing their learners understanding of the text.

Explanation

The aim from these discussions is to create a competitive atmosphere in the classroom that makes the learners at ease to express and exchange ideas with one another and also develop their critical thinking. The teacher can act only as a guide and he only contributes once in a while to clarify some points.

Question14: From classroom discussions, do you think that your students implement metacognitive strategies while reading?

	Frequency	Percentage
Yes	7	50%
No	5	35.71%
Missing	2	14.23%
Total	14	100%

Table 12: Teachers' Opinions towards Students' Frequency in Metacognitive Strategy Use

The table shows that 7 respondents representing 50% say that their students implement metacognitive strategies while reading, whereas 5 teachers representing 35.71% say that their learners never use them. Half of the teachers express that their learners implement strategies, for some of them, this manifests in the questions and comments learners make about the text. Others claim that it is apparent when the learners rely on their background knowledge to explain some points in the text.

Question15: Do you think that using metacognitive strategies would develop higher order thinking in your students?

	Frequency	Percentage
Yes	14	100%
No	0	0%
Total	14	100%

Table 13: The Development of Higher Order Thinking via Metacognitive Strategy Use

All the respondents say that using metacognitive strategies would develop their learners' higher order thinking. This question was established to investigate the teachers' opinions towards strategy use.

Question16: Do you think that if your learners use metacognitive strategies this would help them to become more autonomous?

	Frequency	Percentage
Yes	14	100%
No	0	0%
Total	14	100%

Table 14: The Effect of Metacognitive Strategy Use on Autonomous Learning.

All the teachers agree that if their learners use metacognitive strategies, it would help them to become more autonomous. This proves that the teachers are aware of the role of these strategies in making learning more student-centered.

2. The Students' Questionnaire

2.1. Description of the Students' Questionnaire

The students' questionnaire is a 30-item five-point Likert scale questionnaire composed of three sections, and each section contains ten closed–ended questions using a scale varying between "strongly disagree- disagree- neutral- agree- strongly agree" for the first and the third sections, and varying between "never- rarely- sometimes-often- very often" for the second section. The students are asked to choose one option that best goes with their point of view. The first section is about students' attitudes towards reading, the second section is about their awareness of metacognitive strategies, and the last section focuses on their attitudes towards the effect of metacognitive strategies on their reading comprehension. The questionnaire has been given to 70 EFL students of third year university students, in Mila university center.

2.2. The Aim of the Students' Questionnaire

The students' questionnaire is concerned with third year EFL students' perceptions about the effect of metacognitive strategies on reading comprehension, in Mila university center. It tries to explore the way learners read, the metacognitive strategies they might use, their awareness about these strategies, and their opinions about the importance of these strategies in improving their reading comprehension.

2.3. Analysis of the Students' Questionnaire

The analysis of students' questionnaire has been done by using scientific package of social science (SPSS). The data are presented by both tables and pies.

Section One: Students' Perceptions of the Reading Act. (S1-10)

Item 01: Reading is a pleasurable activity because it stimulates the reader's mental schemes.

	Frequency	Percentage	Mean	Standard deviation
Disagree	1	1.4		
Neutral	2	2.9		
Agree	39	55.7	4.34	0.611
Strongly agree	28	40		
Total	70	100		

Table 15: Students' Feeling about Reading

95.7% of the respondents agree that reading is a pleasurable activity only one student 1.4% disagrees and two students are neutral 2.9%. Almost all of the students like to read, this is an indication that they read for pleasure and not only for academic purposes.

Item 02: Reading is the most important skill in foreign language learning.

	Frequency	Percentage	Mean	Standard deviation
Strongly disagree	1	1.4		
Disagree	7	10		
Neutral	4	5.7		
Agree	30	42.9	4.10	0,995
Strongly agree	28	40		
Total	70	100		

Table 16: The Importance of Reading in Foreign Language Learning

11.4% of the respondents disagree that reading is a pleasurable activity, 5.7% are neutral, whereas 82.9% agree. The mean (4.10) is high and the standard deviation (SD) (0.995) indicates that the learners' answers are homogeneous to a certain extent. The majority

of the respondents consi der reading as being the most important skill in foreign language learning, whereas the minority does not consider it to be that important. This indicates that most of the students are aware of the importance of reading in fostering the acquisition of other skills. In this respect, Anderson (1999) said that reading is the most important skill to master for EFL learners and if learners develop this skill they will achieve better development in all academic areas.

Item 03: Reading helps me to connect and synthesize my thoughts

	Frequency	Percentage	Mean	Standard deviation
Strongly disagree	1	1.4	4.10	0.825
Disagree	2	2.9		
Neutral	8	11.4		
Agree	36	51.4		
Strongly agree	22	31.4		
Missing	1	1.4		
Total	70	100		

Table 17: Connection and Synthesization of Thoughts through Reading

4.3% of the respondents disagree that reading connects and synthesizes their thoughts, 11.4% are neutral, and 82.8% agree with this. The majority of the students believe that reading helps to connect and synthesize their thoughts. From the one hand, when reading, learners make connections between the text being read and either their personal experiences, or their knowledge of the world. From the other hand, reading also synthesizes their thoughts; That is, when reading a text, the learners acquire new information from it and this might contribute in modifying their scheme about this topic.

Item 04: I better enjoy reading in Arabic.

	Frequency	Percentage	Mean	Standard deviation
Strongly disagree	1	1.4	4.26	0.879
Disagree	10	14.3		
Neutral	11	15.7		
Agree	19	27.1		
Strongly agree	27	38.6		
Missing	2	2.9		
Total	70	100		

Table 18: The Joy of Reading in Arabic

15.7% of the respondents disagree that reading in Arabic is enjoyable, 15.7% are neutral, and 65.7% agree. More than half of the students enjoy reading in their mother tongue. The reason behind that might be attributed to their lack of proficiency in a FL, so they find it easier to read in their L1. This question is tightly related to the following question.

Item 05: I think that reading in English is a very difficult task.

	Frequency	Percentage	Mean	Standard deviation
Strongly disagree	3	4.3	3.08	1.108
Disagree	23	32.9		
Neutral	15	21.4		
Agree	21	30		
Strongly agree	7	10		
Missing	1	1.4		
Total	69	98.6		

Table 19: Difficulty of Reading in English

The learners' opinions to this question are mitigated. 40% of them think that reading in English is a difficult task, 21.4% are neutral, and 37.2 % think that it is an easy task to accomplish. This difference in students' opinions might be due to each learner's vocabulary and grammar knowledge, and to each one's familiarity with the English culture. This might be also an explanation of why the majority of them prefer reading in Arabic.

Item 06: I think that my mental representations affect the way I understand an English text.

	Frequency	Percentage	Mean	Standard deviation
Strongly disagree	1	1.4		
Disagree	4	5.7		
Neutral	12	17.1		
Agree	44	62.9	4.26	0.879
Strongly agree	8	11.4		
Missing	1	1.4		
Total	70	100		

Table 20: The Effect of Mental Representation on Understanding English Text

74.3% of the respondents agree that their mental representations affect the way they comprehend a text, 17.1% are neutral and 7.1% disagree with this. The mean (4.26) is high and the SD (0.879) proves that the learners' opinions are compatible. The majority of the students think that the mental representations affect the way a text might be understood. In fact, the learners' prior knowledge about a given topic impacts the way they might comprehend a text, and difficulties in text comprehension might result from a lack either in the linguistic or in the world knowledge.

Item 07: I believe that literary and non-academic texts are the most challenging

	Frequency	Percentage	Mean	Standard deviation
Disagree	14	20		
Neutral	17	24.3		
Agree	28	40	3.51	0.989
Strongly agree	11	15.7		
Missing	0	0		
Total	70	100		

Table 21: The Difficulty of Reading Literary and non-Academic Texts

As shown in the table, 20% of the respondents disagree about the fact that reading literary and non-academic texts is challenging, 24.3% are neutral about it and 55.7% agree. The majority of the students face difficulties when reading texts that are not included in the program. This might explain the fact that some of them find that reading in English is difficult.

Item 08: I prefer the teacher's selection when it comes to classroom reading.

	Frequency	Percentage	Mean	Standard deviation
Strongly disagree	6	8.6		
Disagree	18	25.7		
Neutral	14	20	3.18	1.257
Agree	18	25.7		
Strongly agree	12	17.1		
Missing	1	1.4		
Total	70	100		

Table 22: Learners' Opinions about the Teacher's Selection of Classroom Readings

42.8% of the respondents think that the teacher's selection of the reading material in the classroom is preferable, 20% are neutral, whereas 34.3% disprefer it. When choosing a text for his learners, the teacher must take into consideration his students' interests and needs. An inappropriate choice might have a great effect on the learners' motivation to read in the classroom, as well as, on their reading comprehension (Pitcher et al, 2007). If the teacher selects a text that is difficult and full of unfamiliar words and complex sentences, the learners will easily get bored and stop reading.

Item 09: I trust the teacher's questions because they help me to reflect and guess meaning.

	Frequency	Percentage	Mean	Standard deviation
Disagree	4	5.7	4.1	0.775
Neutral	5	7.1		
Agree	39	55.7		
Strongly agree	20	28.6		
Missing	1	1.4		
Total	70	100		

Table 23: the Effect of the Teacher's Questions on Students' Reflection

84.3% of the respondents agree that the teacher's questions help in reflection, 7.1% are neutral, whereas 5.7% disagree. The mean (4.1) is high and the SD is an indication that there is a homogeneity in the learners' answers. Most of the students consider that the teacher's questions help to reflect and make guesses about the meaning of the text. These guesses are what stimulate the learners thinking and push them to further reflect upon the text's ideas. Blachowicz and Ogle (2008) say that "most teachers do use questions to help students consolidate what they have read and to reflect on ideas" (p.125).

Item 10: I feel that classroom structured discussion can better enhance the students' scheme of thinking.

	Frequency	Percentage	Mean	Standard deviation
Disagree	2	2.9		
Neutral	3	4.3		
Agree	36	51.4		
Strongly agree	20	28.6	4.31	0.692
Missing	0	0		
Total	70	100		

Table 24: The Enhancement of the Students' Schema of Thinking through Classroom

Discussions

The majority of the respondents 92.8% agree that classroom discussions enhance students' scheme of thinking, 4.3% are neutral and 2.9% disagree. The majority of the students view that classroom discussions better enhance their thinking. This indicates that they are aware of the importance of debating and classroom discussions.
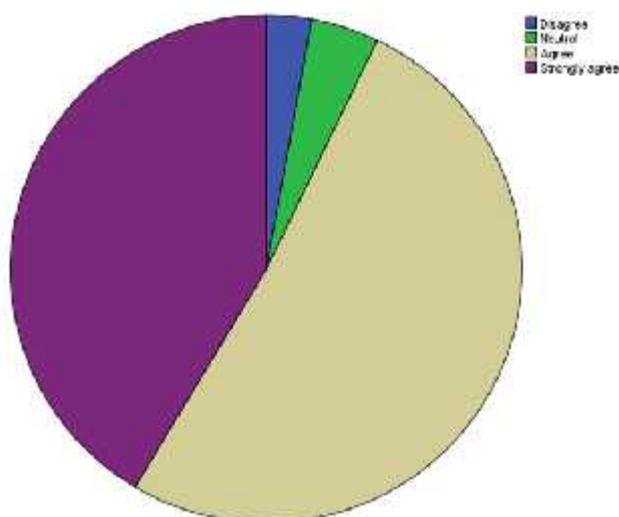
Figure9: The Enhancement of the Students' Schema of Thinking through

Classroom Discussions.

Section Two: Students' Degrees of Awareness of the Use of Metacognitive Strategies in Various Learning Tasks

Item 11: I question my thoughts before, during and after a particular activity.

	Frequency	Percentage	Mean	Standard deviation
Rarely	8	11.4		
Sometimes	21	30		
Often	27	38.6	3.67	0.928
Very often	14	20		
Missing	0	0		
Total	70	100		

Table 25: Thoughts' Questioning, before, during, and after Task Performance

58.6% of the respondents often question themselves before, during and after doing a particular activity, 30% sometimes do it, whereas 11.4% rarely do that. The mean (3.67) is high and the SD (0.928) proves homogeneity in the students' answers. The answers show that more than half of the students plan monitor and evaluate their task performance; in other words, they are self- regulated. Self-regulation is considered as one aspect and major element of metacognition (McCormick, 2003).
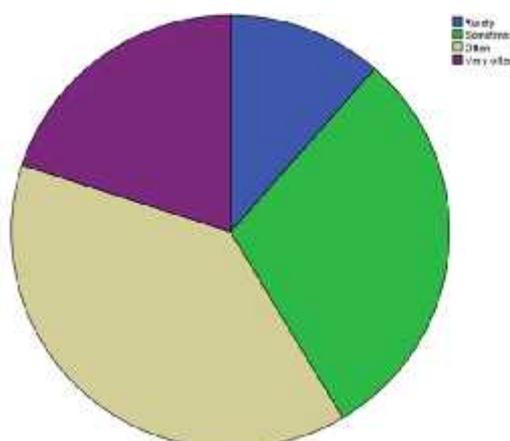
Figure10: Thoughts' Questioning, before, during, and after Task Performance.

Item 12: during the task performance, if I feel I am going the wrong way, I redirect my strategies and adopt new ones.

	Frequency	Percentage	Mean	Standard deviation
Never	1	1.4	3.77	1.010
Rarely	8	11.4		
Sometimes	24	34.3		
Often	15	21.4		
Very often	18	25.7		
Missing	0	0		
Total	70	100		

Table 26: Strategy Adjustment during Task Performance

The table shows that 65.7% of the students are often aware of their performance and are able to regulate it if they feel themselves going the wrong way, whereas 21.4% are only sometimes aware of it. The rest of the respondents are rarely or never aware of their performance, with respectively, 11.4% and 1.4% respondents. It can be deduced from these results that many students in the sample monitor their task performance; this entails that they are aware of how well or bad they are doing in the task. This awareness proves their use of metacognitive strategies. Aebersold and Field (1998) contend that the more the learner is aware of his comprehension, the more likely he will use metacognitive strategies in his learning.
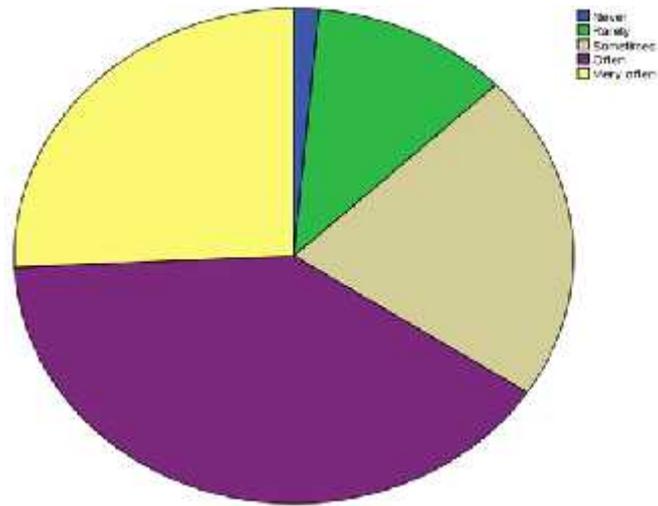
Figure11: Strategy Adjustment during Task Performance.

Item 13: Before starting any task, I work out the appropriate strategies to approach it successfully.

	Frequency	Percentage	Mean	Standard deviation
Never	1	1.4		
Rarely	7	10		
Sometimes	17	24.3		
Often	29	41.4		
Very often	15	21.4	3.72	0.968
Missing	1	1		
Total	70	100		

Table 27: Planning Strategy before Task Performance

62.8% of the students are often or very often able to select the appropriate strategies to perform the task at hand; whereas 24.3% are only able to do so sometimes. The rest of the respondents are divided; 10% answered that they rarely select the suitable strategy and only one respondent answered with never. The majority of the students are able to plan for the task by selecting the appropriate strategy from their repertoire of strategies.

70
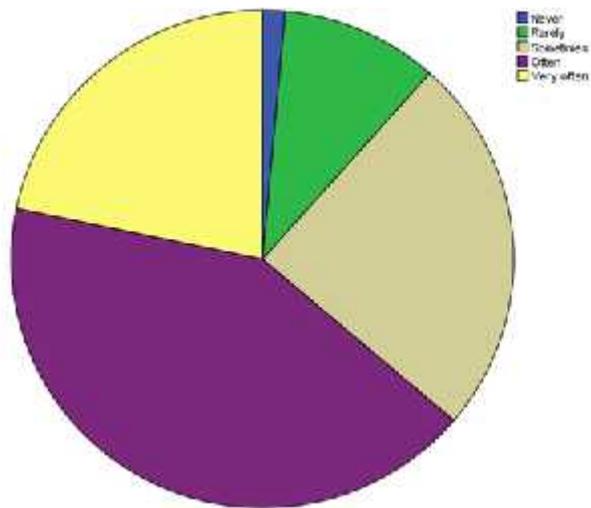
Figure12: Planning Strategy before Task Performance.

Item 14: I keep enhancing my cognitive capacities before, during and after task's completion.

	Frequency	Percentage	Mean	Standard deviation
Never	2	2.9		
Rarely	9	12.9		
Sometimes	25	35.7		
Often	21	30	3.46	1,023
Very often	12	17.1		
Missing	1	1.4		
Total	70	100		

Table 28: Cognitive Capacity Enhancement before, during, and after Task Performance

47.1% of the students often or very often regulate their cognition or cognitive resources as they engage in a particular activity, when 35.7% of the students sometimes do so. The rest of the respondents rarely and never regulate their cognition, with respectively, 12.9% and 2.9%. The majority of the students are able to regulate their cognition at each stage of the

task. This ability of controlling the learning is called "metacognitive skills" and it is referred to as the ability to plan, monitor and evaluate the learning process (Brown, 1987).
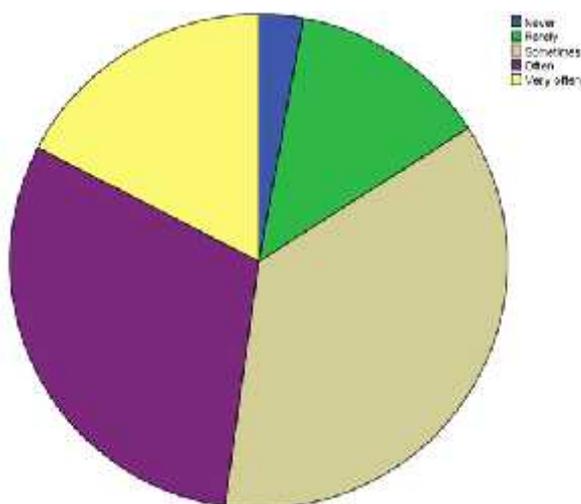
Figure13: Cognitive Capacities Enhancement before, during, and after Task Performance.

Item 15: I make sure of using of using mental strategic scheme in the appropriate time and context.

	Frequency	Percentage	Mean	Standard deviation
Rarely	4	5.7		
Sometimes	27	38.6		
Often	31	44.3		
Very often	7	10	3.59	0.759
Missing	1	1.4		
Total	70	100		

Table 29: Conditional Knowledge and Strategy Use

54.3% of the students believe themselves to be able to use the appropriate strategies in the appropriate time and situation , while 38.6% and 5.7% think that they are sometimes or often able to do so. The mean (3.59) is high and the SD (0.759) shows that the answers are

homogenious.These results prove that the majority of the students possess the conditional knowledge, recquired in strategy use.
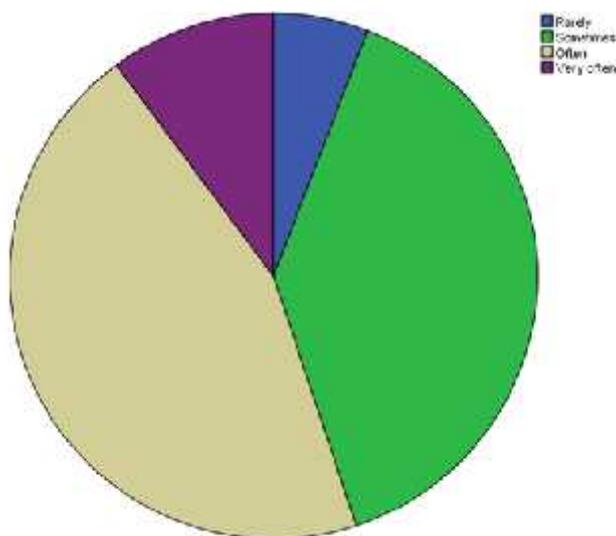
Figure14: Conditional Knowledge and Strategy Use.

Item 16: I perform an activity with the aim of reaching a precise goal.

	Frequency	Percentage	Mean	Standard deviation
Rarely	5	7.1	3.83	0.857
Sometimes	17	24.3		
Often	32	45.7		
Very often	15	21.4		
Missing	1	1.4		
Total	70	100		

Table 30: Activity Performance for Goal Attainment

67.1% of the respondents often do an activity in the aim of attaining a certain goal. The rest of the respondents are divided; 24.7% sometimes and 7.1% rarely do so. It is evident from the statistics that the majority of the students set goals for doing a particular activity.
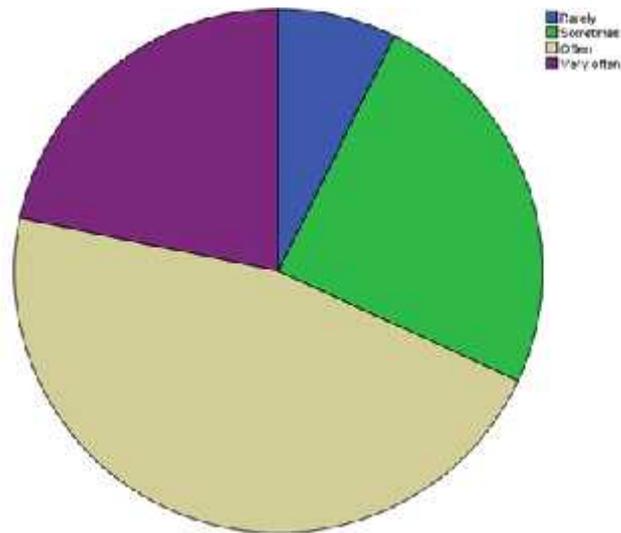
Figure15: Activity Performance for Goal Attainment.

Item 17: I use the strategies because I am aware of their importance in facilitating my learning tasks.

	Frequency	Percentage	Mean	Standard deviation
Never	1	1.4		
Rarely	4	5.7		
Sometimes	19	27.1		
Often	28	40	3.83	0.932
Very often	18	25.7		
Missing	0	0		
Total	70	100		

Table 31: The Importance of Strategy Use in Facilitating the Learning Tasks

65.7% of the students often use strategies because they are aware of their importance, while 27.1% sometimes do so. The remaining minority is divided into two groups: 1.4% never uses strategies and 5.7% rarely use them. The mean (3.83) is high and SD (0.932) indicates that the students' answers are homogeneous. The majority of the students are aware of the strategies they use; consequently, they are more likely to implement them in their future

task performance. As many researchers confirm, the more students are aware of the importance of strategy use, the more likely they will be motivated to use them (Iwai, 2011; Chamot & Kupper, 1989).
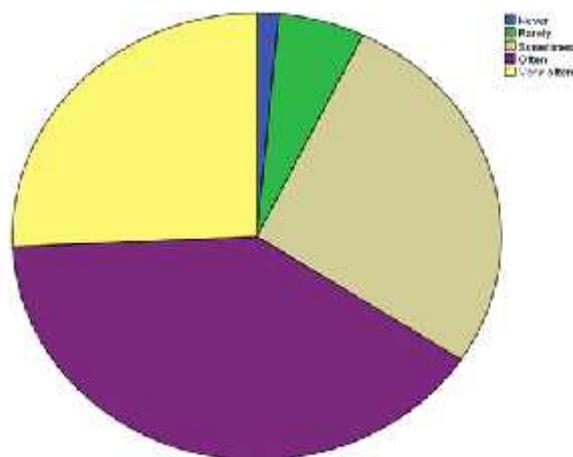
Figure16: The Importance of Strategy Use in Facilitating the Learning Tasks.

Item 18: I use the strategies because they ease the analysis and synthesis processes.

	Frequency	Percentage	Mean	Standard deviation
Never	1	1.4		
Rarely	9	12.9		
Sometimes	15	21.4		
Often	29	41.4	3.71	1.009
Very often	16	22.9		
Missing	0	0		
Total	70	100		

Table 32: The Importance of Strategy Use in the Facilitation of the Analysis and

Synthesis Processes

Most of the students 64.3% often use strategies because they help them to synthesize and analyze their thoughts and 21.4% sometimes use them. Finally, 12.9% of the respondents rarely implement strategies to ease them and only one student 1.4 % never does so. The

majority of the students 64.3% are aware of the importance of strategy implementation in analyzing and synthesizing their thoughts. Strategy use can help them to connect ideas in their minds and reflect upon them.
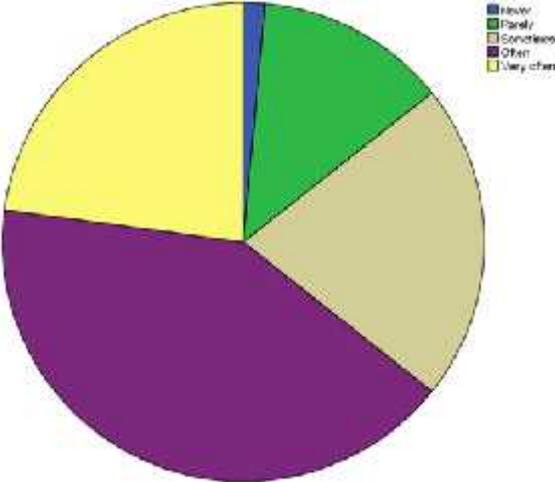
Figure17: The Importance of Strategy Use in the Facilitation of the Analysis and Synthesis Processes.

Item 19: I transfer the use of metacognitive strategies in all courses.

	Frequency	Percentage	Mean	Standard deviation
Never	5	7.1		
Rarely	20	28.6		
Sometimes	19	27.1		
Often	19	27.1	2.99	1.086
Very often	5	7.1		
Missing	1	1.4		
Total	70	100		

Table 33: Strategy Transfer during all Courses

34.2% of the respondents are able to transfer the strategies in all the courses, whereas 27.1% are sometimes able to do so. 28.6% are rarely able to control their cognition in. Only 7.1% of the respondents think themselves unable to control it. The mean (2.99) is average and

the SD (1.086) indicates that there is a limited homogeneity in the respondents' answers. The results show that few students are able to apply the strategies they learnt to new contexts.

Section three: Students' Attitudes towards the Implementation of Metacognitive Strategies in Text Comprehension

Item 20: I think that setting a purpose for reading helps me to be an effective/successful reader

	Frequency	Percentage	Mean	Standard deviation
Strongly disagree	1	1.4		
Disagree	3	4.3		
Neutral	5	7.1	4.26	0.879
Agree	29	41.4		
Strongly agree	32	45.7		
Total	70	100		

Table 34: Setting a Purpose for Reading

5.7% of the respondents disagree that setting a purpose for reading shapes successful readers, 7.1% are neutral, whereas 87.1% agree with that. The majority (87.1%) of the respondents agree that setting a purpose for reading helps in shaping successful readers. This entails that the majority of the students are aware of the importance of this strategy in improving their reading comprehension. This pre-reading strategy is a characteristic of good readers.
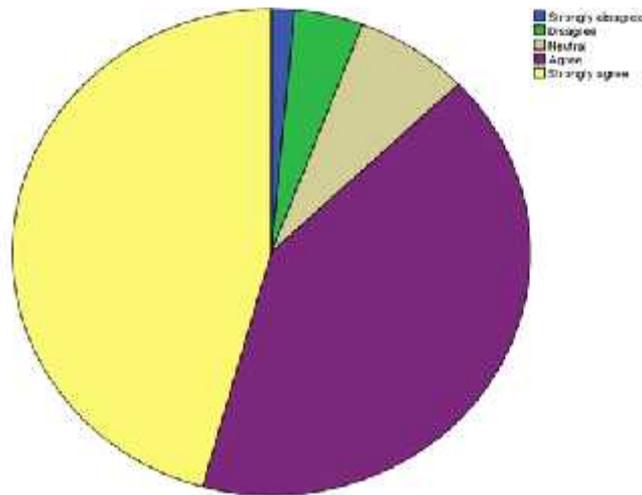
Figure18: Setting a Purpose for Reading.

Item 21: I think that using my background knowledge stirs up my conceptual schemes to comprehend a big portion of the text.

	Frequency	Percentage	Mean	Standard deviation
Neutral	6	8.6		
Agree	44	62.9		
Strongly agree	20	28.6	4.20	0.580
Missing	1	1.4		
Total	70	100		

Table 35: Background Knowledge Use and Text Comprehension

Almost all the respondents (91.5%), except 6 agree that using their background knowledge aids them in text comprehension. The mean (4.20) and the SD (0.58) indicates that the learners' answers are homogeneous. This proves that the learners are aware of the importance of this pre-reading strategy. Before starting any reading activity, the students activate their background knowledge to use it as a base for comprehension. As Carrasquillo and Rodriguez (2002) states that:

Having sufficient prior knowledge of the topic to be read and the related vocabulary knowledge are essential for successful reading comprehension. The more the readers know about the author, the vocabulary, and the concepts, the better they are able to construct meaning from the text. (p.96)
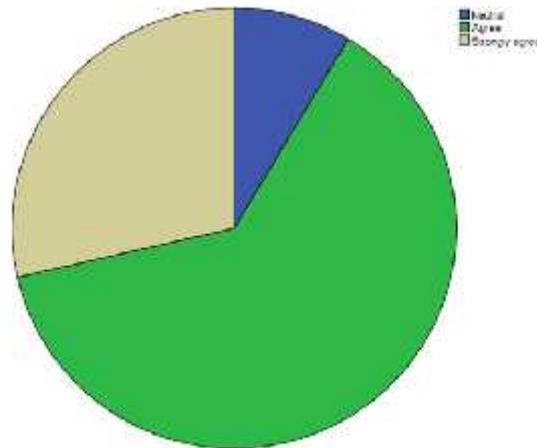
Figure19: Background Knowledge Use and Text Comprehension.

Item 22: I think that looking at the titles and images helps me to form an idea about the content of the text.

	Frequency	Percentage	Mean	Standard deviation
Strongly disagree	1	1.4		
Disagree	3	4.3		
Neutral	4	5.7		
Agree	27	38.6	4.31	0.877
Strongly agree	35	50		
Total	70	100		

Table 36: Previewing Strategy and Idea Formation

88.6% of the respondents say that the text features (title, pictures, graphs…etc) helps them to form an idea about the text, whereas 5.7% are neutral and 5.7% disagree with this. The mean (4.31) is high and the SD (0.877) proves that the answers are homogeneous. The

majority of the students use previewing strategy to prepare themselves to read. Moreover, they use it as a means to predict the content of the text. This pre-reading strategy, as Aebersold and field (1997) say allows students to form an idea and establish expectations about the content and the organization of the information.
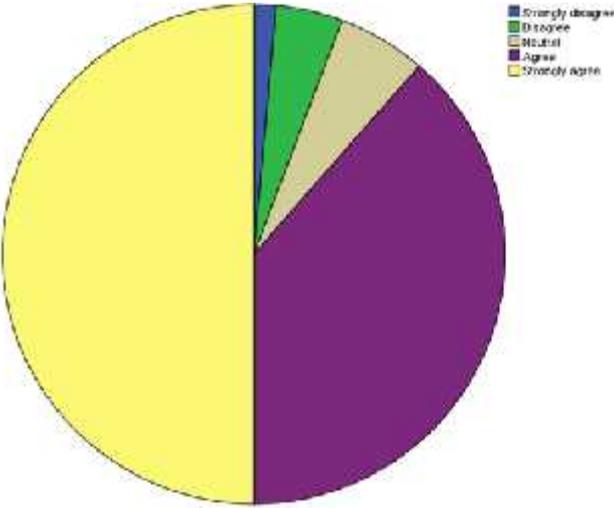
Figure20: Previewing Strategy and Idea Formation.

Item 23: I reread to confirm my understanding of the text.

	Frequency	Percentage	Mean	Standard deviation
Strongly disagree	1	1.4		
Neutral	4	5.7		
Agree	28	40	4.43	0.734
Strongly agree	37	52.9		
Total	70	100		

Table 37: Rereading Strategy and Text Comprehension

92.9% of the respondents consent that rereading is a good strategy that helps in confirming their understanding, while 5.7% are neutral. Only one student (1.4%) disagrees with that. The majority of the respondents employ rereading as a strategy that permits them to access better understanding. In fact, when rereading students might get clearer ideas about what they failed to catch during their first reading.

80
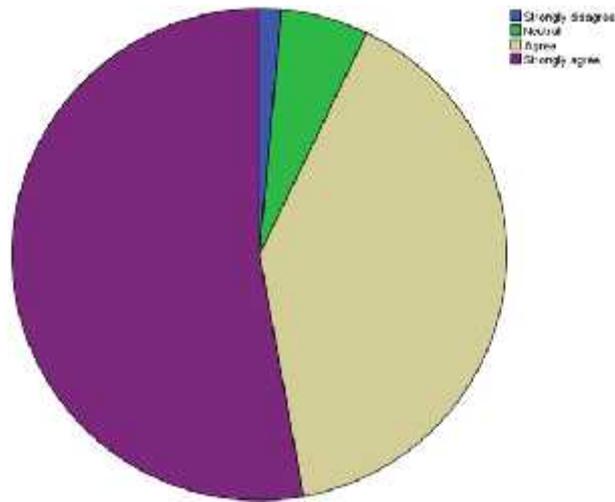
Figure21: Rereading Strategy and Text Comprehension.

Item 24: I make inferences to compensate for my lack of vocabulary and grammar knowledge.

	Frequency	Percentage	Mean	Standard deviation
Disagree	1	1.4	4.04	0.772
Neutral	15	21.4		
Agree	32	45.7		
Strongly agree	20	28.6		
Missing	2	2.86		
Total	70	100		

Table 38: Inferring Strategy and Vocabulary and Grammar knowledge

74.3% of the respondents make inferences to compensate for their lack of vocabulary and grammar knowledge, whereas 21.4% do not give them interest. This strategy is used to infer the general meaning of the sentence rather than finding the meaning of the every single word. During reading the reader makes inferences every once in a while, and as he progresses further in text he either confirms, or disconfirms his predictions.
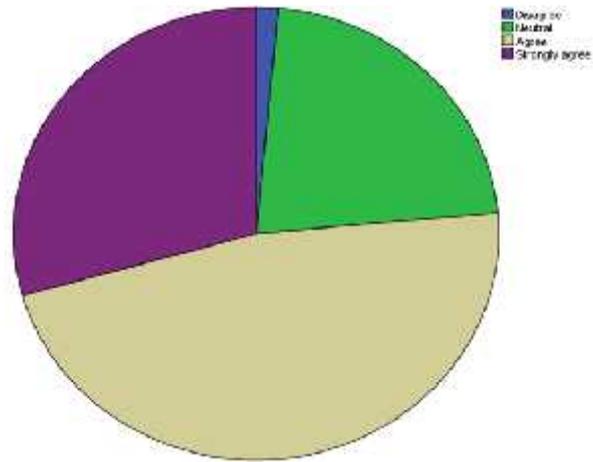
Figure22: Inferring Strategy and Vocabulary and Grammar knowledge.

Item 25: Summarizing helps me to state the main ideas of the text.

	Frequency	Percentage	Mean	Standard deviation
Disagree	4	5.7		
Neutral	10	7.1		
Agree	24	34.3		
Strongly agree	32	45.7	4.2	0.894
Missing	1	1.4		
Total	70	100		

Table 39: The Role of Summarizing in the Statement of the Main Ideas of the Text

80% of the respondents agree that summarizing helps to state the main ideas of the text, 14.3% are neutral, and 5.7% disagree with that. The majority of the respondents use summarizing to state the main ideas of the text. It helps them to condensate the length of the text, as well as, to organize and memorize the relevant information.

82
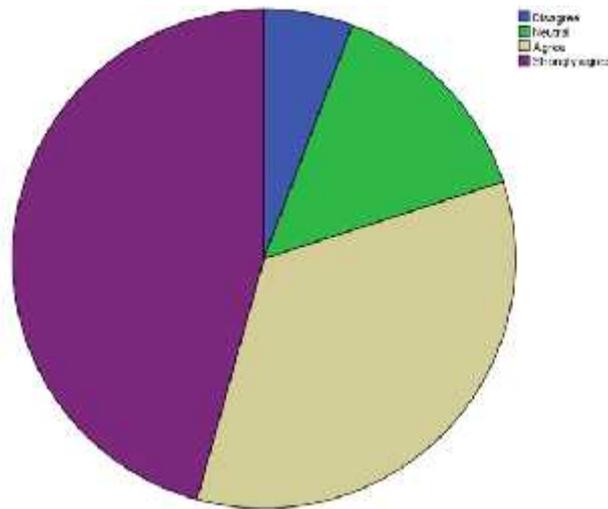
Figure23: The Role of Summarizing in the Statement of the Main Ideas of the Text.

Item 26: Knowing that I have or have not understood the text helps me to adopt new strategies to deal with the text (reread, slow down reading…)

	Frequency	Percentage	Mean	Standard deviation
Disagree	1	1.4		
Neutral	7	10		
Agree	36	51.4		
Strongly agree	25	35.7	4.23	0.689
Missing	1	1.4		
Total	70	100		

Table 40: Strategy Use While Facing comprehension Difficulties

The majority of the respondents (87.1%) are aware of their understanding and adopt new strategies if they find comprehension problems, 10% are neutral, whereas only one student disagrees. Thus, the majority of the students affirm that their awareness of their understanding helps them to regulate it and then achieve better reading outcomes. This strategy is an important aspect of monitoring and it is one characteristic of good readers (Pressley, 2002).
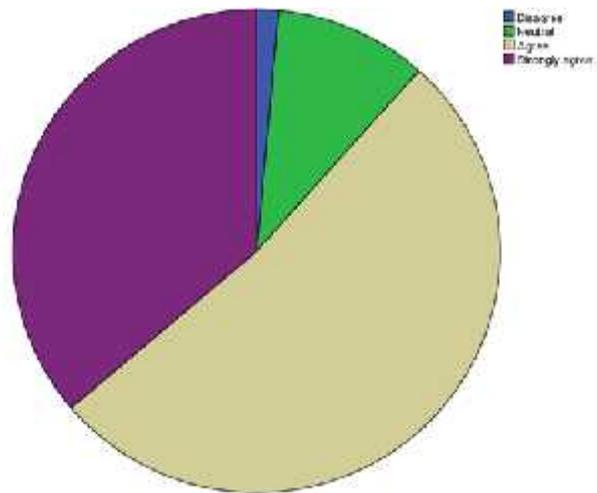
Figure24: Strategy Use While Facing comprehension Difficulties.

Item 27: I think that visualizing the information helps me better link ideas and remember them.

	Frequency	Percentage	Mean	Standard deviation
Disagree	1	1.4		
Neutral	6	8.6		
Agree	35	50	4.1	0.775
Strongly agree	28	40		
Total	70	100		

Table 41: Visualization Strategy in Linking Ideas and Memorization

Most of the respondents (90%) agree that visualizing helps them to remember better the text's ideas, 8.6% are neutral and only one student disagrees. Duke and Pearson (2001) affirm that "mental images or pictures help readers to understand and remember what they have read" (p.434). Mental imagery helps organizing ideas in the mind of the reader in a given order and then linking them together.
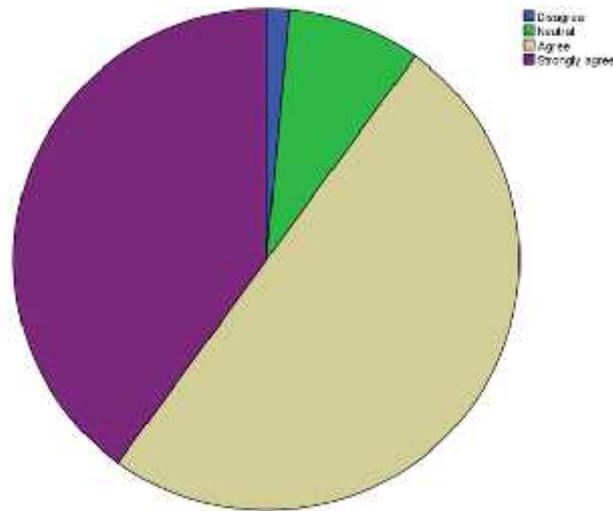
Figure25: Visualization Strategy in Linking Ideas and Memorization.

Item 28: I think that read-aloud might help me to better process the information in my head.

	Frequency	Percentage	Mean	Standard deviation
Strongly disagree	6	8.6		
Disagree	7	10		
Neutral	8	11.4		
Agree	15	21.4	3.90	1.341
Strongly agree	33	47.1		
Missing	1	1.4		
Total	70	100		

Table 42: Read-aloud Strategy and Information Processing

68% of the respondents agree that read-aloud helps them to process the information, 11.4% are neutral and 10% disagree. The mean (3.90) is high and the SD (1.341) proves the answers' homogeneity. Even though read-aloud is an important strategy that allows the students to reflect upon their reading, they remain unaware of its importance. This strategy might be used in classroom with teachers to practice fluency.
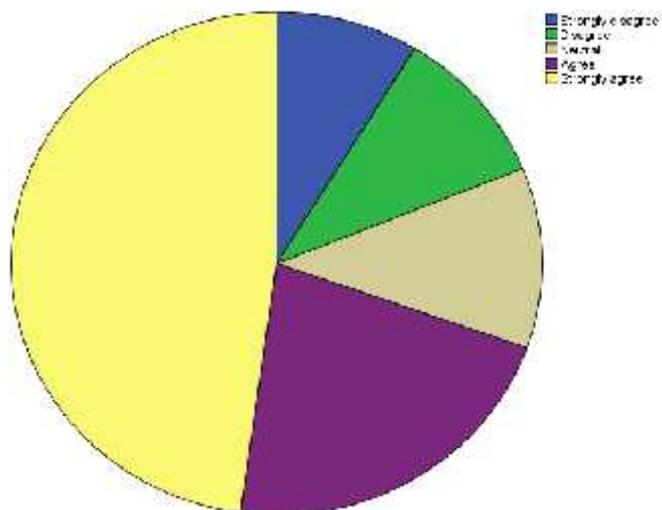
Figure26: Read-aloud Strategy and Information Processing.

Item 29: I think that sharing and discussing my ideas with my classmates and teacher might be very helpful for building my understanding of the text.

	Frequency	Percentage	Mean	Standard deviation
Strongly disagree	2	2.9		
Disagree	3	4.3		
Neutral	17	24.3		
Agree	17	24.3	4.49	0.944
Strongly agree	47	67.1		
Total	70	100		

Table 43: The Role of Classroom Discussions in Shaping Understanding

71.4% of the respondents agree that sharing ideas with their peers and techer helps them to comprehend better, 7.2% disagree and only on student is neutral. Classrom discussions are beneficial for learners; for, it allows them to exchange ideas and opinions with each others, as well as to forms a competitive spirit that creates a motivational atmosphere. The teacher is the one responsible for these structered discussions. Instead of asking questions, he should shape and encourage classromm discussions (Blachowicz & Ogle, 2008).
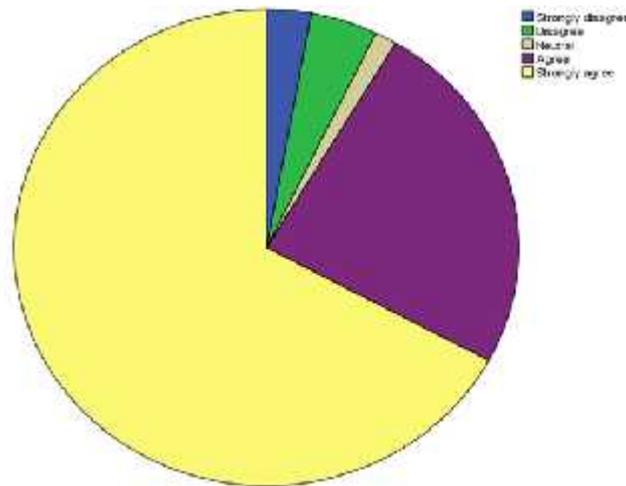
Figure27: The Role of Classroom Discussions in Shaping Understanding.

3. Discussion

After the analysis of the questionnaire's results, an idea about the ways learners and teachers perceive the use of metacognitive strategies in reading comprehension tasks was established. A comparison between the two questionnaires is made to know to what extent the two answers match. It was apparent from the students' answers that these latter not only have a positive perception about metacognitive strategy use, but also know that these strategies can have an effect on their reading performance. Despite that, 50% of the learners remain unaware of their cognition and doubt about their ability to use metacognitive strategies to regulate it. These contradictions in the learners' perceptions and attitudes can be explained by the fact that students implement these strategies unconsciously.

Knowing how and when to use metacognitive strategies is not only the responsibility of the learners. In fact, it is the teachers' role to teach students, first; explicitly how these strategies should be implemented, and then to guide them while they apply them in their reading. It was found that 57.14% of the teachers do not use think-aloud protocol which is considered to be the most important technique in modeling strategy use. This can be an indication that teachers may neglect strategy instruction, or they may teach strategy use implicitly. Furthermore, a considerable number of students representing 34.3% do not

appreciate the texts chosen by their teachers. This should be a warning for teachers to select texts that better suit their learners' needs and preferences, since if learners dislike the reading materials and find them uninteresting, they will not be engaged in classroom discussions, as they further might get demotivated to read at all.

4. Recommendations and Suggestions

The main aim of this work was to investigate students' perceptions about the implementation of metacognitive strategies on reading comprehension and if these strategies have a positive effect on learners' comprehension.

In the light of what has been presented in chapter one (Metacognition and Strategic Reading), chapter two (Reading Comprehension and Metacognitive Strategies) and chapter three (Field Investigation), the following suggestions are proposed to both learners and teachers:

Learners should:

➢ Be aware of the importance that reading can bring benefits to their world and linguistic knowledge.

➢ Read extensively

➢ Learn metacognitive strategies and train themselves to use them while reading.

Teachers should:

➢ Set clear standard/criteria to assess their students' reading ability in order to provide the effective tools to help them become more effective readers.

➢ Take into consideration learners' needs and interest when selecting the reading materials.

➢ Teachers should dedicate more time to the explicit teaching of metacognitive strategies in their classrooms and raise their learners' awareness about the importance of these strategies as means to ease their learning, whether it be for reading

comprehension or any other activity. Bransford, Brown and Cocking (2000) recommend that "the teaching of metacognitive skills should be integrated into the curriculum in a variety of subject areas" (p.21).

➢ Model to his learners the strategy use through using think-aloud protocol because explicit strategy instruction raises learners' awareness of these strategies. In this way, they can see in front of them how to better deal with the texts.

➢ Teach reading as a separate module, since the three skills, speaking, listening and writing, are part of the curriculum.

➢ Motivate their learners to read.

5. Limitations of the Study

The most significant limitation this study had encountered is the collection of the teachers' questionnaires. Though all the teachers who were given the questionnaire accepted to answer it, only half of them gave back their filled questionnaires. Therefore, the analysis was made on only 14 questionnaires, which is considered as an insufficient number. The other limitation was that reading is not taught in EFL classrooms. For that reason, it was difficult to investigate the opinions of both students and teachers about something that is not implemented in the classrooms.

Conclusion

This chapter is an attempt to confirm or reject the hypothesis. In other words, it was established to confirm whether the use of metacognitive strategies would enhance the reading comprehension performance of foreign language students and whether their perceptions about them would affect their use.

The outcomes of the tools used, that is, the teachers' and students' questionnaires reveal that students have a positive perception about metacognitive strategy use, though they do not use them frequently. Furthermore, they are somehow not sure about their ability to

think about their cognition and the ability to plan, monitor and regulate it. In addition to that, the teachers are urged to be more effective regarding strategy modeling, and the identification of the sources of students' poor comprehension.

General Conclusion

One major problem faced by EFL learners is text comprehension. Even though acquiring the reading skill is of a main importance, it remains extremely difficult for EFL students to achieve a complete comprehension of the texts they read. After many years of study, Researchers found that cognitive and metacognitive strategies are good ways to overcome the learners' comprehension problems. In fact, implementing metacognitive strategies has a very important role in improving the learners' mental abilities and in facilitating their learning. They help the learners to be more efficient readers who rely on understanding the general idea of the text rather than relying on the linguistic knowledge. The present study was made to investigate whether if students have a positive perception about metacognitive strategies they would implement them in the texts they read.

The means of this research, that is, the teachers' and the students' questionnaires confirms our hypothesis. The results also show that more interest should be given to metacognitive strategy use and instruction in Mila University Center. This work is beneficial to raise the awareness of both students and teachers about the importance of metacognitive strategies in task performance in general and in text comprehension in particular.

References

Aebersold, J. A. & Field, M. (1997). *From readers to reading teachers: Issues and strategies for second language classrooms*. Cambridge: Cambridge   University Press.

Ahmadi, M. R, Hairul, N. I., & Pourhossein, A. G. (2012*).* Impacts of learning reading strategy on students' reading comprehension proficiency. *The International Journal of Language Learning and Applied Linguistics World*, *1*(1), pp.47-62.

Alkhaleefah, N.B. (2000).The effect of L2 reading proficiency, reading purposes and text type (expository versus narrative) and on Saudi EFL students' reading problems and strategies: An expository study .Unpublished doctoral thesis. University of Essex.

Alyousef, H. S. Teaching reading comprehension to ESL/EFL Learners. *Journal of Language and Learning*, 5(1). pp. 143-154.

Anderson, N. (1999). *Exploring second language reading*: *Issues and strategies*. Boston: Heinle & Heinle. The Electronic Journal for English as a Second Language. 4(1). Retrieved from http://www.tesl-ej.org/wordpress/issues/volume4/ej13/ej13r7/

Anderson, N. (2002). Using Telescopes, Microscopes and Kaleidoscopes to put metacognition into perspective, *TESOL Matters* 12(4), pp 1-4.

Baker, L., & Beall, L. C. (2009). Metacognitive processes and reading comprehension. S. E. Israeal (ed). *Handbook of metacognition in education* (pp., 779-812)*.* New York: Routlege.

Bernhardt, E.B. (1986). Listening, reading, and writing: Analysis and application .In B. H. Wing (ed). *Reading in the foreign language (pp.93-115).* Middlebury, VT: Northeast Conference on the Teaching of Foreign Languages.

Blachowicz, C. and Ogle, D. (2008). *Reading comprehension*, *Strategies for independent learners* (2ⁿᵈ ed). The Guilford Press: New York.

Boulware, R., Carreker, S., Thornhill, A., & Joshi, R., M. (2007). Instruction of metacognitive strategies to enhance reading comprehension & vocabulary achievement of third – grade students. *The Reading Teacher. 61*(1), pp.70-77.

Bransford, J. D., Brown, A. L., & Cocking, A. R. (2000). How people learn: Brain, mind, experience, and school. Retrieved from http://www.nap.edu/read/9853/chapter/1.

Brown, A. L., (1987). Metacogntion , executive control, self-regulation & other mistirious mechanisms. In F.E. Weinert, & R.H., Kluwre (ed). Metacognition and understanding (pp. 65-116). Hillsadale, NJ; Erblaum.

Cain, K. (2010). *Reading development and difficulties.* UK: British Psychological Society.

Carrasquillo, L.A. & Rodriguez, V., (2002). Language minority students in the Mainstream Classroom(2nd ed). Clevedon: Multilingual Matters.

Carrell, P. L., Pharis, B. G., & Liberto, J. (1989). Metacognitive strategy training for ESL reading in. *TESOL Quarterly.23*, pp. 649-678.

Carrell, P.L., Devine, J., & Eskey, D.E.(eds.). (1988). *Interactive approaches to second language reading*. Cambridge: Cambridge University Press

Carrell.P.L. (1984). The effect of rhetorical organization on ESL readers. *TEOSL Quarterly*, *18*(3), pp. 441-469.

Chamot, A. U., Kupper, L. (1989). Learning strategies in foreign language instruction. *Foreign Language Annals, 22*(1), pp.13-22.

Çubukçu, F. (2008). How to enhance reading comprehension through metacognitive Strategies. *The journal of International Social Research, 1*(2), pp.84-93.

Day, B., & Bamford, J. (1998).*Extensive reading in the second language reading classroom.* J. C. Richards (ed). Cambridge: Cambridge University Press.

Dechant, E (1991*), Understanding and teaching reading: An interactive model.* Hillsdale, New Jersey: Lawrence Erblbaun associates, Inc.

Dole, J. A., Duffy, G. G., & Pearson, D.P. (1991). Moving from the old to new: Research on reading comprehension instruction. *Review of Educational Research, 61*(2), pp.239-264.

Donna-Lynn Forrest-Pressley, D. & T. Walle, G. (1984). *Cognition, metacognition and reading.* Springer-Verlag: New York Inc.

Duke, N.K., & Pearson, D. (2001). *How can I help children to develop their reading comprehension*? Ann Arbor, Michigan: Center for the Early Year of Reading Achievement (CIERA).

——— (2002).Effective practices for developing reading comprehension. In S.J. Samuel & A.E.Farstrup (eds).*What research has to say about reading comprehension* (pp.205-242). Newark, DE: International Reading Association.

Dutcher, P. (1990). Authentic reading assessment. practical assessment, research & evaluation.2(6), (pp., 1-3). Retried from http://pareonline.net/getvn.asp?v=2&n=6.

El-Kouny. A. A. (2004).Metacognition and reading comprehension: Current trends in theory and research. Educational Resources Information Center: USA.

Eskey,D.E. (1988). Holding in bottom: An interactive approach to the language problems of second language readers. In P.L.,Carrell,J., Devine&D.E., Eskey(eds). I*nteractive approaches to second language* reading (pp., 93-100). Cambridge, UK: Cambridge University Center.

Eskey, D. E. (2005). Reading in a second language. In E. Hinkel (ed.). *Book on second language learning and teaching* (pp.563-579). Mahwah, NJ: Erlbaum.

Flavell, J. H. (1979). Metacognition and cognitive monitoring. *American Psychologist, 34*(10), pp. 906-911.

Gates (1949), Stuart,M & Stainthorp, R.(2016).*Reading development & teaching.* In L. Block
(ed)*.* London: Sage Publication, LTD.

Goldenberg, C. (1991). *Instructional conversation & classroom approaches (educational
report)*.Santa Cruz: National Center for Research on Cultural Diversity   and
Second Language Reading.

Goodman, K. (1967). Reading: A psycholinguistic guessing game. *Making sense of learners
making sense of written language the selected work of Kenneth S. Goodman and
Yetta M. Goodman* (pp., 103-112). New York: Routledge.

———(1988). The reading process. In P.L Carrell, J., Devine, D., Eskey (eds). *Interactive
approaches to second language reading* (11-21).Cambridge: Cambridge
University Press.

Gould, J., E. (1990).What is perception. Available at uw.edu/jgould/perception.

Grabe, w. (1995).*Reading in a second language: Moving from theory to practice.* Cambridge:
Cambridge University Press.

Grabe,W., & Stoller,F. L. (2002).*Teaching and researching reading*. Harlow: Pearson
Education.

—— (2009). *Reading in second language: Moving from theory to   practice.* New York:
Cambridge University Press.

Habibian, M. (2015).The impact of Training metacognitive strategies on reading
comprehension among ESL learners. *Journal of Education and Practice.
6*(28). pp.61-67.

Helgeston, J. (2010).Being active with active reading strategies. Annual Conference.

Hudson, T. (1996). Assessing second language reading from a communicative competence.

—— (2007). perspective: Relevance for TOEFLn2000.Princeton, New Jersey: Educational
Testing Service. *Teaching second language reading: A guide to teaching*

reading for teachers of English as a foreign language. Oxford: Oxford University Press.

Irvin, (1990). Reading and the middle school student: Strategies to enhance literacy. In Akarsu, O. & Harputlu, L. *Perceptions of EFL students toward academic reading. The Reading Matrix.* 14(1), (pp., 61-75).

Ismail,N., M & Tawalbeh,T.,I. (2015). Effectiveness of a metacognitive reading strategies program for improving low achieving EFL readers. *International Education Studies .8*(1). pp.71-87.

Israel, E. S. (2017). *Handbook of Resarch on reading Comprehnsion* (2nd ed). New York, NY: The Guilford Press.

Iwai,Y. (April,2011).The effect of metacognitive reading strategies: Pedagogical implications for EFL/ESL teachers. *The Reading Matrix*, *11*(2), pp.150-159.

Kelly, M.J., & Clausen-Grace, N. (2013).. *Comprehension should not be silent: From strategy instruction to student independence (*2nd ed). S.Vicarra,C.M., Lambert (eds). Newark, DE: International Reading Association.

Khaokaew, B. (2012). An investigation of explicit strategy instruction on EFL reading of undergraduate English majors in Thailand. Doctoral thesis. University of Bedforshire.

Koda, K. (2004). *Insight into second language reading: Across –linguistic approach*. M.H., Long & J. C., Richard (eds). New York: Cambridge University Press.

Korotaeva, I.V. (2014).Metacognitive strategies in reading comprehension of majors in education and psychology. *Russian Psychological Society, 7*(2), pp.40-47.

McCormick, C. B. (2003). Metacogntion and learning. In W. M., Reynolds & G. E., Miller (eds). *Educational Psychology*, *7*, pp.79-102.

*Meloth,M. S.(1990).*Changes in poor reader knowledge of cognition & the association of knowledge of cognition with regulation of cognition &reading comprehension. *Journal of Educational Psychology .82*(4), pp.792-798.

Meniado,J.C., (2016).Metacognitive reading strategies, motivation & reading comprehension performance of Saudi EFL students. *English Language Teaching. 9*(3), pp.117129.

Mokhtari, K., & Reichard, C. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of Educational Psychology*, 94(2).pp.63- 75.

National Reading Panel (2000). Teaching children to read: Evidence-based assessment of the scientific research literature on reading and its implication for reading instruction. Bethesda, MD: National Institute of Child Health & Human Development

Noë, A. (2004)**.** *Action in perception***.** Cambridge: The MIT Press**.**

Nunan, D. (1991). *Language teaching methodology.* Wiltshire: Prentice Hall International.

Nuttal, C.(1996). *Teaching reading skills in a foreign language*. Oxford, UK: Macmillan Education.

O'Malley, J.M., & Chamot, A.U. (1990). *Learning strategies in second language acquisition.* New York*:* Cambridge University Press.

Palincsar,A., & Brown,A. (1984). Reciprocal teaching of comprehension- fostering and comprehension- monitoring activities. *Cognition and Instruction, 1*(2), pp. 117- 175.

Pearson,P.D., & Cervetti,G. (2009).The roots of reading comprehension instruction. In I.S., Isreal(Ed).*Handbook of research on reading comprehension* (2nd., pp.12-56).New York,NY: The Guilford Press.

Perfetti,C.A., Landi,N., & Oakhill,J. (2005).The acquisition of the reading skill. In M.J.,Snowling & C., Hulm. *The science of reading: A handbook* (pp.228-247). Oxford: Blockwell.

Phakiti, A. (2006).Modeling cognitive and metacognitive strategies and their relationship to EFL reading test performance. *Melbourne Papers in Language Testing, 1,* pp. 53-95.

Philip, P., & Kim Hua ,T., K.(2006).Metacognitive strategy instruction for reading(MSI):Co-regulation of cognition. *Journal E-Bengi. 1*(1), pp.1-27.

Philip, B. (2005).Toward a social-motivational strategy instruction model: Theory and practice. Unpublished doctoral dissertation, university Kebangsan, Malysia Bangi.

Pie, L. (2014). Does metacognitive strategy instruction indeed improves EFL learners reading comprehension performance and metacognitive awareness? *Journal of Language Teaching and Research, 5*(5), pp. 1147- 1152.

Pitcher, S. M. (2007). Assessing adolescents' motivation to read. *Journal of Adolescent and Adult Literacy,50*(5).pp.378-396.   (R:I n the practical part say pitcher only not pitcher et al)

Pressley, M. (2002). *Comprehension Instruction: What makes sense now, what might make sense soon*? Newark, DC: International Reading Association. Available at: www.readingonline.org/articles/handbook/pressley/index.html.

Pressley, M., Wharton-McDonald, R., Mistretta-Hampston, J., & Echevarria, M. (1998). The nature of literacy instruction in ten grade-4/5 classrooms in upstate New York. *Scientific Studies of Reading*, *2*, 159–194. Retrieved from: http://www.albany.edu/cela/reports/pressley1stgrade11007.pdf.

Pressley, M., & Gaskins, I.W. (2006). Metacognitively competent reading comprehension is constructively responsive reading: How can such reading developed in students? *Metacognition and Learning, 1(*1), pp. 99-113.

Rooks , p., & Willson, J. (2000). *Perception theory, development and organization*. London: Routledge.

Rumelhart, D. E. (1977). Toward an interactive model of reading. In D.E., Alvermann, N.J., Unrau, & R.B., Ruddell(eds). *Theoretical model & process of reading* (6th ed., pp.719-9-747). Newark, DE: International Reading Association.

Samuels, S. J., & Kamil, M. L. (1988). Models of the reading process .In Carrell, J. Devine, & D. Eskey (eds). *Interactive approaches to second language reading* (pp.22-36). Cambridge: Cambridge University Press.

Santana,J.(2014). Moving toward metacognition. *Research Gate.* pp. 126-130. Retreived from http://www.researchgate.net/publica.

Sheory.,R. & Mokhtari,K.(2001).Differences in metacognitive awareness of reading strategies among native and non-native readers.*System,29*(4), pp.431-449.

Singer, Harry, & Robert B. Ruddell. (1985). Theoretical models and the processes of reading. In S., Wu (ed*). The use of L1 cognitive resources in L2 reading by Chinese EFL learners* (3rd ed). New York, N. Y: Routledge.

Snow, C. E. (2002). Reading for understanding: Toward an R & D program in reading comprehension. RAND: Department of Education, pp. 11-12.

Stanovich, K. (1980). Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly, 16, pp.*32-71.

⸻(1988). Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly*, 44(16), pp.32-71

———(2000). *Progress in understanding reading scientific foundation and new   frontiers   .* New York: Guildford Press

Takallou, F. (2011).The effect of metacognitive instruction on EFL learners' reading comprehension performance and metacognitive awareness. *Asian EFL Journal, 13*(1), pp.272-300.

Tavakoli, H., & Koosha, M (2015) .The effect of metacognitive instruction on reading comprehension and self-efficacy beliefs :the Case of Iranian university EFL students. *Porta Linguaram*, 25, pp.119-133.

Uso- Juan, E., & Martinz-Flor, A. (2006). *Current trends in the development and teaching of the four language skills: Studies on Language acquisition.* Berlin: Walter de Grayter

Veenman , M .J., Bernadette. H.A.M., Hout-Wolters , V, & Afflerbach , P . (2006). Metacognition and learning: Conceptual and methodological consideration. *Metacognition and Learning,1, pp.*3-14.

Veeravagu, J., Muthusamy, C., Marimuthu, R., & Subrayan, A. (2010).Using Bloom's taxonomy to gauge students' reading comprehension performance. *Canadian Social Science*, 6(3), pp. 205- 212.

Viswanathan ,R. (2009).Using mobile technology and prodcast to teach soft skills. In T., Micheal (ed). *Hanbook of research on web 2.0 and second language learning* (223-236). Hershey, NY: Information Science Reference.

Williams, J.P., & Atkins, J.G. (2009).The role of metacognition in teaching reading comprehension to primary students. In D.J. Hacker,J. Dunlosky, & A. C. Graesser (eds) . *Handbook of metacognition in   education (pp.26-43).* New York: Routledge.

Yang,Y. (2002).Reassessing reader's comprehension monitoring. *Reading in Foreign Language, 14*(1), pp.19-42.

Zhang ,L.J.,& Wu, A.(2009). Chinese senior high school EFL students metacognitive awareness & reading strategy use, *Reading in a Foreign Language,21*(1),pp.37-59.

Zimmerman, B.J., & Rizemberg, R. (1997). Becoming a self-regulated writing: A social cognitive perspective. *Contemporary Educational Psychology.22*, pp.73-101.

Appendices

Appendix 1: Teachers' Questionnaire

Dear teachers,

This questionnaire is designed to gather information about teachers' attitudes towards the use of metacognitive strategies in reading comprehension. We would be so grateful if you could answer the following questions.

Please, tick the box that best corresponds to your opinion.

Section one: background information

1. How long have you been teaching?

Less than one year ☐   1-5 years ☐

6- 10 years ☐   More than 10 years ☐

2. What is your degree of qualification?

1. Bachelor of arts ☐
2. Master ☐
3. Magister ☐
4. Doctorat ☐

3. What is your specialty?

…………………………………………………………………………………...

Section two: Teachers' implementation of metacognitive strategies

4. How would you define metacognitive strategies?

…………………………………………………………………………………...

…………………………………………………………………………………...

…………………………………………………………………………………...

5. When you give your students a text to read, do you ask them questions to help them reflect upon it?

Yes ☐   No ☐

Explain how?

………………………………………………………………………………

6. How do you encourage your students to think about and assess their reading?

………………………………………………………………………………………...………

………………………………………………………………………………………...………………

…………………………………………………………………………...

7. Do you draw your students' attention towards the importance of metacognitive strategy use in reading comprehension?

Yes ☐   No   ☐

If yes, in which way

………………………………………………………………………………………...…

………………………………………………………………………………………...…

………………………………………………………………………………………...…

………………………………………………………………………………………...

8. Do you give your learners the opportunity to ask questions after reading a text?

………………………………………………………………………………………...…

………………………………………………………………………………………...

9. Do you use think-aloud protocols?

Yes ☐   No   ☐

10. How often do you ask your students if they agree upon the ideas in the text?

………………………………………………………………………………………...

………………………………………………………………………………………...

11. Do you show your students where and when to use metacognitive strategies?

Yes ☐   No   ☐

Section three: Teachers perceptions about the use of metacognitive strategies in reading comprehension

12. How would you grade your learners in terms of their ability to comprehend texts?

Poor ☐   average ☐   good ☐

Why?

………………………………………………………………………………………………….

13. Do you think that classroom discussions are beneficial for your learners to build their understanding of a text?

Yes ☐   No ☐

Please, explain

………………………………………………………………………………………………...

………………………………………………………………………………………………...

14. From the classroom discussion, do you think that your students implement metacognitive strategies while reading?

Yes ☐   No ☐

Please, explain

………………………………………………………………………………………………...

………………………………………………………………………………………………...

15. Do you think that using metacognitive strategies would develop higher order thinking in your students?

Yes ☐   No ☐

16. Do you think that if your learners use metacognitive strategies this would help them to become more autonomous?

Yes ☐   No ☐

Thank you for your collaboration ☺

Appendix2: Students' Questionnaire

You are kindly invited to complete the following questionnaire about your attitudes towards the use of metacognitive strategies in the enhancement of reading comprehension. Your responses will be kept strictly confidential. Respond to the following statements by ticking the appropriate number from 1 to 5 which indicates the extent to which you agree or disagree with each statement. There are no rights or wrong answers, these statements are about the way you perceive the relationships between metacognition and text comprehension. If you need any clarification, or you do not understand any item; please ask the researcher giving you the questionnaire. Lastly, we owe you much gratitude for your cooperation.

Part One: My perceptions of the reading act

The following statements report about your feelings about the reading activity in general. Tick the answer that most reflects your opinion.

Statements	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1. Reading is a pleasurable activity because it stimulates the reader's mental schemes.					
2. Reading is the most important skill in FL learning.					
3. Reading helps me connect and synthesize my thoughts.					
4. I better enjoy reading in Arabic.					
5. I think that reading in English is a very difficult task.					
6. I think that my mental representations affect the way I might understand an English text.					
7. I believe that literary and non-academic texts are the most challenging.					
8. I prefer the teacher's selections when it comes to classroom readings.					
9. I trust the teacher's questions about the text since they help me reflect and guess the meaning.					
10. I feel that classroom structured discussions can better enhance the students' scheme of thinking.					

Part Two: Degrees of my awareness of the use of metacognitive strategy in various learning tasks

The forthcoming statements refer to your ways of orchestrating your metacognitive capacities in the various classroom tasks

Statements	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Very often (5)
11. I question my thought before, during, and after performing a particular activity.					
12. During the task performance, if I feel like I am going in the wrong way; I redirect my strategies and adopt new ones.					
13. Before starting any task, I work out the appropriate strategies to approach it successfully.					
14. I keep enhancing my cognitive capacities before, during and after task completion.					
15. I make sure of using mental strategic schemes in the appropriate time and context.					
16. I perform an activity with the aim of reaching a precise goal.					
17. I use the strategies because I am aware of their importance in facilitating my learning tasks.					
18. I use the strategies because they ease the analysis and synthesis processes.					
19. I transfer the use of metacognitive paradigm in all the courses.					

Part three: My attitudes towards the implementation of metacognitive strategies in text comprehension

The following statements reflect your attitudes about the relative import of metacognitive abilities in the comprehension of the FL texts

Statements	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
20. I think that setting a purpose for reading helps me to be an effective/successful reader.					
21. I think that using my background knowledge stirs up my conceptual schemes to comprehend a big portion of the text.					
22. I think that looking at the titles and images helps me to form an idea about the content of the text.					
23. I reread to confirm my understanding of the text.					
24. I make inferences to compensate for my lack of vocabulary and grammar knowledge.					
25. Summarizing helps me to state the main ideas of the text.					
26. Knowing that I have or have not understood the text helps me to adopt new strategies to deal with the text (reread, slow down reading…)					
27. I think that visualizing the information helps me better link ideas and remember them.					
28. I think that reading-aloud might help me to better process the information in my head					
29. I think that sharing and discussing my ideas with my classmates and teacher might be very helpful for building my understanding of the text.					

Thank you for your collaboration ☺

إن القراءة مهارة مهمة يجب أن تغرس في الروح الأكاديمية للطلاب، لكنه   ل ينظر إليها على أنها مهمة صعبة. لصعوبة اكتسابها يواجه العديد من الطلاب مشاكل في الفهم.لحل هذه المشكلة ،تم وضع هذا البحث لتوعية الطلاب حول استعمال الاستراتيجيات الماوراء معرفية ،كاستراتيجيات بإمكانها تحسين قدرتهم على فهم القراءة. إن الفرضية تقرأ أن الاستعمال المناسب للاستراتيجيات الماوراء معرفية سيحسن من فهم القراءة لدى طلاب اللغة الانجليزية كلغة أجنبية كلما كان للطلاب نظرة ايجابية اتجاه هاته الاستراتيجيات كلما زاد احتمال استعمالهم لها لتحسين فهم قراءتهم .لاختبار هذه الفرضية تم توزيع استبيانين :   .   تبيان الأول لمعرفة رأي الأساتذة حول فهم قراءة طلابهم و هل ما   ا كانوا يدرسون هاته الاستراتيجيات،بينما أعطي الأخر للطلاب لمعرفة أن كانوا يستخدمونها .بينت النتائج أن آراء الأساتذة و الطلاب تتعاكسان نسبيا. يدعي الطلاب   أنهم يستخدمون الاستراتيجيات الماوراء معرفية خلال القراءة ،بينما يقر الأساتذة أن طلابهم يستخدمون هاته الاستراتيجيات بصفة محدودة.يمتلك طلاب اللغة الإنجليزية كلغة أجنبية في المركز الجامعي لميلـة   إيجابية حول الاستراتيجيات الماوراء معرفية ولكن هم لا يستخدمونها باستمرار،كما أنهم غير واعين عن معرفتهم ،و على قدرتهم على ضبط مواردهم المعرفية لتحقيق نتائج حسنة .بينت النتائج أنه لا يوجد تطبيق لهاته الإستراتيجية الماوراء معرفية في الأقسام ، و أن تدريسهم غير مقرر في المناهج الدراسية.تزود هذه الدراسة المتواضعة أسس الاستعمال المستقبلي لهاته الاستراتيجيات في المركز الجامعي لميلة،كما أنها تخمن استعداد طلاب اللغة الانجليزية لاستقبال تعليم حول هاته الاستراتيجيات.بالإضافة فهي تشجع الأساتذة على ضمن القراءة في المناهج كمادة منفصلة أين يتوفر وقت للطلاب لممارسة هاته الإستراتيجية.