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**FACULTÉ DES ÉTUDES SUPÉRIEURES
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**FACULTY OF GRADUATE AND
POSTDOCTORAL STUDIES**

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GRADE / DEGREE

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**EFL Reading Strategies of Main Idea Comprehension and Identification:
Awareness and Use of Arabic Speaking University Students**

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EFL READING STRATEGIES OF MAIN IDEA COMPREHENSION
AND IDENTIFICATION: AWARENESS AND USE OF ARABIC
SPEAKING UNIVERSITY STUDENTS

by

Seham Ali Elashhab

Thesis submitted to
The School of Graduate Studies and Research
In partial fulfillment of the requirements for the degree of
Doctor of Philosophy in Linguistics

Department of Linguistics
University of Ottawa

May, 2008

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395 Wellington Street
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Your file Votre référence

ISBN: 978-0-494-50715-5

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ISBN: 978-0-494-50715-5

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ ﴿١﴾ خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ ﴿٢﴾

اقْرَأْ وَرَبُّكَ الْأَكْرَمُ ﴿٣﴾ الَّذِي عَلَّمَ بِالْقَلَمِ ﴿٤﴾

عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ ﴿٥﴾

صدق الله العظيم

In the name of Allah, Most Gracious, Most Merciful.

Proclaim! (or Read!) In the name of thy Lord and Cherisher, Who

created, Created man, out of a (mere) clot of congealed blood:

Proclaim! and thy Lord is Most Bountiful, He Who taught the use

of the Pen, Taught man that which he knew not.

DEDICATION

I dedicate this thesis to my father Ali Ashour Elashhab
and to my mother Aziza Gadmoor

الاهداء

اهدي هذا العمل بكل فخر واعتزاز الى والدي علي عاشور الاشهب
ووالدتي عزيزة بشير قدمور

ABSTRACT

This study investigated the effects of reading comprehension strategy awareness and use on main idea comprehension and recall in first and second languages for Arabic-speaking Libyan university students. The research examined the effects of general reading proficiency, text difficulty and topic interest and familiarity on main idea comprehension. The study also examined whether there is a facilitatory relationship between awareness of reading comprehension strategies and their effective use.

Participants were all university students majoring in Teaching English as a Second Language (TESL). There were 112 participants from Libya and 16 English speaking control participants from Canada. Reading comprehension strategy awareness was assessed via Mokhtari and Sheorey's (2002) Survey of Reading Strategy. The CanTEST was used to assess the English as a second language reading proficiency of the Arabic-speaking group, while the Nelson-Denny Reading Test served to assess L1 reading proficiency for the English-speaking group. An English reading text was administered to both groups and an Arabic reading text to the Arabic group only. The texts served as the basis for examining the English group's L1 and the Arabic group's L1 and L2 reading comprehension strategy use through their recall of the main ideas of these texts. A reader assessment questionnaire was employed to assess text difficulty, topic interest and familiarity. In addition, semi-structured reading strategy interviews were conducted individually with participants from the control and the experimental groups. The interviewees were randomly selected from within different reading proficiency groupings.

Results revealed that reading comprehension strategy awareness had no effect on main idea comprehension in both L1 and L2 for the native Arabic group. The native English group had higher awareness of the three categories of reading strategies (Support, Global and Problem-solving) than the native Arabic group. The Problem solving strategy category was the most familiar to the native Arabic group. Results indicated that general reading proficiency did not affect the recall performance of main ideas for either group. Text difficulty and topic interest did not contribute to the comprehension and recall of main ideas, while topic familiarity was a factor in the recall performance of the native Arabic group.

Qualitative analysis of the results indicated that the native English group effectively used more reading strategies than the native Arabic group, and that the native Arabic group did not actually use the strategies which they claimed the highest awareness of. Furthermore, they tended to misapply the strategies that they did use. These findings indicated that simply knowing about reading strategies does not necessarily result in being able to use them appropriately. We concluded that reading strategy awareness alone is not sufficient for the comprehension and recall of main ideas and that awareness needs to be accompanied by effective strategy use in order to have a positive impact on main idea comprehension and recall.

ACKNOWLEDGEMENTS

I would like to seize this opportunity to express my deep gratitude and thanks to so many people who supported me during this long journey and their contributions helped make this study possible and this dream comes true.

First, I am very grateful to the Libyan Ministry of Higher Education for the scholarship that made all this possible. Second, I am deeply indebted to my thesis advisors: Professor Eta Shneiderman who what ever I will say, I will never be able to express in adequate words how much I owe her for everything she did to help me and to support me academically and financially before the activation of my scholarship; my second thesis advisor, Professor Martine Peters, who was always available and willing to discuss what ever I need to discuss with her. Her academic guidance has contributed greatly to the quality of this work. Both of my supervisors' enthusiastic and interest, combined with their understanding have been crucial factors in the completion of this work. Eta and Martine are extraordinary people. I am proud that I had the chance to know them on both the academic and personal level.

I am grateful to my committee members: Line Laplante, Larry Vandergrift, Juana Munos Liceras and John Jensen. I appreciate the cooperation of all people who helped in the collection of the data, particularly, Khalifa Al-Aswad and his students from English Language Department at Al-Fateh University; Naima Al-Khbooli and third year students from the English Language Department at the 7th of April University; Abderrahman Ashibani, Anwar Mana and Khaled Mana and the English Language Department students from Faculty of Education in Yefren.

Thanks to everyone in the department of Linguistics at the University of Ottawa for the friendly environment that I enjoyed and the rich experience during the years of my study. Eiman Mustafawi, Mouna Ennamsaoui, Boutheina Lassadi, Ahmad Moinzadeh, Abdesattar Mahfoudhi, Karim Achab, Sheila Scott, Tony Blanchard, Dawn Harvey, Olga Arnaudova, Christina Manouilidou, Linda Legault, Anousha Sedighi, Angela Chang, Peyman Nojournian, Riza Falahati, Rok Zaucer, Nooshin Boroumand, Fereshteh Modarresi and Abdulaziz Najmi.

My gratitude also goes to my close friends, Fatma Rouidi, Said Mekhalifa and many more who were always willing to help and to offer their emotional support in many different ways.

I also wish to express my particular thanks and love to my parents, sisters Amal and Hana, sisters in law Naima and Amani and brothers Atef, Taraq, Khaled and Nader for their constant support, for their time and effort dedication and for being always there for me.

Finally I would like to express my special thanks to my husband, Hesham Eshtewi, without whom this thesis would never have seen the light, for his endless support, encouragement and patience during this long journey.

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LIST OF ABBREVIATIONS

abbreviation	Identification
ESL	English as a second language
EFL	English as a foreign language
FL	Foreign language
FLs	Foreign languages
L1	First language
L2	Second language
NA	Native Arabic
NE	Native English

INTRODUCTION

Alexander (2005) states that reading is more important today than it ever was – it is crucial to develop this ability in order for students to succeed in their chosen career, because so much of information is communicated in written form. Therefore, reading is the most fundamental skill a student will ever acquire (Alexander, 2005). Reading is a critical key to academic success. At school, most learning is acquired through reading. According to Zerhouni (1996), teachers can only provide some guidance, but they cannot provide students with all the information they need. Students need to be efficient readers in order to do well in their studies. Thus, the best service teachers can provide their students is to teach them strategies that will help them to become skilled independent readers who are able to access all types of materials on their own (Zerhouni, 1996). Because academic reading can be very demanding and concepts are often difficult to understand, this requires developing their academic reading skills (Beare, 2005). One of the most complex of these skills is reading comprehension.

Reading comprehension is the process of understanding and constructing meaning from a piece of text. It involves extracting the required information from the text as efficiently as possible through the application of different reading strategies. Thus, according to the York University Counselling and Development Centre (2004), university students need to be aware of the whole reading process in order to know how to read their academic materials and to understand and relate the information in the text to other readings, ideas and themes from lectures, and to the goals of their course. Reading difficulties become most apparent when the reader is unable to grasp the meaning from a text passage (Beare, 2005). That is why reading comprehension strategy awareness is

important to successful course completion. Yet it is more crucial in second or foreign language contexts. The capacity to read English as a second or foreign language (ESL/EFL) is essential for the academic success of university students. In foreign language contexts, exposure to written English texts is generally greater than any opportunities to speak or listen to the target language (Khouzam & Amer, 1993; Zerhouni, 1996). EFL students rarely speak the target language in their daily lives, but they need to read it in order to access the huge amount of academically required information available exclusively in the target language (Eskey, 2005). The ability to comprehend the main ideas of different texts in the foreign language is indispensable for students to achieve sufficient intellectual growth and understanding of their course materials to allow them to successfully pass their exams in such contexts.

Although fluent decoding is the first step for successful reading (Eskey, 2005), the readers' capacity to understand the meaning of a text depends on more than decoding. In order to fully comprehend the information available in the text, the reader must relate this information to some relevant body of knowledge. This implies that the reader must have some knowledge of the general content of the text in order to make sense of the text information. According to Eskey (2005), the reader's brain is full of knowledge, it is not empty. In order to extract meaning from a text, the reader's brain connects the new information provided in the text with existing knowledge. Smith (1975) succinctly summarizes the role of the reader's existing knowledge when he states that "what the brain tells the eyes" is much more salient than "what the eyes tell the brain".

Eskey (1997) and Aslanian (1985) assume that proficient readers can understand the individual sentences and the organizational structure of a piece of writing. They can

comprehend ideas, follow arguments, and detect implications. They know most of the words in the text already, but they can also determine the meaning of many of the unfamiliar words from the context - failing this, they can use their dictionary effectively to do so. In summary, good readers can extract from the writing what is important for the particular task they are employed in, because they are aware of and able to implement reading comprehension strategies.

From this fact, reading comprehension strategy awareness and use plays a critical role in the academic success of first and second language (L1 and L2) students, because irrespective of the area of study, students are required to read and understand the subjects of their reading materials. Consequently, for students to be able to understand what they are reading they should be aware of and be able to implement a number of specific reading strategies that differ according to their reading purpose. That is why reading comprehension strategy awareness and use assessment could be the starting point for investigating the students' academic achievement in L1 and L2 contexts as they may play the most important role.

Besides that, even where reading skills are well developed, reading comprehension may be affected by the difficulty of the text, the reader's interest, and the reader's familiarity with the subject matter, among other factors.

Therefore, this study looked at the effect of reading strategy awareness and use on reading comprehension of main ideas in first and second languages. It also investigated the relationship between second language (L2) proficiency and second language reading strategy awareness and use in a population of Arabic-speaking, Libyan university students. This thesis also looked at the effects of topic familiarity, interest and difficulty

on reading comprehension and recall of main ideas.

The first chapter of the thesis, which is devoted to a presentation of the problem, includes a brief overview of different types of ESL/EFL teaching methods followed by a discussion of the Libyan EFL curriculum and teaching methodology. The next subsection illustrates the characteristics of the Arabic language, followed by the goal of the research, the research questions and the research hypotheses.

The second chapter is devoted to a review of related literature. It starts with introducing the reading process, followed by models of reading. Next, a discussion of language learning strategies, followed by a presentation of the development of reading strategies and a demonstration of a main ideas identification task. Then, first language (L1) reading strategies, including global, problem-solving and support strategies, are introduced. This is followed by a discussion of second language reading strategies and their similarities to L1 strategies. The next subsection presents reading strategy transfer, followed by a discussion of the effects of differences between L1 and L2 on reading strategy use.

The third chapter provides a presentation of a pilot study that was made to test the methodology of the research. The results of this study were also presented and discussed.

The fourth chapter provides a description of the experiment methodology and subjects. It begins with a description of the experimental design, followed by a description of the subjects and the material. Next, pre-experimental evaluative measures are discussed, followed by an explanation of the dependent measures. The final subsection presents the experimental procedures.

The fifth chapter is devoted to quantitative and qualitative analyses of the research

results. This chapter answers the research questions quantitatively through statistical analyses of the data. This is followed by a qualitative analysis whose aim is to further validate the statistical results.

The sixth chapter includes an in depth discussion of the quantitative and qualitative results of this study.

The seventh, concluding chapter presents a summary of the findings and provides suggestions for future research.

CHAPTER ONE

The problem

Today many researchers of L1 and L2 reading would concur that there are universal reading processes, and that one has to learn to read only once during a lifetime (Raymond, 1988; Davis and Bistodeau, 1993; Brisbois, 1995). These processes include cognitive processes and metacognitive strategies that are differentially sensitive to various types of text structures.* Although there is generally thought to be transfer of the reading processes from L1 to L2, this transfer is most often accompanied by several types of interference that cause ESL/EFL reading problems.

Second language learners in EFL contexts often have difficulty understanding and locating the main idea of their assigned English texts. This is most likely due to the second language learners' lack of awareness of the techniques and strategies that are required for comprehending the main idea(s). Whether due to inappropriate teaching methods or a simple lack of training on strategy use (Zerhouni, 1996), a failure to use strategies for extracting the main idea of a text can have dire consequences for reading comprehension. Research has shown a strong correlation between reading comprehension and awareness and use of main point recognition strategies (Tomitch, 2000; Van Dijk & Kintsch, 1983; Schellings & Van-Hout-Walters, 1995). It is thus important to carefully examine the teaching of English and, more specifically, the teaching of reading strategies, in the target population of the present study.

* The effect of text structures will be discussed later in the thesis.

1. 1. ESL/EFL Teaching Methods

This section introduces the most familiar teaching methods in ESL/EFL contexts.

Teaching methods are the combination of language teaching theories and classroom practice. Larsen-Freeman (1986) suggests that ESL/EFL teaching methods specify the roles of teachers and learners in the classroom, as well as the language teaching approaches. One of the oldest teaching methods, the Grammar Translation Method, first appeared in the 1800s. Despite a plethora of more recent approaches, the Grammar Translation Method is still applied in EFL contexts in many countries, including Libya. This method focuses on teaching grammar structure, translating and memorizing vocabulary, using L1 as a medium of instruction and treating reading texts as grammatical exercises while ignoring the comprehension of the content (Prator & Celce-Murcia, 1979).

Then, at the turn of the century, the Direct Method purported to solve the Grammar Translation method's problems by avoiding translation and L1 usage. Charles Berlitz was the popular founder of the Direct Method (Brown, 1994 & 2001). This method emphasizes correct pronunciation and grammar using the target language for classroom instruction (Larsen-Freeman, 1986).

The Audio-lingual Method, an off-shoot of the direct method, was developed by Leonard Bloomfield during the Second World War. This method focuses only on oral language skills and is based on the idea of having a native speaker of the target language (the teacher) serve as a source of vocabulary and phrases in the classroom (Richards and Rodgers, 2001). Brown (1994 & 2001) notes that this method tends to disregard language content, focusing on learners' error-free utterances by using mimicry, listening to tapes

and memorizing sets of phrases. Materials are presented in a dialog form in this method (Brown, 1994 & 2001).

Later on, in the early seventies, the Community Language Learning Method appeared. This method perceived the teacher as an empathetic helping agent in the learning process (Brown, 1994 & 2001). This method allows using L1 between students while working as a group; it focuses on teaching students to communicate in the target language and teaching grammar and vocabulary. The teacher is seen as a translator and counselor (Brown, 1994 & 2001). It should be noted here that, despite their differences, all the above mentioned methods are teacher oriented.

In the mid-eighties, a more student-oriented approach, known as the Communicative Language Teaching Approaches appeared. It encompasses various methods, motivations for language learning, types of teachers and the needs of individual classrooms and students. Brown (2001) notes that this approach teaches language learners communicative skills and language use by virtue of its emphasis on: learning to communicate through interacting in the target language, introducing authentic texts into the learning situation, focusing on reading comprehension from the very beginning, linking classroom language learning with language use and activation outside the classroom (Nunan, 1991). In this student oriented approach the teacher is seen as a language facilitator of lifelong language learning among students, an activity organizer in the classroom and a materials designer (Brown, 1994). This one umbrella approach to language teaching aims at the development of the four language skills in a communicative classroom environment (the Ontario curriculum policies of 1995-2000).

However, it is not used in Libyan EFL classes, which are more oriented to the

Grammar Translation Method. Libyan EFL teachers are still using one of the oldest teaching methods (Grammar Translation Method) whose principles do not match the principles of newer methods and approaches that are mentioned above. The following section provides a brief description of the typical Libyan EFL methodology and curriculum, in which the experimental group participants have had their education.

1. 2. Libyan EFL Curriculum and Methodology

The aim of this section is to shed some light on the educational background of the experimental group. According to the researcher's experience as an EFL learner and teacher, the Libyan education system comprises three stages prior to the university level. There is no ESL component during the first stage, which starts at age six in elementary school and continues for six years. Students start learning English as a subject at the age of thirteen from the first year of junior school until the last year of high school. Thus, they learn English for six years before going to the university.

The series "Living English for Libya" by Gusbi (1979) was used in junior schools. This series consists of three parts, each part being taught for a school year. Each book contains thirty lessons; each lesson comprises a simple reading part followed by several grammatical exercises. The three part series "Further English for Libya" by Gusbi and Ronald (1970) was used in High schools.

Based on the author's experience as a high school teacher in Libya and on the classroom observations carried out during the research for her MA degree, the Grammar and Translation method was the sole teaching method applied in the teaching of these text books. This method focuses on translating the reading texts and introducing the

grammatical structure that is included in the reading sections. The main focus of the Libyan EFL program was on teaching the grammatical structure of English, which is typical of the Grammar Translation method. The textbooks described above were taught by using only one teaching method. This suggests that reading strategies were not given much attention during the learners' pre university schooling, because their teachers might not have been aware of the importance of introducing students to these reading strategies. Likewise, the teachers also were not exposed to these reading strategies when they were students. That is why learners are always confronted with several reading comprehension problems while reading university level assigned texts. Their chief reading problem is their inability to recognise the main points or ideas of the text. Another source of their reading problems is the dissimilarity in the scripts, structures, phonology and syntax between the learners' first language (Arabic) and foreign language (English).¹

1.2.1- Teaching of Arabic as a first language

Arabic language reading instruction focuses on using the analytical or alphabet method. Through this method, at the beginning stages, students learn the Arabic alphabet and the vowelization, how to read and use the short vowels (diacritics), how to combine a group of letters to form a word and how to read vowelized words (Khater, 1963; Abu-Rabia et al., 2003). More advanced readers are taught how to read non-vowelized words. They are also taught to vowelize the end of words in order to be prepared to make a sentence from a group of words, to indicate their grammatical function in the sentence and to read them accurately (Abu-Rabia et al., 2003).

In addition, at the advanced levels of reading, the texts are not vowelized. So students

¹ This will be addressed later on.

are taught how to deduce the short vowels from the structure of the sentence. These are all cognitively demanding tasks. Reading Arabic scripts without short vowels is also a difficult task for less proficient and beginning readers because of word and letter similarities; for instance, certain letters are discriminated from each other only by a single stroke (see Appendix A for Arabic alphabet) (Abu-Rabia et al., 2003). Hence, readers must rely on the grammatical structure, their prior linguistic knowledge and the exposure to prints and media (Abu-Rabia et al., 2003). In contrast to this focus on the above mentioned skills, the teaching of the strategies for main idea comprehension and identification is almost entirely disregarded by teachers of Arabic reading to native speakers.

1.2.2- Teaching of English as a Foreign Language

According to the author's experience as an EFL teacher, at the beginning level, students are taught the English Alphabet and lists of simple words such as: car, cat, dog, school, ball, flag and house. Students will be required to memorize the spelling of these words with their Arabic meanings in order to be able to write them correctly with their meanings. In more advanced levels teachers focus more on the grammatical structures, the verb tenses, the memorization larger lists of single words (vocabulary) and the spelling of longer words. By the end of the high school stage, students would be taught the entire English language verb tenses, passive voice, direct and indirect speech, and all the types of conditional verbs. Concerning high school reading, teachers focus on enriching the vocabulary of their students by extracting lists of the new words in the reading lessons and answering the comprehension questions that follow the reading passages after translating the whole text into Arabic.

At this point it is essential to introduce the English language education systems of the control group in order to compare the two different educational systems and L1 teaching methods for both control and experimental groups and their effects on the participants' achievements later in this research.

1. 3. Ontario, Canada English Teaching and Curriculum

In the previous section, the Libyan Arabic and English teaching contexts (L1 & L2) were discussed to give an idea about the experimental group's L1 and L2 education and the teaching methods that were implemented in their education. In this section, the English (L1) teaching methods and curriculum of the control group will be discussed to show how the two groups might vary in terms of L1 reading comprehension strategy instruction and teaching methodology.

The Canadian participants in the control group may differ in their ability to read and comprehend the main idea in their L1 because of the different teaching approaches that have been applied at different educational levels. Since all the control group participants have had their elementary and high school education in Ontario, Canada, the Ontario curriculum policies of 1995-2000 were applicable to their ages. The Ontario curriculum indicates that communicative teaching that focuses on teaching the four skills was the most implemented method in classroom teaching.

According to the Ontario common curriculum policy for grades 1-8 (1995), the control group participants would have learned how to read for particular purposes, how to use a range of strategies to understand what they read, such as how to use background knowledge and how to identify and restate the main idea, by the end of grade three. In

grade five, they would have learned to select appropriate reading strategies such as adjusting reading speed according to the purpose of reading and recording key points. By the end of grade seven, they would have been able to identify main ideas and explain how the details support them, to select appropriate reading strategies such as skimming text for specific information and note taking. In grade eight, they would have learned how to question and evaluate the ideas in the text and how to scan the text to determine the purpose of it.

The goals set by Ontario Curriculum and Policy for grades 9-10 (1999) are that learners can describe a variety of reading strategies in grade nine and select and use them effectively before, during and after reading to understand texts. They can also create questions, self-question to monitor their comprehension, relate prior knowledge to the ideas in texts and locate explicit information and ideas. In grade ten, students can identify how readers' different backgrounds might influence the way they understand and interpret a text and can analyse information and ideas in texts and synthesize their findings.

According to the Ontario Curriculum and Policy for grades 11-12 (1999), in grades eleven and twelve students receive instruction to cope with the more challenging reading demands of the senior secondary school curriculum, which require students to consider increasingly difficult concepts. Through communicative teaching method, they also learn to use vocabulary that is more specialized than in earlier grades. According to the Ontario Ministry of Education (2000), in grade twelve, students read and interpret literary texts as a university preparation program. Students learn to switch from one genre to another and to use a range of reading skills that suit their purpose and the materials they are reading.

The materials include a range of informational texts, poetry, novels, essays, plays and short stories. Students are also encouraged to read independently for pleasure, information, and comprehension. Towards the end of grade twelve, students are expected to be able to understand information, ideas, concepts and themes; to be able to realize the relationship among facts and ideas, to be able to know the forms of texts, conventions and terminologies; to be able to understand the uses of rhetorical elements in literary and informational texts; and to be able to apply reading strategies (The Ontario Ministry of Education, 2000).

1. 4. The Problem and the Rationale of the Study

Reading is especially important for EFL learners, given the fact that they usually have little exposure in their own communities to the target language outside the classroom. In such contexts, reading materials are usually more available than listening materials (Zerhouni, 1996). This is why the main emphasis of EFL programs should be on the skills involved in reading written materials. Another reason of the importance of EFL reading for learners is that it is the only skill that they can develop and use on their own later on in their lives. It has been shown that one way of developing FL is through development of the reading skills (Zerhouni, 1996). However, reading in a FL is often a source of difficulty for FL learners. One of the main problems facing FL readers is the lack of exposure to appropriate reading strategies (Raymond, 1993 and Carrell, 1988)

The present study arose as a result of the researcher's observation that many EFL students have reading deficits that place them at a severe disadvantage in their university English courses. These students usually experience difficulty in EFL courses that

emphasize learning from text materials, where success depends heavily on an individual's ability to determine the most important ideas of the reading selections. EFL students may not be receiving adequate instruction on how to grasp the important information in L1 and FL reading texts. Parry (1996) suggests that reading strategies can be viewed as a function of culture and the differences in strategy-utility can often be presented in terms of how different culture/societies represent, use, and teach language and literacy.

According to Jacobowitz (1990), in the same way, the inability of L1 university students to comprehend a text well or the main ideas of texts may stem from the limited effective instructional strategies taught in schools and the inadequate or inappropriate educational preparation, which is the case of the Libyan students as their L1 teaching of reading program focuses on learning them how to decode words more than anything else.

In the present case, we are dealing with university-educated Libyan EFL students who have not received instructional strategies in EFL reading during their education because the Libyan EFL curriculum focuses on teaching grammar above all else. This lack of instruction is problematic in the light of research underscoring the importance of reading strategies for optimal reading comprehension. For example, Surber (2001) and Upton and Thompson (2001) suggest that readers need some methods for determining which pieces of information in a text are more important and should receive the most attention.

According to Schmitt (1990), skilled readers should be actively involved in the comprehension process. The readers select and use appropriate strategies and monitor their comprehension as they read to help them understand information and identify the main ideas of the reading text. If teachers know how readers identify main ideas successfully, then they will be better able to help unskilled readers learn to do so.

(Schmitt, 1990). Since main idea identification tasks require readers to attend to some information more than other information, Cunningham and Moore (1986) argue that readers pay attention to certain ideas in a text depending on their purpose for reading, as well as the author's presentation of information. Incidentally, L1 and FL similarities and differences may affect the FL reading skills and strategies in different ways.

According to my experience as an FL learner, teacher and researcher, the L1 plays a great role in L2 learning. L1 also has different effects on FL learning. Assuming that there are several factors responsible for Libyan FL readers' main idea identification deficiency in reading comprehension, which includes linguistic differences between L1 and L2, it is crucial to demonstrate the first language characteristics of the Libyan learners in the following subsection. The reason for writing this subsection is to help in understanding and diagnosing the Arabic EFL learners' reading problems that are related to their L1. The following subsection would also shed some light on the Arabic EFL learners' linguistic background in order to understand the nature of their reading problems and the role that the characteristics of L1 play in L2 reading.

1. 5. Characteristics of Arabic

Arabic, a Semitic language, is typologically different from English, an Indo-European language. The two languages also have different writing systems. The Arabic script is written from right to left; in normal Arabic script the vowels are not marked and readers have to supply the correct vowelizing from an understanding of the context in which the word appears; this may make Arabic the only language in which skilled readers must first understand the sentence in order to recognize the word (Abu-Rabia, 1998; Abu-Rabia,

Share & Mansour, 2003; Taouk & Coltheart, 2004). Arabic words are usually quite short; most of them are derived from a trilateral root and are generally less than six characters long. These three consonants can be combined with different patterns of vowels to produce a whole family of words that share a common meaning. Consequently, Arabic speakers are accustomed to a script that places great importance on consonant structures and plays down the importance of vowels. Arabic characters are much less redundant than Roman letters. In Arabic, the presence or absence of a single dot above or below a standard character shape distinguishes between letters (Appendix A for Arabic alphabet). These differences require Arabic speakers to learn an entirely new alphabet for English, including a capital letter system, which makes English more difficult for them. Moreover, Arabic has a very different grammatical structure from English in terms of word order (Bengeliel, 2000). Since reading in English is not an easy process for Arabic speakers, learning how to use reading comprehension strategies may play a very important role in this situation, as it may enhance their reading comprehension achievement.

The present study investigates Arabic readers' awareness and use of EFL reading comprehension strategies in identifying the main ideas in an English text. This study will focus on three types of reading strategies that contribute to main idea comprehension and identification. These strategies, to be discussed in a later section of the thesis, are: global reading strategies, problem-solving strategies and support strategies, as categorised by Mokhtari and Sheorey (2002). The following section illustrates the purpose of this study.

1. 6. Purpose of the Study

Arabic EFL learners have been observed to experience certain types of difficulties in identifying the main ideas in reading, since finding the main ideas is a complex task. In accordance with Vann and Abraham (1990), these difficulties may be rooted in inadequate knowledge of the strategies that should be used and their inappropriate use.

According to the researcher's experience as a teacher and then as a teacher trainer, Libyan EFL teachers do not learn about these underlying reading strategies during their teacher education and are not trained to teach them. This lack of training is not unique to the Libyan context. Carriedo and Alonso-Tapia (1996) found that teachers who do not know what kind of strategies should be taught or how to teach them, at least with regard to the teaching of main idea comprehension strategies, tend to work on reading instruction and not on reading strategy instruction during their reading classes.

According to Schmitt (1990), EFL learners can be taught metacomprehension strategies of how and when to set purposes for reading, activate background knowledge, monitor comprehension, draw inferences and attend to main ideas. Therefore, it would be useful for teachers to evaluate their students' awareness of these strategies, as they are the characteristics of skilled comprehenders. Paris and Winograd (1990) reported that students benefit greatly from achieving greater awareness of their own mental processes and the purpose of academic learning. They taught their subjects the metacognitive processes while reading. Paris and Winograd (1990) also illustrate how students' understanding of their own thinking can improve their reading comprehension. They tried to make invisible mental reading processes tangible for 10 year old students through the use of materials, discussions and metaphors to promote their understanding of reading

strategies. Thus the sheep or cattle-herding metaphors “Tracking down the Main Idea” and “Rounding up Ideas” provide students with a concrete representation of the mental processes of identifying, selecting and knowing when to apply these strategies. Paris and Winograd found that performance on such tasks and measurement of metacognition awareness and strategy utility revealed significant improvement from pre- to post-tests of the experimental group compared to their peers in other classes. Such knowledge could be used to design a reading program that includes explicit instruction in metacomprehension skills (Baumann, 1986).

In a further attempt to establish a link between awareness and use of strategies and reading comprehension, the present study investigates Arabic readers’ awareness and use of EFL reading strategies in identifying the main ideas of an English text. This study will focus on the above mentioned three types of reading strategies that contribute to main idea identification and comprehension as categorized by Mokhtari and Sheorey (2002). At this point, it is important to demonstrate the specific objectives of the study.

1.7. Objectives of the Study

The present study is aimed at investigating three primary objectives. The first is to investigate the effect of strategy awareness and use on the comprehension and identification of the main idea in L1 texts through recall. The second objective is to examine the relationship between strategy awareness and use and the comprehension and identification of the main idea in FL texts. Immediate recall protocols were used as a measure of the comprehension and identification of main ideas based on the assumption that there is a direct relationship between what readers comprehend from a text and what

they are able to recall. In other words, those who comprehend better will also recall better. The third objective is to compare the amount of recalled ideas from an L1 text versus an L2 text.

In addition, there are two secondary objectives for this study. First, the study investigates the effect of language reading proficiency level on the comprehension and recall of main ideas. Second, the study examines the extent to which text difficulty and readers' familiarity with and interest in the topic may affect the amount and levels of main idea comprehension and recall.

CHAPTER TWO

Review of the Related Literature

This chapter will review the major lines of enquiry regarding second language reading comprehension strategies. As the research in the present study focuses on main idea identification in EFL, this chapter begins with a brief overview of the major issues regarding EFL reading strategies for main idea identification. These issues are: the reading comprehension process, models of reading, language learning strategies, and reading strategies. There will also be a brief review of the development of reading strategies. This will be followed by an overview of L1 and L2 reading strategies, including global, problem-solving and support reading strategies. Both the issues of reading strategy transfer and the effects of differences between L1 and L2 on reading strategy use will be discussed. This will be followed by a discussion of main idea(s) identification tasks. The chapter will conclude with a summary of the literature as it relates to the research carried out for the present thesis.

2.1. The Reading Comprehension Process

“Reading is a psycholinguistic process in that it starts with a linguistic representation encoded by a writer and ends with meaning which the reader constructs” (Goodman, 1971, p.127). Comprehension is the most important component in the reading process (Brantmeier, 2004). Consequently, according to Yigiter, Saricoban, & Gurses (2005), reading without comprehension would be meaningless and empty. Thus, understanding and developing reading strategies is necessary for achieving comprehension. In the more narrow sense, Van Den Broek (1990) indicates that the construction of a coherent

functional representation of the target text in memory is a critical component of successful reading comprehension. This process might be viewed as a problem-solving task through which the reader recognises relations between the ideas, events and states that are presented in the text.

The reading processes in L2 involve understanding the basic cognitive, metacognitive and linguistic processes used in L1 reading. However, there are several features in L2 reading that are unique. These include the influence of L1 literacy, limited L2 linguistic knowledge, and cross-linguistic effects (Wade-Woolley, 1999; Koda, 1994). Stott (2001) assumes that the reading process involves identification of formal structure, genre and topic, all of which activate schemata (see below) and allow readers to comprehend the text.

The level of reader comprehension of the text is determined by how well the reader variables (interest level in the text, purpose for reading the text, knowledge of the topic, foreign language abilities, awareness of the reading process, and level of willingness to take risks) interact with the text variables (text type, structure, syntax, and vocabulary) (Parnett, 1988). One important part of interactive process theory emphasizes "schemata," the reader's preexisting concepts about the world and about the text to be read. Into this framework, the reader fits what he or she finds in any passage. If new textual information does not fit into a reader's schemata, the reader misunderstands the new material, ignores the new material, or revises the schemata to match the facts within the passage (Parnett, 1988).

Vann and Abraham (1990) discuss three types of knowledge that are required for understanding any reading text. These are: the language knowledge of grammatical

structures and rhetorical convention; background knowledge, which enables readers to fit the new information presented in the text into their already established framework of knowledge; procedural knowledge that enables readers to proceed with the reading task. In other words, procedural knowledge is the awareness of the purpose, the demands and the steps of performing the task and knowing how to proceed on a task.

2.1.1. Differences and Similarities between Reading in L1, L2 and FL

Reading in a second language is not a monolingual event. Because L2 readers have access to their L1 as they read, many of them use it as a strategy and rely on it to help comprehend an L2 text. This includes the implementation of L1 as the language of thought during L2 reading processes, such as mental translation and inner speech or internalized language that is for oneself. Readers may utilize such strategies when they come across difficult points in the L2 text to fill in their comprehension gaps (Upton and Thompson, 2001). According to Hudson (1998), L2 reading involves the interaction of reading processes and knowledge. It involves basic decoding skills, higher level cognitive skills and interactional skills (with the author of the text). In addition, L2 reading involves L1 and L2 interaction (Hudson, 1998).

Most FL reading specialists view L1 and L2 reading processes as interactive. The reader interacts with the text to create meaning as the reader's mental processes work together at different cognitive levels (Bernhardt and Kamil, 1995; Rumelhart, 1977). This point of view is based on Goodman's (1988) assumption that reading procedures are universal across languages and can be transferred from one language to another because they are similar or almost the same processes for all languages.

From this point of view, L1 and L2 are related to each other and share several similar

processes. L2 readers have to learn to read only once in their lives because they transfer their L1 reading strategies into their L2 reading (Raymond, 1988; Brisbois, 1995).

Furthermore, most of the elements of the reading comprehension process featured in L1 reading models, such as prior knowledge, metacognitive strategies and cognitive strategies are applicable to the L2 reading comprehension process (Brisbois, 1995).

On the other hand, Barnett (1989) argues that it is important to recognize several factors that distinguish the L2 reader from the L1 reader. First, L2 readers already have a level of literacy in their L1 that might be used simultaneously with the L2. Second, Barnett (1989) indicates that different languages may initiate different sorts of processing. For instance, L2 readers decode more than they interact with the text. Third, different L1 orthographies, literacy practice, and background knowledge may affect L2 reading ability and strategies.

Block (1986) assumes that when people first learn to read, they should learn both how to read language in print and the appropriate strategies to use for comprehension.

However, when L2 learners learn to read in a second language, they need only to be concerned with understanding specific language features in print. Moreover, Koda (1994) asserts that there are three fundamental differences that separate L1 from L2:

- 1- The L2 reader has prior reading experience.
- 2- L2 reading is cross-linguistic.
- 3- Reading ability develops before adequate fluency in the target language is achieved.

Similarly, Grabe (1991) notes that L1 learners have already learned a huge amount of vocabulary before they begin reading. They also have a good sense of the grammar of the language. L2 learners typically have not learned a large amount of oral language

vocabulary; nor do they have fairly complete sense of the grammar of the L2 (Grabe, 1991).

Concerning FL reading comprehension, Koda (1994) argues that interletter (internalized orthographic association of words) connection ability is usually weaker among FL than among L1 readers, as their exposure to the FL orthography is more limited. Normally, FL readers have been exposed to a very limited amount of reading material (Sarig, 1987), as everything in their living context is written in their L1, such as the signs, newspapers, magazines and etc. Thus, word recognition by FL readers would be slower and less accurate. Vocabulary knowledge is another factor that affects word recognition and reading comprehension in FL readers. This complex relationship is discussed in the following subsection.

2.1.2. Vocabulary and the Reading Process

Ulijn and Salager-Meyer (1998) state that vocabulary knowledge is a critical component in reading comprehension. Readers with better vocabulary knowledge are usually believed to be better comprehenders (Coady, 1993). Most current L2 reading theories maintain that processing at the word level is essential for successful reading and that the lack of word recognition skills is often a cause of difficulties in developing L2 reading comprehension (Coady, 1993). Brisbois (1995) argues that L2 vocabulary knowledge contributes more to the reading process than does grammatical skill. Thus, it is important for L2 readers to develop the automaticity of word recognition, which allows them to use higher level processing skills and strategies such as using L1 reading strategy knowledge or experience to make sense of the L2 reading text (Brisbois, 1995). Anderson (1999) suggests that vocabulary is the fuel that ignites the fire of reading and facilitates

the comprehension of what one reads.

According to Horst (2005), in L1 as in L2 reading, practice is important; to be precise, the more frequently the word is seen, the faster the lexical access and the shorter the recognition time. For L1 and L2 learner alike, the acquisition of a large mental lexicon involves exposure to a great deal of written text. L2 readers who have been reading and building vocabulary knowledge would have a huge amount of vocabulary (Horst, 2005). In contrast, the lack of L2 vocabulary would hinder the ability to “automatize” word encoding that would result in a slow reading rate, which in turn would affect the comprehension process (Ulijn and Salager-Meyer, 1998).

The following section focuses on research-based models and theories of reading that are applicable to both L1 and L2 reading.

2.2. Models of Reading

This section illustrates the reading theories and the theoretical views of the background knowledge or schema. Reading theorists generally classify reading models into three categories: bottom-up, top-down, and interactive (e.g. Barnett, 1989; Rayner & Pollatsek, 1989; Raymond, 1992; Hudson, 1998; Campbell & Malicky, 2002). Each model focuses on particular aspects assumed by its proponents to play the key role in the reading process.

Bottom-up models put more focus on the one-way flow of information from the lower level perceptual analysing systems, which proceeds through a linear hierarchy moving from letter recognition to decoding at the phoneme level to word recognition, to higher level semantic mechanisms, such as the recognition of syntactic and semantic

relationships and the integration of text material (Gough, 1972; Raymond, 1992, Hudson, 1998). Bottom-up processing would introduce reading as a matter of decoding a series of written symbols. As studies showed that students sometimes could not comprehend the text they read in this way, bottom-up processing was seen to be inadequate for clarifying the reading process (Yigiter, Saricoban & Gurses, 2005).

The top-down models of reading, on the other hand, (e.g. Goodman, 1988; Smith, 1973; Coady 1979; Campbell & Malicky, 2002) emphasize the flow of information from higher levels, such as anticipation of semantic cues, prediction, and hypothesis formation, to lower level perceptual analyzing systems, such as decoding at the grapheme-phoneme level to word recognition and pattern recognition routines. Yigiter, Saricoban & Gurses (2005) assume that readers bring to this process their prior knowledge, their expectation of how the language works, and their interest, motivation and attitudes towards the text and the content it contains. Hence, according to Campbell & Malicky (2002), the bottom-up theory places the emphasis on the text, while top-down and interactive theories place the emphasis on the reader.

The interactive models of reading attempt to combine the crucial insights of bottom-up and top-down models. Such reading models operate in both a top-down and a bottom-up fashion simultaneously. They are bidirectional in nature (Rumelhart, 1977; Campbell & Malicky, 2002). Interactive models can be divided into two types. The first type is based on the interaction of componential cognitive processes of reading, while in the second the interaction focus is on the product of the interaction of readers' background knowledge (schema) with the text information in the process of comprehension (Stanovich, 1995; Carrell, 1983; Grabe, 1991, as cited in Hudson, 1998). Schema theory,

as it will be defined below, is based on the process of combining textual information with the background information that readers bring to the text (Stott, 2001). Thus, the interactive reading theory incorporates the reader's background knowledge or schema, the textual information and the interaction process between them that causes the active construction of meaning (Campbell & Malicky, 2002; Yigiter, Saricoban & Gurses, 2005).

2.2.1. The Role of Background Knowledge

Schemata or schema (singular form of schemata), as they are often known, have been described as cognitive constructs that allow for the organization of information in long-term memory (Singhal, 1998). This includes knowledge of the world, from everyday knowledge to very specialized knowledge, knowledge of language structures, and knowledge of texts and forms they take in terms of genre and organization (Singhal, 1998). Research on schema theory has had a great impact on theories of reading comprehension. Researchers have identified several types of schemata. Content schema, which is relevant to the content domain of the text, refers to a reader's background or world knowledge, and provides readers with a foundation or a basis for comparison (Carrell & Eisterhold, 1983; Carrell, 1987; Carrell, Pharis, & Liberto, 1989). Formal schema, usually known as textual schema, refers to the organizational forms and rhetorical structures of written texts. This can include knowledge of different text types and genres (Carrell, 1987; Singhal, 1998).

Whereas formal schemata include discourse level items, linguistic or language schemata comprise the decoding features needed to recognize words and how they function in a sentence. L1 readers might be able to guess the meaning of a word using the

grammatical structure of the sentence in which the word appears, which may not have initially been part of their linguistic prior knowledge. The building of linguistic schema in a second language can proceed in the same way (Singhal, 1998).

Raymond (1992) considered her “schema-theoretic” model to be an interactive model, as it attempts to incorporate the reader’s background knowledge of both content and form into an interactive view of reading. Schema also provides a way of integrating the readers’ understanding of texts with their comprehension of the world in general (Stott, 2001). They provide a structure that supports the interactions among different levels of processing in reading (Raymond, 1992). If schemata play an essential role in text comprehension, it is reasonable to assume that this occurs in both L1 and L2 contexts. For instance, one can assume that both L1 and L2 readers will understand more of a text when they are familiar with content, formal, and linguistic schema. As L2 readers’ likely possess less of this knowledge, they are more likely to experience greater comprehension difficulties than L1 readers (Singhal, 1998).

The following paragraphs are more devoted to reporting research validating the theories just discussed.

Carrell and Eisterhold (1983) point out that “a reader’s failure to activate appropriate schema.... during reading results in various degrees of non-comprehension” (p.560), as schemata that readers utilize play important roles in constructing meaning from texts (Taguchi, Maas & Gorsuch, 2004). Schemata include all experiences that a reader brings to a text, such as life experience; educational experience, knowledge of how texts can be organized; knowledge of how one’s L1 works; knowledge of how the L2 works; and cultural background knowledge. In the same vein, Dubin, Eskey, and Grabe (1986)

explain that comprehension always depends on individual background knowledge and is directed and controlled by the purpose of reading. As a result, comprehension is not only based on learning the vocabulary and the grammar of the content area of a text, but also on many cognitively demanding activities that include activating prior knowledge (O'Malley & Chamot, 1990). However, Carrell (1988) insists that students should be aware of linguistic devices, such as conjunctions and lexical cohesion, and their functions in sentences and paragraphs in order to be aware of how ideas are incorporated throughout a text. It is important to recognize these elements in an FL so as to comprehend a text.

The findings of Chen and Graves's (1995) study affirm that background knowledge plays a major role in comprehending and remembering L2 text information. This study provides solid evidence that utilizing prior knowledge while reading in L2 helps readers to understand a text, especially texts containing culture-specific elements that cannot be accessed without prior cultural knowledge. Therefore, the use of background knowledge is one of the most important global strategies for main idea comprehension.

Similarly, Bensoussan (1998) examined the effects of "faulty schemata" on reading comprehension. She found that when readers activate an inappropriate schema; they miss the main idea of the text. When readers encounter difficult terms, they predict the general meaning according to assumptions derived from their schema. Readers also compare the ideas in the text with their schemata. Therefore, comprehension occurs as a result of activating background knowledge that includes the process of interrelating new information in the text with old information in the readers' minds.

By the same token, Anderson (1999) demonstrates that activating background

knowledge or schema is one of the cognitive strategies that influences reading comprehension. Anderson argues that meaning does not emerge entirely from the printed words, but that readers bring certain knowledge to reading which affects their comprehension. Therefore, Anderson states that activation of background knowledge facilitates comprehension of the main ideas of a text because it enhances readers' understanding of the meaning of words and the organization of texts, thereby facilitating their comprehension and enhancing their reading skills in both L1 and L2.

Similarly, Lin (2002) discusses the role of prior knowledge in L2 reading, including the types of prior knowledge that L2 readers need to comprehend L2 texts. He also discusses FL learners' perception of prior knowledge as one of the global reading strategies. The results of Lin's research demonstrate that EFL readers' prior linguistic knowledge is the most important factor for EFL reading comprehension at the beginning stages of FL learning, while readers' prior socio-cultural knowledge is considered the most important factor for FL comprehension at higher levels of learning. Lin argues that replacement of linguistic knowledge by socio-cultural knowledge takes place as FL readers improve their target language and attain advanced levels. In other words, "becoming a fluent reader involves finding connections to one's own life and making new information part of one's own knowledge" (Landry, 2002, p. 8). Therefore, it is important to provide readers with familiar topics in order to help them find such connections.

Carrell (1987), Steffensen (1988) and Kozminsky & Kozminsky (2001) assume that readers will comprehend and recall more ideas if texts comprise a familiar topic for which readers have enough background knowledge. Also, a study by Johnson cited in

Carrell and Eisterhold (1983) suggests that a text on a familiar topic is better recalled than a similar text on an unfamiliar topic. Likewise, Wade and Adams (1990) assert that information rated as interesting was recalled better by both skilled and unskilled readers. Furthermore, as a result of Salataci and Akyel's (2002) discussions with their students, they found that the selection of texts should be based on the readers' interests and background knowledge. Given the key role played by familiarity and interest in reading comprehension, these variables that can no longer be neglected by reading researchers and teachers when they select reading texts to assess their students' reading strategies and abilities to comprehend what they read.

Furthermore, Campbell & Malicky (2002) assume that readers may use several strategies during the process of comprehension in order to learn something from the text they are reading. These reading strategies, which are at the core of the present study, can be viewed as a type of language learning strategy. Therefore, before discussing reading strategies, it is first necessary to embark on a more general discussion of language learning strategies.

2.3. Language Learning Strategies (LLS)

The concept that language learners may adopt strategies to facilitate their task has been around for sometime. Oxford (1990) suggests that language learning strategies are steps taken by learners to improve their language training and to develop language competence. Furthermore, Anderson (2005) claims that L2 learning strategies are the conscious actions that learners take to improve their language learning. He also assumes that strategies may be observable, like observing someone taking notes during an

academic lecture, or mental, such as translating and activating prior knowledge. Research has indicated that more proficient learners employ a variety of strategies in different situations than do less proficient learners (Oxford, 1990; O'Malley and Chamot, 1990). According to Rubin (1987), language learning strategies are the particular cognitive and metacognitive processes and behaviours that learners engage in during the learning process to facilitate the obtaining and use of information and to enable learners to learn successfully.

2.3.1. Learning Strategy Taxonomies

Rubin (1975, 1981) classified language learning strategies in terms of processes contributing directly or indirectly to language learning. According to Rubin, there are three types of strategies. First, learning strategies include cognitive and metacognitive learning strategies that contribute directly to the development of the language system constructed by the learner. Cognitive strategies are those needed to perform a task, whereas metacognitive strategies are necessary for understanding how it was performed (Imel, 2002). Cognitive strategies are the specific actions that contribute directly to the learning process in general (Rubin, 1981). They include clarification, verification, guessing, practice, skimming, memorization, summarizing, paraphrasing, note-taking, and self-questioning as one reads to learn from the text (Paris & Winograd, 1990). Metacognitive strategies enable learners to be aware of and monitor their learning process (Imel, 2002). They include planning, setting goals, and self-management. Second, communicative strategies that are less directly related to language learning include participating in conversation, getting meaning across, and asking for clarifications. Third, social strategy activities are used to enable learners to practice their knowledge with other

people. According to Rubin (1981), communicative and social strategies contribute indirectly to the language learning process.

Rubin's (1981) taxonomy of direct and indirect strategies led to Oxford's (1990) classification of language learning strategies into direct and indirect strategies, although with some major differences. Direct strategies include memory, cognitive and compensation strategies. Indirect strategies include metacognitive, affective and social strategies.

In another way of categorizing language learning strategies, O'Malley and Chamot (1990) divided them into three main categories: metacognitive, cognitive, and socio-affective strategies. They stressed that successful learners use a variety of different strategies and techniques in order to solve problems that they face while learning or producing the language. O'Malley and Chamot (1990) agreed that language learning strategy use is positively associated with language proficiency. In a different way, Stern (1992) classified language learning strategies into five types that include management and planning, cognitive, communicative-experiential, interpersonal, and affective strategies. Unlike all the above mentioned classifications, Cohen (1998) distinguishes between language learning strategies and language use strategies. Language learning strategies refer to the processes that are consciously selected by learners and which may result in actions taken to enhance language learning. Language use strategies help learners to use the target language properly. Hsiao and Oxford (2002) suggest that direct and indirect strategies benefit one another. This finding is consistent with O'Malley and Chamot's classification of strategies into cognitive, metacognitive and affective strategies. Also, it is consistent with that of cognitive strategy instruction, which is more

effective when it is supplemented with metacognitive strategy instruction. Therefore, when teaching students to use strategies to enhance L2 performance, teachers should bear in mind the explicit integration of different strategies concurrently. Hsiao and Oxford (2002) conclude that O'Malley and Chamot's classification is more consistent with the learners' use of strategies.

2.3.2. Research on Learning Strategies

By using Oxford's (1990) strategy inventory for language learning, Griffiths and Parr (2001) conducted a study of 569 ESL students from various ESL schools in New Zealand. These students, who were between 14 to 64 years of age, came from 31 different nations and ranged in proficiency from beginner to advanced. They completed the ESL/EFL version of the Oxford Strategy Inventory for Language Learning (1990), which comprises 50 items divided into six categories:

- Memory that relates to how students remember language, such as using flash cards;
- Cognitive that is concerned with how students think about their learning, such as finding patterns in English;
- Metacognitive strategies relate to how students manage their own learning, such as planning schedules to have enough time for studying English;
- Compensation enables students with limited knowledge of the target language to comprehend it. Compensation can include guessing the meaning of new words and using social strategies that permit learning through interaction with others, such as asking native speakers for corrections;
- Affective strategies that relate to students' feelings, such as trying to relax

whenever they feel afraid of using English (Griffiths and Parr, 2001).

The results of this study indicate that students' most frequently reported strategy types are ordered as follows: social, metacognitive, compensation, cognitive, affective, and memory. However, this study did not take into account possible influences of language proficiency. Language proficiency might influence the selection and use of the different types of strategies, as beginners may use different strategies from advanced students.

A study which does take these factors into account was conducted by Abu Shmais (2003). She used the same version of the Oxford language learning inventory as Griffiths and Parr (2001) to study 99 Arabic-speaking English majors at a Palestinian university. Abu Shmais's study investigated the frequency of language learning strategy use by those students according to their gender and language proficiency level, as these variables may affect the way in which language learners learn the target language. The results of this study illustrate that metacognitive strategies, which include techniques used for evaluating one's own learning, such as self monitoring, have the highest frequency of usage, followed by affective strategies used for handling feelings, attitudes and motivation, followed by social, cognitive and memory strategies.

In contrast, Abu Shmais (2003) results indicate that metacognitive strategies had the highest means of usage, while compensation strategies had the lowest. While language proficiency had no apparent effect on the use of compensation, metacognitive and affective strategies, there were significant effects of proficiency on the use of cognitive, social and memory strategies. Given her finding that more proficient L2 learners employed a greater variety of strategies in many situations than did less proficient

learners, Abu Shmais (2003) recommends that less proficient learners be given more training in using the strategies preferred by more proficient learners.

Along similar lines, Peacock and Ho (2003) used Oxford's (1990) inventory of language learning strategies to reveal a number of important findings regarding second language learning strategies. Peacock and Ho studied 1006 adults, Hong Kong Chinese learners from different disciplines in 55 university EAP classes. Peacock and Ho (2003) found that the most frequently used strategies were in the compensation category, followed by cognitive and metacognitive, then social, memory and affective strategies. Researchers also perceived that the most obvious differences were that students who were majoring in the English language reported a much higher use of three specific strategy types (cognitive, metacognitive and social) than students with other majors. This result mirrors part of Griffiths and Parr (2001) results of the most frequently used strategy categories. Contrastively, computer studies students reported the lowest use of metacognitive strategies for studying English. Peacock and Ho (2003) concluded that there is often a positive correlation between strategy use and language proficiency.

Until this point, we have looked at strategies from a general language learning perspective. However, each of the four language skills of listening, speaking, writing, and reading relies on specific learning processes, which are in turn more susceptible to specific learning strategies.. The following subsection discusses strategies specific to the acquisition of reading, which is the research focus for the present thesis.

2.4. Reading Strategies

There are various definitions of reading strategies. Based on first language reading research (VanDuzer, 1999), reading strategies are defined as the steps readers use to process reading. According to Cook and Mayer (1983), an L2 reading strategy is a behaviour that readers adopt when they are reading. Such strategies are dependent upon the purpose of reading, which varies according to each reader. Given the extent of variation in purpose across readers, we prefer to consider a broad definition of a reading strategy as something that the reader does while reading (Mayer, 1983). Similarly, Vann and Abraham (1990) and Brown (1994) state that reading strategies are behaviours that readers engage in to read foreign or second language texts. In other words, reading strategies are the specific actions that readers employ when faced with a problem. However, Barnett (1988) suggests that reading strategies are the mental operations incorporated when readers approach a text and make sense of what they read. These mental operations can include skimming, scanning, reading for meaning, and separating main ideas from supporting details.

Likewise, Feng and Mokhtari (1998) noticed that readers resort to several strategies in their attempts to make sense of what they read. These are conscious and deliberate plans readers carry out when processing textual information. Such strategies include re-reading, evaluating comprehension, previewing texts, and so on. These plans or strategies prepare them to interpret printed information effectively. However, these plans alone, without the implementation of some cognitive strategies such as schema activation, may not be helpful. In fact, neither background knowledge activation alone as one of the global strategies nor all global strategies together are sufficient for achieving comprehension.

Achieving reading comprehension involves a number of other cognitive strategies.

Readers use these additional cognitive strategies, in addition to global ones, to make sense of what they read (Brantmeir, 2002). They may involve reading for meaning, recognition of cognates and word families, skimming, scanning, activating general knowledge, and separating main ideas from supporting ideas (Brantmeier, 2002). As well, the process of reading involves the use of higher-level comprehension strategies, such as inferencing, predicting, and problem-solving. By the same token, according to Marefat and Shirazi (2003), strategies are plans, tactics, actions or behaviours that readers implement to facilitate comprehension. This implementation is usually goal-oriented and, to reach this goal, it is important for readers to develop a range of strategies which they are able to select from appropriately and employ flexibly to meet the needs of reading a specific text. Such goal-oriented reading comprehension strategies include strategies of separating main idea from supporting details and problem-solving strategies (Barnett 1988; Brantmeier, 2002, and Marefat and Shirazi 2003).

2.5. Development of Reading Strategies

Gough (1972) notes that in the 1950s and 1960s the predominant reading strategies were thought to be “bottom up”, based on the smallest meaningful unit of sound (phoneme). Meaning was derived in a linear manner. First readers decoded letters, then words, phrases and sentences to make sense of the printed symbols. These decoding strategies were carried out automatically and unconsciously. Theorists considered these “bottom up” based strategies to play a great role in comprehending the reading text.

Through the 1970s, prominence was given to “top down” models, where the meaning

precedes the structure. Readers rely on their background knowledge (schema) and their previous experience to comprehend the meaning of the text and to confirm or correct their understanding (Smith, 1971; Campbell & Malicky, 2002).

The 1980s and 1990s gave rise to interactive models, where readers use both their background knowledge and information from the text to derive meaning. These strategies include taking clues from the page and transmitting them to the brain. Then, the brain matches the existing knowledge to the data to facilitate processing of new information. Interactive strategies take into account interaction between bottom-up and top-down skills that readers use while reading (Hood et al., 1996; Taguchi, Maass, & Gorsuch, 2004; Saricoban & Gurses, 2005). Local linguistic strategies deal with the reader's attempt to understand a specific linguistic unit, such as the comprehension of words and sentences at the linguistic level (Carrell, 1989). These are considered bottom-up or text-centered strategies (Upton, 1997).

Recently, Mokhtari and Sheorey (2002) proposed the following taxonomy of second language reading comprehension strategies:

Table 1: Mokhtari and Sheorey Reading Comprehension Strategy Taxonomy for L2 reading

Strategy taxonomy	Strategy List
Global	1- I have a purpose in mind when I read. 2- I think about what I know to help me understand what I read. 3- I take an overall view of the text to see what it is about before reading it. 4- I think about whether the content of the text fits my reading purpose. 5- I review the text first by noting its characteristics like length and organization. 6- When reading, I decide what to read closely and what to ignore. 7- I use tables, figures, and pictures in the text to increase my understanding. 8- I use context clues to help me better understand what I am reading. 9- I use typographical features like bold and italics to identify key information. 10- I critically analyze and evaluate the information presented in the text. 11- I check my understanding when I come across new information. 12- I try to guess what the content of the text is about when I read. 13- I check to see if my guesses about the text are right or wrong.
Problem-solving	1- I read slowly and carefully to make sure I understand what I am reading. 2- I try to get back on track when I lose concentration. 3- I adjust my reading speed according to what I am reading. 4- When a text becomes difficult, I pay closer attention to what I am reading. 5- I stop from time to time and think about what I am reading. 6- I try to picture or visualize information to help remember what I read. 7- When a text becomes difficult, I re-read it to increase my understanding. 8- When I read, I guess the meaning of unknown words or phrases.
Support	1- I take notes while reading to help me understand what I read. 2- When a text becomes difficult, I read aloud to help me understand what I read. 3- I underline or circle information in the text to help me remember it. 4- I use reference materials (e.g. a dictionary) to help me understand what I read. 5- I paraphrase (restate ideas in my own words) to better understand what I am reading. 6- I go back and forth in the text to find relationships among ideas in it. 7- I ask myself questions I like to have answered in the text. 8- When reading, I translate from English into my native language. 9- When reading, I think about information in both English and Arabic.

Mokhtari and Sheorey (2002) divided these interactive strategies into three categories: global reading strategies, problem solving reading strategies, and support reading strategies. Global reading strategies are employed by readers to monitor and manage their reading and to differentiate between main ideas and supporting details. Global strategies include having a purpose in mind, previewing the text and activating prior knowledge. As text familiarity is one basis for prior knowledge activation, it is looked at as a sub-factor, along with topic interest and text difficulty, both of which have been shown to affect recall.

Problem-solving strategies are the actions or procedures that readers use while reading when encountering problems in understanding textual information. For example, they might adjust their reading speed according to the text difficulty or re-read the text to improve comprehension.

Support strategies include basic mechanisms intended to aid readers' text comprehension. They include taking notes and underlining or highlighting textual information (Mokhtari & Sheorey, 2002).

Since using appropriate strategies for different reading contexts increases comprehension (Grabe, 1991; Koda, 1994; Wade-Woolley, 1999), some of the second language reading strategies are also applicable to first language reading. Other strategies are used exclusively in L2 reading, and some of them can be transferred from L1 to L2 reading (Grabe, 1991; Hudson, 1998; Upton & Thompson, 2001). Thus the amount of overlap in any individual's strategies for L1 and L2 reading may vary considerably and may be partially dependent on structural similarities between the two languages (Randall & Meara, 1988; Ryan & Meara, 1991; Abu-Rabia, Share & Mansour, 2003; Taouk &

Coltheart, 2004). When L1 and L2 differ greatly in structure, as do Arabic and English, Arabic speakers may be inclined to draw on different types and proportions of reading strategies in the process of reading comprehension of English texts, which may influence their reading comprehension (Bengeliel, 2000). For instance, Randall and Meara (1988) found that native Arabic speakers react to Roman letters in the same way as they react to Arabic letters. Of course they argue that it is different from the way native English speakers react to Roman letters, but they do not explain how or why such differences exist. Kern (1994) also suggests that mental translation is a common strategy for adult L2 language learners attempting to process L2 reading texts. Furthermore, Upton and Thompson (2001) assume that many L2 readers use L1 for more than mental translation. It seems that they use L1 to process and think about information that is being read in L2.

The specific goal of this study is to measure EFL students' awareness and use of reading strategies of main idea identification. Since most of second language research is grounded in first language research concerning the processes of finding main ideas (Upton and Thompson, 2001), the following subsection discusses these processes with respect to first language strategies followed by second language strategies and the strategy transfer between both languages. The present research will measure the awareness and use of these specific three types of L2 reading strategies and assess their effects on EFL readers' main idea comprehension and identification. More specifically, the present study looks at the degree to which Arabic-speaking learners of English use strategies of separating main idea from supporting details and problem-solving strategies in comprehending English texts.

2.6. First and Second Language Reading Strategies

This section will start with a discussion of L1 and L2 global reading strategies. The section on L2 global strategies includes subheadings of strategy awareness and reading proficiency, comprehension monitoring, role of background knowledge and combined strategies utilization. Problem-solving strategies and support reading strategies in L1 and L2 will be discussed in the following subsections.

2.6.1- L1 Global Reading Strategies

Global strategies complement local strategies. According to current theories, a reader cannot depend on the text only, but must use several sources of information in the process of main idea comprehension (Jacobowitz, 1990). These sources include the reader's purpose and background knowledge as well as the author's purpose and the organisation of the text. Readers who are aware of and able to use these strategies can be defined as skilled readers (Jacobowitz, 1990).

Afflerbach (1990) demonstrated that prior knowledge had a significant influence on readers' use of cognitive strategies to comprehend the main idea of the reading text. However, for Cook and Mayer (1985), having only background knowledge is not sufficient for understanding. Rather, what is important is that prior knowledge should be active during reading. When prior knowledge is absent or inactive, the text appears to be nothing more than a series of unrelated facts. Therefore, making generalizations and elaborations requires readers to realize the cognitive relations with the new knowledge and to relate it to their background knowledge (Stevens, Slavin & Farnish, 1991). More specifically, skilled readers use three different sources to determine importance while reading: their general knowledge of world-specific knowledge; their knowledge of biases,

intentions and goals of the author; and their knowledge of text structure (Afflerbach, 1986). In the same vein, Hennings (1991) suggests that each reader brings to the text a personal network of knowledge, ideas, and values, using them as the basis for identifying anticipated main ideas. These values, knowledge, and ideas provide readers with a framework for interpreting what they read and for expanding main ideas. Readers develop their own ideas relative to the author's points.

Moreover, Afflerbach (1987) and Jacobowitz (1990) found that skilled readers employ certain strategies that can be labelled as metacognitive in nature, as readers ask themselves questions before, during, and after reading. In keeping with strategies of main idea comprehension, Hennings's (1991) study of thinking about the main idea demonstrated that readers interact with the main idea by asking themselves questions such as: What is the author trying to say? And is my anticipated main idea the actual point? Readers use their evolving ideas to make decisions about which facts to concentrate on, and which sentences and paragraphs to skip. Similarly, Nolan's (1991) study looked at the effectiveness of combining cognitive strategies such as self-questioning and making predictions while reading. Results of this study indicated that readers who used self-questioning together with making predictions scored higher on a measure of reading comprehension than those who used only prediction strategies.

Concerning cognitive strategies, Collins (1994) notes that readers can recognise how authors arrange ideas and determine which types of structures are used to interrelate ideas by detecting the organisational patterns of texts. Therefore, an inconsistent sentence or a vague word in the text affects cognitive processing because readers will adjust their reading rate and may return to that word or sentence several times. Furthermore, Collins

(1994) insists that readers must first become aware of the structure of the text and must be aware that the purpose of reading is to construct meaning; then they can use and control different reading comprehension strategies that lead to a thorough processing of the text.

In agreement with the harmonized findings of the above studies, Chen and Graves (1995) assert that research on schema theory (background knowledge) has provided evidence of the tremendous importance of background knowledge in L1 and L2 reading comprehension. Efficient comprehension requires readers to rely appropriately on their prior knowledge in order to relate it to the text to comprehend the main ideas.

In addition to the above mentioned studies, Rupley and Willson (1996) investigated the contribution of background knowledge and strategy use to the comprehension of expository and narrative texts in an L1 reading context. Background knowledge is defined as specific text knowledge, text organisation knowledge, and general world knowledge. Rupley and Willson assume that there are two other forms of knowledge that help readers understand the text, discourse knowledge (knowledge of language use) and strategy knowledge. In theory, these two types of knowledge are supposed to promote or develop reading comprehension. There is also prior domain knowledge, which increases the ability to discriminate between information of high and low importance (Surber, 2001).

2.6.2- L2 Global Reading Strategies

Global reading strategies may include comprehension monitoring, recognition of text structure, and background knowledge activation (schemata) (Mokhtari and Sheorey, 2002). The point here is to describe previous research on strategies that predates and sets

the stage for the present study. This section starts with previewing studies that examined reading strategy awareness and reading proficiency followed by comprehension monitoring strategy. After that, the role of background knowledge activation will be deliberated, followed by a description of the role of the utilization of combined strategies in reading comprehension and main idea identification. The main focus of this review will be on prior studies that are most pertinent to the present research.

Strategy Awareness and Reading Proficiency

The results of a study by Block (1986) reveal that adult skilled readers are more aware of the strategies they use than unskilled readers. Also, they use strategies with more flexibility. Further, skilled readers are more able to monitor their comprehension than unskilled readers. They also moderate their strategies according to the type of text they are reading and the purpose for which they are reading. Skilled readers are also able to distinguish between main ideas and details as they read; they are able to relate new information with information that appeared earlier in the text and combine it with their prior knowledge. Block's study showed that L2 readers do not appear to use different strategies from those of L1 readers. Readers of an L2 seem to bring with them their L1 reading strategies to process and approach the L2 text with its specific language features. Block's study supported the notion that the implementation of cognitive strategies does not depend on the language proficiency of the reader.

A study by Carrell (1989) tested two groups of subjects. The first group were native speakers of Spanish studying intermediate level English as a second language at a university level institute and the second group consisted of native speakers of English learning Spanish as a foreign language. Subjects were asked to read two texts, one in L1

and one in L2. Carrell controlled schemata or background knowledge, as both texts were on the general topic of "language". Next, the subjects answered multiple choice comprehension questions about the text, followed by a strategy use questionnaire. Broadly Carrell (1989) stated that teaching L2 readers to use various global reading strategies helps them to improve their reading comprehension skills. These global reading strategies allowed subjects to differentiate between main ideas and supporting details. More specifically, Carrell (1989) discovered that subjects who could differentiate between main ideas and supporting details comprehended EFL reading texts much better than others who were not aware of, and did not use, the required strategies for doing so. Carrell's (1989) study of metacognitive awareness of L2 readers' strategies, in both their L1 and L2, and the relationship between this awareness and their comprehension, reveals that ESL readers with high L2 competency preferred using global strategies that focus on comprehension monitoring and recognition of the text structure, whereas less proficient L2 readers preferred using bottom-up, or local strategies, that deal with the comprehension of words and sentences at the linguistic level. Similarly, L1 readers showed a preference for global strategies and their performance correlated negatively with the use of local strategies. Carrell (1989) correlated strategy use with comprehension achievement. She concluded that successful L2 comprehenders use top-down and meaning-based approaches similar to those of L1 readers.

Furthermore, Vann and Abraham (1990) divide knowledge into three types: procedural knowledge or knowing how to work on a task; background knowledge or schemata, which would enable learners to match the new information represented in the task with their existing framework of knowledge; and linguistic knowledge or knowledge

of the language itself, which could be either a conscious awareness of language functions and features or unconscious knowledge. They argue that FL tasks demand various levels of cognitive control that manage the selection of appropriate knowledge and strategy with which problems of meaning and form in the text are solved. Thus, insufficient knowledge of the required strategies for a task might weaken the learner's engagement. Vann and Abraham (1990) conducted a study on Arabic EFL learners with the aim of determining how successful and unsuccessful learners might differ in the quantity and quality of reading strategies they used in different tasks. This study provides counter-evidence for the claim that unsuccessful learners are inactive strategy users. Two unsuccessful learners in this study were found to be remarkably similar to successful EFL learners in their use of strategies (as they appear to be active strategy users). However, they usually failed to apply the appropriate strategy for a particular task due to their lack of training on the appropriate use of these strategies.

Studies by Anderson (1991) and Kozminsky & Kozminsky (2001) demonstrate that knowledge of reading strategies includes various factors that affect the reading process, such as what reading strategies to apply, how to apply them efficiently, when each strategy should be applied and why. Such knowledge enables readers to identify, select and use appropriate strategies (Anderson, 1991; and Kozminsky, & Kozminsky, 2001).

Anderson (1991) investigated individual differences in strategy use on two types of reading tasks: standardized reading comprehension tests and academic texts. Subjects were 28 Spanish speaking adult students. Pritchard's inventory of reading processing strategies was used as a starting point in classifying the reading strategy data and a multiple-choice strategy checklist was used for classifying the test-taking strategy data

reported. Subjects took a reading comprehension test consisting of fifteen English reading passages each followed by two to four multiple choice questions. The questions were categorized according to three types of reading skills, including identifying main ideas. The qualitative and quantitative results of this study demonstrate that participants who used more strategies comprehended better in all the tasks of the experiment. From the frequency of the reported strategies used, Anderson (1991) noted that unskilled readers seem to be aware of the correct strategies to use, as they appear to be using the same kinds of strategies used by skilled readers while reading and answering the comprehension questions. However, unskilled readers may not know how to determine if they are successful in their application of these strategies.

Along similar lines, Feng and Mokhtari (1998) examined the strategies used by native speakers of Chinese while reading expository texts in English and Chinese. Twenty adult native speakers of Chinese read and verbally reported their thinking process while reading the text. Each subject read a total of four passages varying in difficulty levels (easy/difficult) in both English and Chinese. Researchers controlled the effect of prior knowledge by selecting passages whose topics were generally familiar to the subjects. The purpose of this study was to investigate whether differences in strategy use exist among the 20 subjects when reading English and Chinese, and whether text difficulty affects strategy use. The results showed that subjects demonstrate awareness and use of various reading strategies while reading English and Chinese. Strategy use in their verbal reports suggested that reading strategies were used more frequently in English than in Chinese, and more frequently for difficult texts than for easy ones. Furthermore, the number of strategies used for the Chinese texts did not change between easy and difficult

texts, while for English, strategy use increased when going from easy to difficult. Feng and Mokhtari (1998) concluded that skilled readers are more aware of the strategies they use than unskilled readers. Skilled readers flexibly use strategies; they adjust strategy use to text type and purpose of reading. Furthermore, on the basis of think-aloud protocols and strategy questionnaires applied to capture reading strategies of adult EFL subjects, Levine and Reves (1998) assume that readers who are aware of the strategies they use are also able to differentiate between appropriate and inappropriate strategies for specific reading situations. Consequently, they are able to monitor their reading comprehension process.

Comprehension Monitoring

Block (1992) compared the comprehension monitoring process used by first and second language readers of English. The subjects were 25 proficient and non-proficient readers of English. The results revealed that to solve a vocabulary problem, proficient readers used background knowledge, decided on whether the word contributed to the overall meaning, used syntactic clues, and reread the sentence. These meaning based strategies are categorized as global strategies. In contrast, non-proficient ESL readers utilized fewer strategies to figure out the word meaning and focused more on simply identifying lexical problems. Block (1992) concludes that differences that exist in comprehension monitoring strategies between L1 and L2 readers seem to be due more to reading proficiency than to the language background of the readers, because skilled L2 readers are as proficient as skilled L1 readers in recognizing and solving problems of a reading text.

Knowledge of The Text Structure

Raymond (1993) specifically investigated the effect of structure strategy (strategies of recognizing the organizational structure and how ideas are arranged in a text) on the comprehension of expository texts. The subjects were native speakers of English learning French as a second language. Raymond compared two groups of participants: one group received training in strategy use and the other group did not. The findings indicated that the experimental group outperformed the control group by recalling more idea units. Thus Raymond's study supports the notion that knowledge of the text structure is crucial for reading comprehension. Readers must first become aware of text structures. By recognizing the organizational structures of texts, readers can perceive how authors arrange ideas and can determine which types of structures are utilised to interrelate ideas to each other (Decker, 1994).

Carrell (1989) suggests that local strategies alone are usually used by non-proficient readers, but a combination of local and global strategies are used by proficient L1 and L2 readers. Hence, readers need to use global strategies combined with other types of strategies, such as local strategies, in order to comprehend a reading text. The utility of combined reading strategies in L2 will be discussed in the following section.

Combined Strategies

In an attempt to assess the effects of using both local and global strategies together, Lontas (1999) assessed the comprehension of vivid phrasal idioms and the comprehension of authentic texts in university-level L2 learners of Spanish, French and German. Lontas utilized a number of tasks that includes text reading, international reading tasks, idiom detection tasks, think-aloud reading tasks and retellings. Strategies

used by the learners included: word recognition, contextual support, and background and world knowledge. These processes cannot be categorized separately as local and global strategies because the successful comprehenders used a combination of both local and global strategies. These findings suggest that if both types of strategies are used together at the same time, the L2 readers will comprehend better.

Moreover, Eskey (2005) suggests that successful reading begins with fluent decoding, but this must be accompanied by the reader's construction of a meaning for the text, which goes beyond decoding. Although every text provides information for the reader, the meaning of the text is ultimately determined by readers who can relate that information to their prior knowledge. Therefore, decoding, which is one of the local strategies, is not sufficient for comprehending the text; it must be accompanied by a prior knowledge activation strategy, which is one of the global strategies (Eskey, 2005). These results mirror Sarig's (1987) findings, where global strategies used without local strategies did not prompt comprehension. However, these results stand in contrast to Block's (1986) results, in which the use of global strategies alone without local strategies led to successful reading comprehension.

According to Sarig's (1987), Lontas's (1999) and Eskey's (2005) point of view, in order to comprehend the whole text, a combination of both local and global strategies is important, since the utility of global strategies alone, such as world knowledge, would not lead to an understanding of a text without using local strategies of word recognition and sentence comprehension. Besides these two types of global and local strategies there are also problem-solving strategies, which contribute to the comprehension process. The role of L1 and L2 problem-solving strategies will be considered in the next sections.

2.6.3- L1 Problem-Solving Reading Strategies

The reading process can be seen as a problem solving process. Olshavsky (1976) assumes that a reader with a goal of comprehending identifies problems and applies strategies to solve these problems. Thus, problem solving strategies serve to solve problems encountered in reading comprehension. Olshavsky (1976) noticed that re-reading and inferencing were used by the subjects to solve the problem of failure to understand words and clauses.

In addition, Hare (1981) studied undergraduate students' use of problem solving strategies while reading high and low knowledge articles. She found that good readers described twice as many problem solving strategies as poor readers in the high knowledge article. Types of problem solving strategies also varied as a function of the passage and of the readers' ability. Re-reading was the most frequently mentioned strategy for good and poor readers on both passages. However, reading selectively, which means selecting and reading the important parts of the text where the main points are expected to be, as well as adjusting reading speed strategies, differentiated between good and poor readers, as reading selectively was positively associated with reading achievement.

Furthermore, Hare and Smith (1982) found that good readers reported the use of re-reading, selectively reading, imaging, changing speed, summarizing and concentrating on important information. Hare and Smith (1982) noticed that re-reading and imaging were the most frequently cited problem solving strategies for reading narrative passages, and re-reading and changing speeds were the most frequently cited strategies for reading expository texts. Therefore, readers need to be aware of and able to use problem solving

strategies as they play a central role in the reading process. Moreover, recognizing reading comprehension problems and being able to solve them by using the required strategies is an important aspect of being a good reader (Olshavsky, 1976).

2.6.4- L2 Problem-Solving Reading Strategies

L2 problem-solving strategies that are listed in Table 1 above were found to solve L2 reading comprehension problems that include: lack of comprehension monitoring, lack of awareness of rhetorical structure of L2, vocabulary difficulties, lack of prior knowledge (Kim, 1995). These problem-solving strategies include guessing the meaning of unknown vocabulary, rereading to increase understanding, and adjusting the reading speed to comprehend the text information. Kim's (1995) study of Korean high school EFL students concludes that using problem-solving strategies diminishes problems of both language and reading because learning the language takes place through using the appropriate strategies in reading it.

Barnett (1988) investigated real and perceived strategy use among university level students and its effect on reading comprehension. Subjects answered a background knowledge questionnaire, read an unfamiliar text in French and then recalled it in English. Results of this experiment suggest that as strategy use increases, L2 students' perception of strategy use also increases, and the increase of these two variables contributes to the increase of comprehension. Barnett (1988) concluded that there is a significant interaction between strategy use and perception of strategy use, and L2 reading comprehension, since readers who use certain problem-solving strategies understand more of what they read than readers who do not use such reading strategies. Similarly, readers who perceive or think that they use reading strategies generally

understand more of what they read than those who do not perceive themselves as using such strategies.

Along the same lines, Najar (1998) conducted a study of the effects of using cognitive reading strategies (that include problem-solving ones) on reading tasks in the L2 classroom. Najar found that not all reading strategies have equal effects on helping L2 readers to identify main ideas and comprehend a text. Data from this study indicates that problem-solving reading strategies, such as vocabulary identification and guessing meaning lead to more successful task performance because they encourage L2 readers to work with the text in order to comprehend it. In addition, readers indicate an awareness of their lack of comprehension when they perceive a reading comprehension problem and try to solve it (Stromso, Braten & Samuelstuen, 2003). As a result, they might attempt to repair comprehension by using the appropriate problem-solving strategy (Stromso, Braten & Samuelstuen, 2003). Besides global strategies and problem-solving strategies there are also support reading strategies, which play a role in the comprehension process. The next section discusses the role of L1 support reading strategies in L2 reading comprehension and main idea identification.

2.6.5- L1 Support Reading Strategies

Support reading strategies can be used by readers to help process and comprehend texts. Researchers discuss a number of support strategies such as self-questioning, underlining, note-taking, summarising, and highlighting words or phrases (e.g. Andre & Anderson, 1978; Poostay, 1984; Mayer, 1985; Schellings & Van Hout-Wolters, 1995; Bailey, 2002).

Brown (1985) points out that in many L1 reading workbooks, instruction regarding

main ideas tends to focus on testing and practice using paragraphs followed by lists of questions. The focus is on finding the right answer. Little attention is paid to the thinking or metacognitive processes involved in arriving at answers; such metacognitive processes are effective in main idea comprehension as well as in text comprehension.

Andre and Anderson (1978) point out that a self-questioning strategy is more effective than a passive support reading strategy of rereading because it incorporates several metacognitive components. That is, it encourages readers to set purposes for reading, to identify or underline important points of the text, to generate questions that require comprehension of the text in order to be correctly answered, and to think of possible answers to these questions. Thus, the self-questioning strategy leads readers to an active monitoring of the comprehension process and to the engagement of strategic actions. Correspondingly, Anderson (1980) found that written self-questioning as a cognitive strategy helps in identifying the main idea of the text. Although it is similar to note-taking, in that a written record incorporates an idea, in an important sense it is different, because the written idea is in the form of a question. Anderson (1980) assumes that readers generate a question about every important idea in the text. However, Anderson points out that reading text materials from the curriculum is normally different from other forms of reading in that it is strongly criterion oriented, which would require more use of a questioning strategy on the part of the reader.

Anderson (1980) assumes that students process texts with the expectation of learning something specific from them. Consequently, explicitness of their purpose for reading affects how students read and how much they learn. For instance, in an academic reading context, when students read a chapter of a text book, they probably read to determine the

author's main ideas and how they relate to each other. Students in such cases often generate their own support-reading strategies such as note taking, which refers to writing information about the text in one's own words at the time of reading. Furthermore, they underline information in the text or highlight portions of the text during reading. Outlining or summarising refers to writing information about the text in one's own words after reading a portion of the text.

A number of studies have explored the effects of using support strategies on reading outcomes. Anderson's (1980) and Cook and Mayer's (1985) experiments on L1 reading showed that the underlining strategy, as a search and select process, causes readers to score higher on a recall test than in a reading only condition. Likewise, Poostay (1984) studied the effects of underlining as an organizational strategy on reading comprehension. He assumed that underlining presents important words and phrases in their original context, highlights key concepts in sequence, and teaches selective comprehension, which means that readers learn to select important and meaningful ideas. Schellings & Van Hout-Wolters (1995) stress that the positive effect of underlining of text fragments on the recall of these elements is due to the extra reading time and cognitive efforts that readers spend on the fragments they underline. Furthermore, Bailey (2002) argues that highlighting words or phrases in a reading passage increases the recall of those words.

In a similar vein, Brown (1985) and Schellings and Van Hout-Wolters (1994) examined and compared the effects of note-taking and underlining strategies on L1 reading and stated that these strategies have positive effects on identifying main ideas. In addition, Brown studied engagement in self-questioning as a way to facilitate learning from text. The high school students who participated in this study were taught to locate

sections of text containing important points and to generate questions about them. She found that generating such questions facilitated learning better than simply reading text or making up questions without regard to main ideas. In addition, in two experimental studies on students' abilities to read for the main idea, Taylor, Olson, Prenn, Rybczynski and Zakaluk (1985) revealed a number of support strategies that can be effective in terms of L1 reading for the main idea in content areas. They noted that both mapping techniques, in which readers write down the key ideas of content material, and summarising procedures have positive effects on readers' main idea recall, as well as on their recall in general.

2.6.6- L2 Support Reading Strategies

The literature on second language reading contains relatively few studies of support reading strategies. The studies indicate that this type of strategy plays an important role in L2 reading comprehension as it includes note-taking, highlighting, underlining, and translating strategies. These strategies support the comprehension of main ideas because their utility helps readers to locate and focus on the important information in the text (Najar, 1998).

Mokhtari and Sheorey (2002) found that ESL learners' reading ability is related to their awareness and use of reading strategies while reading. They assumed that skilled L2 readers can compensate for a lack of English proficiency by increasing awareness of reading strategies and using these strategies, including support strategies, to develop their comprehension. Further, Mokhtari and Reichard (2002) recommend providing L2 readers with the knowledge and confidence that enable them to monitor their comprehension and inspire them to pursue their reading through the use of support reading strategies.

More specifically, Najar (1998) argues that support strategies, such as full translation, note taking, underlining and highlighting key ideas, contribute to main idea recognition and to organizing information into levels of importance. Note taking also directs readers' attention toward certain information, such as important points, and consequently, this increases their recall of information related to the main ideas. These strategies might be included in the utility of separating main idea from supporting details strategies that help readers to identify the main idea of a text.

A key point here is that L2 readers may transfer all the above mentioned strategy types from their first language to their second or foreign language. Of course, a prerequisite to this transfer is that they must be aware of and using reading strategies in their L1. The next section examines evidence of strategy transfer between L1 and L2.

2.7. Reading Strategy Transfer

This section discusses previous research on the transfer of reading strategies from L1 to L2, even when the languages use different scripts and structures. Second language readers have to learn to read only once in their lives, since they transfer their L1 reading strategies into their L2 reading. There is evidence that first language strategies do transfer, allowing readers to capitalize upon their L1 reading strategies in order to make sense of the L2 (Raymond, 1988; Brisbois, 1995). Since "L2 reading is not a monolingual event, L2 readers have access to their L1 as they read, and many use it as a strategy to help comprehend an L2 text" (Upton and Thompson, 2001, p. 469). Research has confirmed that readers' processing procedures and various aspects of cognitive and metacognitive reading strategies are transferred from L1 into both oral and written forms

of L2 production and comprehension (Sarig, 1987; Koda, 1987; Afflerbach, 1990; Carrell, 1991; Jimenez, Garcia & Pearson, 1996; Eskey, 1997; Feng and Mokhtari, 1998; VanDuzer, 1999; Salataci & Akyel, 2002). Thus Dekeyser and Juffs (2005) assume that the L1 processing strategy is a source of L2 performance.

Koda's (1987) investigation of Japanese FL learners indicates that strategies developed in L1 reading are transferred to L2 reading even when the scripts of L1 and L2 are different. Transfer phenomena are more obvious among beginning L2 readers, especially FL learners who learn L2 as a foreign language in a context where the target language is not used. In addition, L2 readers might bring their L1 orthographic knowledge and corresponding strategies to the process (Koda et al., 1998).

Sarig (1987) claims that there is a strong relation between L1 reading strategies and L2 reading proficiency and that the reading processes in L1 and in L2 are related to each other. Consequently, the process of reading in a foreign language is viewed as the interlingual transfer of reading skills from the reader's native language. Furthermore, success in L2 reading comprehension is viewed as dependent on the success of L1 reading comprehension.

Correspondingly, Carrell's (1991) study demonstrates that "both first language reading ability and second language reading proficiency have significant effects on second language reading ability" (p.167). FL readers transfer their good L1 reading strategies and skills to their L2 reading tasks. This concurred with the results of Koda (1988), Koda (1993), Davis and Bistodeau (1993), Upton (1997), Upton and Thompson (2001), and Afflerbach (1990), all of whom found that the strategies which readers use when they interact with printed information play an important role in both first and

second language reading.

Accordingly, Bernhardt and Kamil (1994) suggest that reading performance in L2 is largely shared with reading ability in L1. First language acquired strategies and operations are transferable and available within a second language context (Jimenez, Garcia & Pearson, 1996). However, Brisbois (1995), and Ulijn and Meyer (1998) assert that L2 readers can use L1 strategies only once they achieve a certain threshold vocabulary base in L2. Brisbois (1995) asserts that the relationship between L1 and L2 reading may vary according to the L2 proficiency level. Hence, Alderson (2000) and Heinz (2004) posited that reaching the necessary language threshold, which is located somewhere at intermediate levels of L2 reading proficiency, allows students to capitalize upon their L1 skills in order to make sense of their L2.

The transfer phenomenon includes several processes such as mental translation, word recognition, L1 background knowledge utility and thinking in L1 while reading L2 texts. The following paragraphs will shed some light on these issues.

Research has demonstrated that mental translation is a common cognitive strategy for adult L2 readers. When EFL readers attempt to process L2 texts, they rely on mental translation in which they process L2 words, phrases or sentences in L1 forms while reading L2 texts (Kern, 1994). Cohen (1995), Upton (1997), and Upton and Thompson (2001) suggest that L2 readers usually use their L1 for more than mental translation. It seems that they use their L1 to think about and process information that is being read in the L2. For instance, L2 readers usually shift into their L1 to translate a word or a phrase or to confirm their comprehension of a sentence. They also use their L1 background knowledge, their L1 word recognition strategies, and their L1 decoding skills in order to

help them to follow the overall meaning of the text.

By the same token, Jimenez, Garcia & Pearson (1996) and Eskey (1997) argue that the more students read in their native language, the more likely they are to become proficient readers in their FLs, because good reading strategies transfer across languages, especially when languages are similar to each other. Concerning the same issue, VanDuzer (1999) points out that adult ESL learners come with different reading backgrounds and experiences. Some of them are fluent readers in their first language, while others are not. Also, their view of the reading process and literacy is influenced by their L1 reading practice and their culture. Consequently, they will approach reading in different ways from native speakers because they bring all the above-mentioned factors and effects to the L2 reading process. Feng and Mokhtari (1998) agree that level of language proficiency, level of reading ability, and type of language used (L1 or L2) all play a critical role in determining the type and amount of strategy transfer from one language to another. In addition, Feng and Mokhtari contend that, in spite of the differences that exist between first and second languages, reading strategies developed in the first language tend to be transferred to a second language. In contrast, Feng and Mokhtari speculate that students who had not developed any helpful reading strategies in their L1 and later on developed some useful L2 reading strategies might transfer their L2 reading strategies to enhance their L1 reading. The next paragraph considers studies examining such situations.

Salataci and Akyel (2002) investigated the reading strategies of Turkish EFL readers in Turkish and English and the possible effect of reading instruction on reading in both languages. The data came from semi-structured interviews, observation, a background

questionnaire, and think-aloud protocols. The results of this study indicate that the target group, who had been taught EFL reading strategies, transferred them to their L1 reading, thereby improving their reading in both languages. In fact, after instruction, there were significant increases in frequency of use of strategies in both L1 (Turkish) and L2 (English) reading. Thus the results of this study suggest that reading strategies transfer back and forth between L1 and L2 and that strategy instruction for L2 reading can have a positive effect on reading strategy use and reading comprehension in both L1 and L2.

Taking the reverse perspective, Birch (2002) investigates the positive and negative transfer of L1 strategies to English reading. The subjects were four readers of ESL with Arabic, Spanish, Greek, and Chinese as their respective native languages. Birch found that in cases where L1 and L2 have different writing systems (e.g. logographic, syllabic, and alphabetic), there may be a negative impact on L2 reading strategy use. However, where the writing systems are similar between the L1 and L2, there may be a positive impact on L2 reading comprehension strategy development and use such that those readers may positively transfer their L1 strategies to help them comprehend L2. Birch found that different L1 and L2 writing systems lead to negative strategy transfer, which could be the main cause of misinterpretations of the main idea(s) of texts. Since L1 strategy transfer plays an important role in main idea comprehension, it is crucial to discuss in more detail the effects of different L1 strategies on L2 reading strategy use and comprehension.

2.7.1. Effects of Differences between L1 and L2 on Reading Strategy Use

The relationship between the L1 and L2 is one of the central issues in L2 reading comprehension, since L1 transfer plays a fundamental role and greatly affects L2 reading

strategy use. Thus, when the L1 is completely different in its structure and orthography from the L2, it might have a negative impact on L2 reading strategy use and consequently on reading comprehension. For instance, in spite of the considerable evidence that readers' sets of linguistic knowledge and processing skills and strategies interact during L2 comprehension (Koda, 1993), prior orthographic experience also has a strong effect on the development of word processing skills and reading comprehension strategies (Randall & Meara, 1988; Koda, 1988; Koda, 1996; Jimenez, Garcia & Pearson, 1996; Koda, Muljani & Moates, 1998; Bengeleil & Paribakht, 2004). For example, Chinese and Arabic speakers would find it relatively more difficult than French or Spanish speakers to find cognates or to guess the meaning of unknown words when reading English texts, simply because Arabic and Chinese have different orthographic systems and different directions of scripts (and fewer cognates with English). Koda et al. (1998) suggest that even when processing skills and reading strategies are well developed, they are not readily available during L2 processing without substantial adjustments among L2 readers from a structurally different L1 orthographic background. In fact, L1 writing systems have a deep and long lasting impact on the visual processing procedures and strategies of L2 reading comprehension (Koda, 1996; Rivera, 1999).

In the same vein, Randall and Meara (1988) investigated native Arabic speakers' orthographic search strategies involving Arabic or Roman letters. They found that Arabic speakers react to Roman letters in the same way as they react to the recognition and the reading of Arabic letters. Although they argue that the strategy of Arabic learners faced with English words is very different from that of native English speakers, the researchers do not show exactly how or why such differences exist. They simply assert that "when L1

and L2 are very different, two separate attack strategies for reading will develop” (Cowan & Sarmad, 1976, cited in Kern, 1994, p. 455).

Similarly, Tomitch (2000) and Ryan and Meara (1991) point out that Arabic-speaking English readers may be faced with word processing difficulties that are rather different from those faced by other readers of English. These difficulties may be related to the lexical structure and orthography of Arabic, since Arabic words are very different from words in Indo-European languages, where words tend to be made up of relatively stable roots and a system of affixes that are added on to these roots. Arabic-speaking readers may have different English reading problems from other readers of English, since they would need to rely on text structure and lexical structure that differ from their L1 in order to determine the main ideas in texts. As main idea identification is one of the most important skills underlying text comprehension and also is the focus of the present study, the following section will be devoted to it.

2.8. Main Idea Identification Skill

According to Isakson, Miller, & O’Harra, (1979), the main idea of a text is a statement accompanied by all the pertinent details assigned to it. The details and the main idea are identified by “a part-whole” relationship, which means that the main idea is the whole of which each element is a part. The main idea is treated by Isakson, Miller, & O’Harra, (1979) as if it was a fact to be remembered or recognized. Similarly, according to Baumann and Serra (1984), the main idea of a text signals to the reader the most important statement the author is presenting to explain the topic. The main idea can sometimes be hiding somewhere behind all the details in the text, it can be at the

beginning or end, or it may be stated in only some of the paragraphs. Hence, the main idea can be stated explicitly or implicitly in texts (Phillips & Sotiriou, 1992).

The identification of main points is considered to be one of the basic skills in reading comprehension. It is also a critical component in the understanding of a text. According to Taylor, Olsol, Prenn, Rybczynski, & Zakaluk (1985), the ability to read for the main idea is the ability to form a gist of whatever was read, comprising the most important points in the reading material. Furthermore, in most academic reading situations, we read for the writer's main points (Tomitch, 2000). Therefore, when studying a text, a reader must be able to distinguish between main points and subsidiary points. Similarly, Broek et al. (2003) state that detecting the main idea of most texts is not a simple task, because it involves recognising the connections between the different elements of the text, distinguishing the whole structure of the text, and then extracting the most principal statement from this structure. Broek et al. (2003) insist that the recognition of the connections among the elements and between the larger units of the text is crucial in forming a coherent representation of the text. Therefore, this is fundamental for identifying the main idea of the text. As well, understanding these connections is the major factor in the development of readers' main idea comprehension skills. In a similar vein, Stevens et. al (1991), Hennings (1991) and Eskey (1997) assume that main idea identification requires the readers to realise the connections between the new knowledge and their prior knowledge about the topic, and to associate them in order to make generalizations and elaborations from this information.

Despite the importance of main idea identification, several studies (Van Dijk & Kintsch, 1983; Schellings & Van Hout-Wolters, 1995; and Brown & Day, 1983) show

that many students lack proficiency in identifying these main points in their first language (L1). This is because main idea identification requires full engagement in relatively complex cognitive processing of the text, which is essential in reading comprehension (Broek et al., 2003).

2.8.1. Definitions of Main Idea and Main Idea Identification Task

Main idea comprehension research is based on the propositional analysis of Kintsch, W., Kozminsky, E., Streby, W., McKoon, G., and Keenan, J. (1975) and Kintsch (1988), in which they analysed the reading text into idea unit levels. Kintsch and Keenan (1973) suggest that sentences have a base structure consisting of propositions which represent their semantic content. They numbered the propositions for the purpose of identification, showing the hierarchical relations among them. Kintsch and Keenan (1973) indicated that first level propositions comprise the most important ideas in the text. Then, all propositions directly related to the propositions at the first level can be added to form a second level. Second level propositions are followed by the idea units that support or explain the second level propositions to form third level propositions and so on. This type of analysis was validated by Kintsch and Van Dijk (1978) and used by Zerhouni (1996), Schellings, Van Hout-Wolter, and Vermunt (1996) and Roloff (1999) to assess L2 reading comprehension. The following table summarizes the differences between various authors' definitions of main idea and, where applicable, tasks involved in main idea identification. In this thesis we are adopting Baumann and Serra's (1984) definition of main idea, because their definition of the term main idea perfectly matches the intended definition of main idea or what we mean by main idea in this study. They also located it in the same locations of main idea in the reading texts used in this study. The means of

main idea identification mentioned by Tomitch (2000) and Broek et al. (2003) are also adopted in this thesis because these are the exact tasks that the present study aims to determine.

Table 2: Definitions of Main Idea and Main Idea Identification Task

Author	Main idea definitions	Means to Main idea identification
Isakson, Miller, & O'Harra (1979)	-a fact to be remembered or recognized. -a statement accompanied by all the pertinent details assigned to it.	
Baumann and Serra (1984)	-the most important statement the author is presenting to explain the topic. -It can sometimes be hiding somewhere behind all the details in the text, it can be at the beginning or end, or it may be stated in only some of the paragraphs.	
Taylor, Olsol, Prenn, Rybczynski & Zakaluk (1985)		-Forming a gist of whatever was read comprising the most important points in the material.
Stevens et. al (1991), Hennings (1991)		-The ability to relate the text's new information and background knowledge in order to comprehend the main points.
Phillips & Sotiriou, (1992)	-main idea can be stated explicitly or implicitly in texts.	
Eskey (1997)		-The ability to relate textual information and the reader's prior knowledge to comprehend the main idea of the text.
Tomitch (2000).		-distinction between main points and subsidiary points.
Broek et al. (2003)		-Recognition of the connections between the different elements of the text. -distinguishing the whole structure of the text, and then extracting the most principal statement from this structure. -a full engagement in relatively complex cognitive processing of the text.
O'Hear and Ashton (2003)	Main ideas would be located up front where they will be easily seen. Also, main idea clues usually used to help readers identify the main idea of individual paragraphs.	

Little is known about how learners of English as a foreign language (EFL) identify main points in reading texts. Most of the research on main idea comprehension of texts to date has looked primarily at the process of finding main ideas in L1 reading (e.g. Brown, 1985; Meyer, 1985; Collins, 1994; Chen & Graves, 1995; Schellings & Van Hout-Wolters, 1995; Surber, 2001; Bailey, 2002; and Broek et al., 2003). The focus in much of this literature is on school-age children in terms of how they learn to read in their L1 and how they develop their reading proficiency.

Although some research has also provided us with important information about L1 adult readers such as (Rinehart & Platt 2003), it has not gone very far in terms of analyzing the factors underlying their main idea identification skills. Researchers have paid even less attention to foreign language (FL) readers' metacognitive knowledge of how they conceptualize their reading processes for main idea identification and meaning-making. Furthermore, many researchers also essentially equated strategy knowledge with the strategy use.

Thus researchers measure either one or the other independently and correlate the results with text recall. But to our knowledge, no one has looked at reading comprehension strategy awareness and their effective use in the same population by additionally debriefing subjects regarding their actual strategy use during a reading task. One of the principle aims of the present study is to determine whether there is a facilitatory relationship between strategy awareness and use and whether either of these has any effect on the comprehension and recall of main ideas. The present study attempts to address these issues in L2 adult readers, thereby adding to our understanding of the reading comprehension process in these less studied populations.

2.9- Summary

In recent years, researchers have paid a great deal of attention to reading strategies in L1 and L2 contexts and have particularly focussed on the types of reading strategies that L2 readers develop to enhance their reading comprehension. More specifically, they have investigated the effect of strategy awareness and use on reading comprehension. Carrell (1989) found that global reading strategy awareness enables FL readers to differentiate between main ideas and supporting details. She concluded that L2 reading comprehension is correlated with strategy awareness and use. Also, Levine and Reves (1998) found that readers who are aware of the strategies they use are also able to differentiate between appropriate and inappropriate strategies for specific reading situations.

Concerning the effect of using specific types of reading strategies, Chen and Graves (1995), Bensoussan (1998), Anderson (1999) and Lin (2002) agree that background knowledge activation is one of the global strategies that facilitates main idea comprehension. Furthermore, Barnett (1988), Najar (1998), Stromso et al. (2003) and Samuelstuen (2003) confirmed that using problem-solving strategies enhances reading comprehension. Additionally, Najar (1998) found that using support strategies of underlining, note taking and highlighting key ideas is incorporated in main idea recognition and organization. Referring to the effect of L2 reading proficiency level on strategy awareness and use, Block (1986) and Feng and Mokhtari (1998) revealed that skilled readers are more aware of the strategies they use than unskilled readers. Therefore, Mokhtari and Reichard (2002) recommend providing L2 readers with strategy knowledge that inspires them to pursue their reading.

In the matter of the effect of strategy transfer from L1 to L2, Koda (1988, 1993), Davis and Bistodeau (1993), Upton (1997), Upton and Thompson (2001), Afflerbach (1990), Cohen (1995), Salataci & Akyel (2002) and Birch (2002) confirmed that readers learn to read only once in their lives, so L1 reading strategies transfer to L2 reading even when the languages' structures and scripts are different from each other.

Relevant to the effect of different L1 reading experience on L2 reading strategy use and L2 reading comprehension, Randall and Meara (1988), Tomitch (2000) and Ryan & Meara (1991) revealed that Arabic speaking English readers are faced with several difficulties. These difficulties are related to the different lexical structure and orthography of Arabic when they read English, as their L1 strategies did not help them in their L2 reading. According to Rnadall and Meara (1988), there are a number of reasons why native Arabic speakers develop reading strategies which are systematically different from the strategies that are characteristic of native speakers of English. First, Arabic script is written from right to left (Abu-Rabia, 1998; Rnadall and Meara, 1988). This is expected to produce right-to-left reading strategy and eye movement, which is the opposite movement for English reading (Rnadall and Meara, 1988). Second Arabic is a consonantal language. In normal Arabic script the vowels are not marked and the reader has to supply the correct vowelizing from an understanding of the context in which the word appears. This fact might cause the sentence to be read differently than an English one (Abu-Rabia, 1998). Third, Arabic words are usually short; most of them are derived from a trilateral root with the addition of prefixes, suffixes and infixes. This may also produce different reading strategies from English (Abu-Rabia, 1998). Finally, Arabic characters are much less redundant than Roman letters. In some cases only the presence

or absence of a single dot above or below a standard character shape distinguishes between letters (Rnadall and Meara, 1988). This could lead to the adoption of quite different reading strategies in native Arabic speakers who are looking for small differences between letters. This may also lead them to read for details and to focus on reading word by word, which in turn leads to loss of the meaning of the text as a whole. Consequently, the utility of these L1 reading strategies of focusing on the very small details in each word could be one of the main reasons that hinder the native Arabic speakers from comprehending and identifying the main idea of the L2 text.

According to Tomitch (2000), who examined twelve EFL reading text books, none of them contain clear and established criteria for main idea identification. Also, none of them explicitly told students about EFL reading strategies that differ from their L1 reading strategies in order to help them comprehend the reading texts, such as using text structure in order to determine the main ideas in the text. Thus, there is little reason to assume that L2 readers know how to approach a text to understand the main idea(s) in terms of strategy awareness and use is necessary. As yet, relatively little work has been done on the role of the readers' L1 on L2 strategy use for main idea identification, particularly in the cases where readers' L1 (e.g. Arabic) is typologically different from the target language. Therefore, the following questions inspired the author to conduct a pilot study to at least partially explore these issues.

- 1- Are EFL readers aware of reading strategies of main ideas identification?
- 2- Do EFL readers use Global, Problem-solving and Support reading strategies in EFL academic reading?
- 3- Which of the above mentioned strategies help Arabic speaking EFL readers to identify

the main idea when reading?

The following chapter briefly discusses a pilot study designed to address these issues.

CHAPTER THREE

The Pilot Study

3.1. Introduction

This pilot study was done to assure that the experimental design and the methodology were accurately developed and appropriate to addressing the research questions of the main study. Any limitations and deficiencies in the pilot study could thus be avoided or corrected in the design of the main research study, thereby assuring more accurate results.

As was noted in earlier chapters, the identification of main points is considered to be one of the basic skills in reading a text (Tomitch, 2000). It is also a critical component in the understanding of a text. When studying a text, a reader must be able to distinguish between main points and subsidiary points. Several studies (Van Dijk & Kintsch, 1983, Schellings & Van Hout-Wolters, 1995, Brown & Day 1983) show that many students lack proficiency in identifying these main points in their first language (L1). However, little is known about how learners of English as a foreign language (EFL) identify main points in reading texts.

The subjects in this study were EFL Libyan university graduate students. They had not received instructional strategies in EFL reading during their education, because the Libyan curriculum and the EFL education system emphasize the teaching of grammar above all else. Moreover, Libyan EFL teachers, who also experienced the Libyan curriculum during their own education, received no training in reading strategies and are thus not equipped to teach them.

The pilot study reported on here investigated native Arabic speaking readers' awareness and use of EFL reading strategies, including the identification of the main

ideas of a text. It is concerned with Libyan Arabic-speaking readers' ability to interact with written English and the types of reading strategies that they might use to identify the main idea of the reading text. This study focused on three types of reading strategies: Global reading strategies, problem-solving strategies and support strategies, as categorized by Mokhtari and Sheorey (2002). According to these authors, Global strategies include using background knowledge, identifying the purpose for reading, and self questioning. Problem-solving strategies include deciding what to focus on, getting back on track when concentration weakens, and monitoring comprehension. Support reading strategies include note taking, underlining key ideas or words, and listing major ideas.

The pilot study examined four Libyan Arabic speaking EFL readers' awareness of the above mentioned strategies, their ability to use them during reading, and the usefulness of these strategies for main idea comprehension and identification.

The research questions were:

- 1- Are EFL readers aware of reading strategies of main idea identification?
- 2- Do EFL readers use Global, Problem-solving, and Support reading strategies in EFL academic reading?
- 3- Which of the above mentioned strategies help EFL readers to identify the main idea when reading?

It was hypothesized that these participants might not use these types of reading strategies or they might use them inappropriately. It was also expected that the subjects would experience certain types of difficulties in identifying the main ideas in reading. Following Vann and Abraham (1990), these difficulties may be rooted in both inadequate

knowledge of the appropriate strategies that should be used and their inappropriate use.

The following sections provide a description of the experiment, methodology and subjects. The results section provides both qualitative and quantitative analyses of the results of the experiment. Finally, the results are discussed, along with questions and hypotheses for the main research study.

3.2. Methodology

In addition to providing information on the design of the study, this section explains the scoring of the Reading Strategy Survey as per Mokhtari and Sheorey (2002) and the scoring of the recall protocols.

3.2.1. Subjects

As this was a pilot study, there were only four native Libyan-Arabic speaking female subjects between the ages of 27 and 34. Since the task of this experiment required subjects to recognize the vocabulary for the topic and to know enough about grammatical structure and rhetorical conventions to be able to understand the text content, the selected subjects were recent university graduates in science, law or engineering. Two are science teachers, one is a lawyer and one is an engineer. These four subjects all studied English as a foreign language in Libya for about six years, four hours per week. At the time of this study, they were living in Canada as temporary residents, but had not yet taken any ESL courses in Canada. In this paper, each subject will be referred to by a first name. Names have been changed to protect subjects' anonymity.

The selection criteria for the subjects, including university education, age, gender and cultural and educational background knowledge, are based on Vann and Abraham's

(1990) discussion of the three types of knowledge that are required for understanding any reading text. Not respecting these selection criteria could affect subjects' test performance and text comprehension in ways that are totally unpredictable. Materials that were used in this study will be introduced in the following section.

3.2.2. *Materials*

EFL reading strategy awareness of main idea identification was measured by providing each subject with an envelope containing three items. The first was a copy of Mokhtari and Sheorey's (2002) Reading Strategy Survey, translated into the first language (L1) of the subjects (Arabic) (see appendix B). In this survey, reading strategies were divided into three categories: Global reading strategies, problem-solving strategies, and support reading strategies. The second item was a reading passage of 719 words that contained pre-reading instructions written in both Arabic and English. The third item consisted of two blank pages upon which the subjects were directed to write in either language as much as they could recall from the text without looking back at it.

The Reading Strategy Survey was used as a starting point in measuring the participants' awareness of FL reading strategies. The first 13 items of this survey focus on Global reading strategies. These strategies can be considered as general reading strategies focusing on a Global analysis of a reading text, and as generalized reading strategies (Mokhtari and Sheorey's, 2002). The next 8 items look at strategies which are employed to solve problems when a text becomes difficult to read. These Problem-solving strategies provide readers with action plans to go through texts skilfully and to develop solutions for problems in understanding textual information. The last 9 items focus on Support reading strategies, which involve the use of outside reference materials

and provide the support mechanisms that serve a useful function for readers who implement them as needed. According to the literature, these three categories of strategies interact with each other and influence main idea comprehension.

The target English-language reading text was on “functional foods” or foods that have medical functions (see appendix C). The text content can be considered authentic, interesting and non-technical, as it was written by a native speaker and addresses native English readers of a life style magazine. The text was selected from the Internet and was used without modification. All subjects indicated to the researcher that this was a familiar topic about which they had sufficient knowledge and interest to inspire them to read carefully. All of them are mothers who are concerned about the health and nutrition of their children. Steffensen (1988) assumes that readers will comprehend and recall more ideas if texts comprise a familiar topic for which readers have enough background knowledge. The text was printed out directly as it appeared on the internet and used in its photocopied form.

3.2.3. Procedures

There was no time limit either for reading or recalling the text. All the subjects performed the task at the researcher’s home in her presence. The researcher observed the subjects while they were reading and recalling the text. She observed their way of reading, their use of support reading strategies and their use of a translation strategy. Upon their completion of the task, the researcher interviewed the subjects individually to discuss their task performance with them in order to confirm what she observed and to obtain some information about the strategies that they thought they had used. The observation and the interview reports clarified and confirmed several issues while the

researcher was analyzing the text and the recalls of the subjects. The data collected from these three sources (text analyses, recalls and interviews) are addressed in the discussion section. This data also gave a good indication of the subjects' comprehension, which in turn enabled the researcher to correlate the recall with the comprehension.

Insufficient knowledge for a task may cause a reader not to engage seriously, which consequently affects the study's results (Vann and Abraham, 1990). Therefore, it was important to link strategies with task demands to pinpoint discrepancies between what a given task requires and what the subjects actually do. Lee (1986) found significant differences in the quantity of idea units recalled depending on the recall language, which can affect the results of a study. Thus, subjects were instructed to write in either language to avoid the problem of limited L2 production abilities. This did not pose any problems, as the subjects all share the same native language background with the researcher. By allowing the subjects to write in Arabic, we were able to obtain maximum insight into the strategies used by these EFL readers to identify the main idea of a reading text. The scoring of the reading strategy survey is discussed in the following section.

3.2.4. Scoring of the Reading Strategy Survey

The administration and interpretation of information stemming from this survey was inspired by interpretation systems used by Oxford (1990) and Mokhtari and Reichard (2002). Subjects were directed to read each statement and indicate how often they use the strategy described in that statement, using the 5-point Likert scale provided after each statement (ranging from 1 'I never do this' to 5 'I always do this'). Participants were reminded that their responses should refer only to the strategies that they think they use during their reading of school-related materials. In accordance with Mokhtari and

Reichard (2002), subjects' scale responses were divided into three levels of utilization of reading strategies: high level (mean of 3.5 or higher), medium level (mean of 2.5 to 3.4), and low level (mean of 2.4 or less).

3.2.5. Scoring of the Recalls

The propositions were identified following the guidelines developed by Zerhouni (1996), Schellings, Van Hout-Wolter, and Vermunt (1996) and Roloff (1999). These researchers based their analyses on Kintsch's (1988) model. An idea unit analysis was carried out on the target text resulting in its division into 79 semantic propositions. (The propositional analysis is included in Appendix D). This propositional structure is a set of propositions organized into a hierarchy that reflects their relative importance in the text. Five hierarchical levels were assigned to the reading text: a Macro propositional level (MP), which is the highest in the hierarchy, presents the topic of the text; a primary propositional level (PI) represents the main ideas; a secondary propositional level (PII) corresponds with the ideas of comparable importance, which clarify and/or expand the main ideas; a tertiary propositional level (PIII) represents ideas of lesser importance, which provide further details regarding secondary propositions; a quaternary propositional level (PIV) presents the details within the text that are related to names of substances and organizations, as well as those that provide clarification for tertiary propositions. In other words, propositions that are not important for main idea comprehension are positioned at this lowest level (PIV). This analysis was validated by both a colleague who was doing his Ph. D in the same area and by the research supervisor at that time.² Table 3 displays these five levels and the number of propositions within the

² - The first research supervisor subsequently took retirement and was replaced by the current supervisors.

text.

Table 3: Numbers and Levels of Propositions

Text components	Number of propositions
No. of words	719
No. of MP	1
No. of PI	11
No. of PII	15
No. of PIII	40
No. of PIV	12
Total no. of propositions	79

The amount recalled was measured by the type and the number of propositions in the text. Following the weighting of the propositions suggested in Zerhouni (1996) and Roloff (1999), scoring was assigned as follows: The macro propositional level (MP) received the highest score of 16 marks. Level I propositions (PI) received 8 marks each; level II propositions (PII) 4 marks each, level III propositions (PIII) 2 marks each, and level IV propositions (PIV) 1 mark each. The differences between these values were meant to reflect the different hierarchical levels of the propositions. The scoring of propositions was calculated based on the weighted values shown in Table 4 below:

Table 4: the Maximum Possible Scores for Each Level of the Text

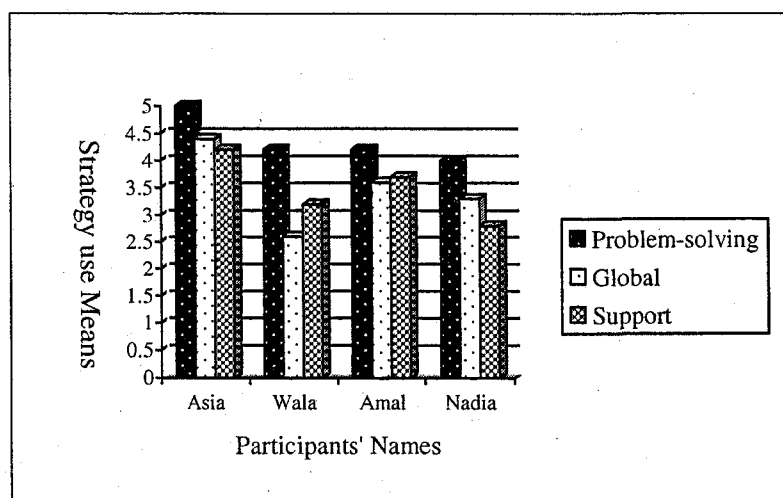
Propositions as well as for the Total Textbase Recall

Prop. Level	No. of Props	Points for each proposition	Total points for each level
MP	1	X 16	16
PI	11	X 8	88
PII	15	X 4	60
PIII	40	X 2	80
PIV	12	X 1	12
Total	79		256

3.3. Results

3.3.1. Strategies

Figure 1: Participants' Mean of Reported Use of Each Strategy Type from the Reading Strategy List



There seems to be some variations across subjects in self-reported use of the Global strategy and Support strategy categories, with their means ranging from high to medium levels (See Figure1). Conversely, there was no apparent difference in the self-reported use of the Problem-solving strategies across the four subjects, as all of them were at a high level and their means ranged from 5.0 to 4.1. In addition, their total means of these three types of strategies were: 4.5 for Asia, 3.8 for Amal, 3.5 for Nadia and 3.2 for Wala.

Table 5 shows the self reported use for each Global strategy (see Table 2 for Global strategy list). The highest average in this category was obtained by Asia (4.4). Amal scored 3.6, which is in the high level. However, Wala scored 2.6 and Nadia scored 3.2; both of these averages are at the medium level. These overall averages indicate how often subjects report using global strategies during their academic readings.

Table 5: Participants' Averages of Global Strategies Use

Category of strategy	Serial number of strategy *	Subjects' scores			
		Asia	Wala	Amal	Nadia
Global Reading Strategies	1	5	5	4	4
	3	4	4	4	3
	4	5	1	4	3
	6	4	2	2	3
	8	4	1	4	4
	12	4	3	4	4
	15	5	4	3	3
	17	5	4	4	1
	20	3	1	3	4
	21	4	1	3	1
	23	5	4	4	4
	24	5	3	4	5
	27	5	1	3	3
Total	13	58	34	47	42
Global mean		4.4	2.6	3.6	3.2

* See Table 1 for the list of strategies

According to Mokhtari and Reichard (2002), it is insufficient for students to simply be aware of the appropriate reading strategies; students should also be capable of implementing and monitoring their use of these strategies in order to be able to identify main ideas and improve their reading comprehension. However, the best possible optimum use of such strategies heavily depends on the students' age and reading ability, and also on the type of reading material, text difficulty, text familiarity, and other related factors.

Table 6: Participants' Averages of Problem-Solving Strategies Use

Category of strategy	Serial number of strategy *	Subjects' scores			
		Asia	Wala	Amal	Nadia
Problem-solving Reading Strategies	7	5	5	4	5
	9	5	4	5	5
	11	5	3	5	4
	14	5	5	4	4
	16	5	4	4	3
	19	5	4	4	2
	25	5	4	4	5
	28	5	5	4	5
Total	8	40	34	34	33
Prob. mean		5.0	4.2	4.2	4.1

* See Table 1 for the list of strategies

Table 6 shows that Asia scored 5.0, Wala and Amal scored 4.2 and Nadia scored 4.1.

This indicates that subjects report using problem-solving strategies more than they use Global strategies, as all of them were placed in the high usage level.

Table 7: Participants' Averages of Support Strategies Use.

Category of strategy	Serial number of strategy *	Subjects' scores			
		Asia	Wala	Amal	Nadia
Support Reading Strategies	2	4	5	4	5
	5	4	5	3	5
	10	5	5	5	2
	13	3	1	3	4
	18	5	2	4	2
	22	4	4	3	3
	26	4	2	4	1
	29	4	2	4	4
	30	5	3	4	4
Total	9	38	29	34	30
Supp. mean		4.2	3.2	3.7	3.3

* See Table 1 for the list of strategies

Table 7 shows that subjects' self-reported different categories of use of the Support strategies, with Asia (4.2) and Amal (3.7) in the high range. However, Wala (3.2) and

Nadia (3.3) were in the medium range. The following section displays the scoring of the recalls:

3.3.2. Recalls

The scores for recalled propositions indicate that all the participants recalled the major point (MP) or the title of the text. The range of the first level idea units (PI) is 6-3 out of 11 units in total. The second level (PII) recalls ranged from 12-3 out of 15 idea units in total. Within the third level idea units (PIII), the recalls ranged from 20-12 out of 40 in total. For the fourth level idea units (PIV), recalls ranged from 5-1 out of 12 units in total.

Table 8: Number of Recalled Propositions and Total Weighted Scores³

Subjects	Number of recalled props. from each level					Total recalled props. (79)	Total weighted score (256)	Total recall percentage
	MP (1)	PI (11)	PII (15)	PIII (40)	PIV (12)			
Asia	1	6	12	20	5	44	157	61%
Wala	1	4	5	13	2	25	96	37.5%
Amal	1	3	3	13	2	22	80	31%
Nadia	1	6	7	12	1	27	117	45.7%

Regarding the total number of recalled propositions, Asia recalled the highest number (44 idea units out of 79 idea units in total). Nadia recalled 27 propositions out of 79; Wala recalled 25 idea units out of 79 idea units; Amal recalled the lowest number which was 22 propositions out of 79. Regarding the subjects' total scores, Table 9 shows that they ranged from 157 to 80 out of 256, which is the maximum possible score for the total number of propositions of the reading text (see Table 4 for weighting system).

³ For weighting see Table 4

Table 8 also indicates that Asia scored 61%, which is the highest total mean weighted score. Nadia obtained the second highest score of 45.7%, followed by Wala who scored 37.5%, and lastly Amal, who scored 31%.

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The main idea comprehension percentages in Table 9 indicate that the participants differed considerably in their recall of each propositional level except the title of the text, which all of them recalled successfully.

Table 9: Percentages of Recalled Propositions

Subjects	Percentage of recalled props. from each level					Total recalled Percentage
	MP	PI	PII	PIII	PIV	
Asia	100%	54%	80%	50%	41%	55%
Wala	100%	36%	33%	32%	16%	31%
Amal	100%	27%	20%	32%	16%	27%
Nadia	100%	54%	46%	30%	8%	34%

Table 9 also shows that Asia recalled 54% of level 1 propositions; 80% from level 2 propositions; 50% from level 3 propositions; and 41% from level 4 propositions. Asia had the highest recall overall except for PI, where she tied with Nadia. But Asia was more successful on the second level propositions than on the first level propositions. She identified more from PII than from PI, which could mean that she had difficulty with higher-level propositions or that she focussed more on the second level ones than on those from the first level. Nadia evidenced the same recall percentage as Asia from level 1 (54%), but in level 2 she recalled 46%. Moreover, Nadia recalled 30% of the propositions in level 3 and only 8% in level 4, which is the lowest recalled percentage of all four subjects. Wala recalled 36% from level 1 propositions, 33% from level 2 propositions; 32% from level 3 propositions; and 16% from level 4 propositions. Both Nadia's and Wala's recall percentages ranged from high to low in the same order as the proposition levels. This indicates that they focused more on high level ideas than on low level ideas, which could mean that they used some effective reading strategies for identifying the main idea of the text, although their overall averages are lower than Asia's. Lastly, Amal recalled 27% from level 1 propositions, 20% from level 2 propositions, 32% from level 3 propositions, and 16% from level 4 propositions. This indicates that she may have focused on level 3 propositions more than on level 1 and level 2 propositions. This could mean that she had a problem, like Asia, in identifying the main ideas of the text.

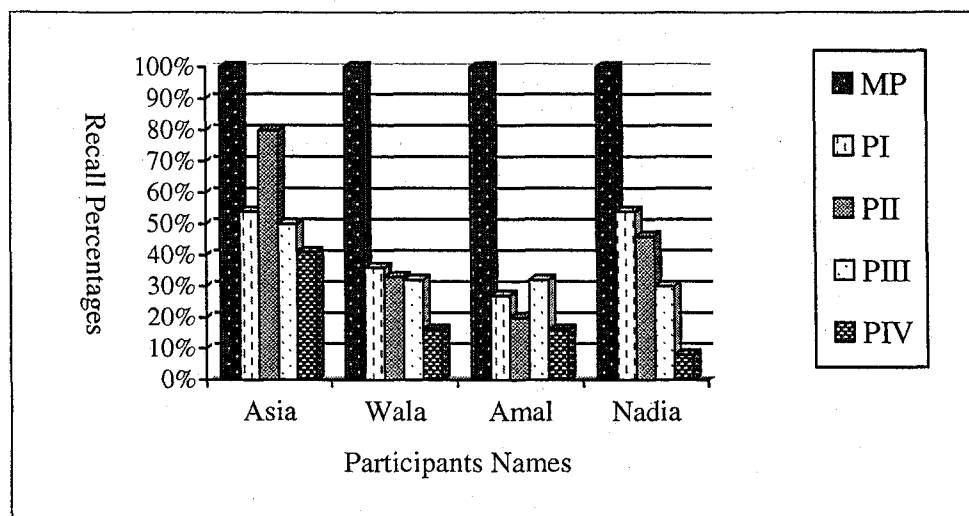
The percentages of the total recalled propositions in Table 9 indicate that Asia recalled 55%, which is the highest recalled percentage. Nadia recalled 34% of the text propositions, with Wala following at 31% and Amal at 27%.

Concerning the comprehension of main ideas, results indicate that Asia and Amal focused more on lower level propositions than on higher level ones. For instance, Asia recalled 80% of level 2 propositions, which was the highest percentage in her recalls, but she recalled 54% from level 1. This shows that she could not identify the most important ideas of the text, since she recalled only 54% of them, which amounts to half of the important points of the text. However, she recalled most of the supporting points of the main idea (80%). Also, Amal focused more on level 3 propositions, since she recalled 32%, which was the highest percentage of her various level recalls, whereas she recalled 27% from level 1. This indicates that she also had a problem with identifying the main idea of the text, since she focused on the supporting details more than on the main ideas and the second level ideas. In contrast, Nadia's and Wala's recalls indicate that they focused more on level 1 propositions, as they recalled 54% and 36% respectively and their percentages of recalls for the lowest level decreased to 8% and 16% respectively.

For main idea comprehension, a simple analysis revealed noticeable variability across the subjects' with respect to their recall of the main ideas of the text (see Figure 2). Asia considered the second level ideas as the most important ideas in the text, as she recalled 80% of them, which was her highest recall percentage in her chart. Amal focused on the third level propositions of the text, since she recalled 32% of them-her highest recall percentage in her chart. On the other hand, Wala's close percentages of recalls from levels 1, 2, and 3 (36%, 33% 32% respectively) illustrate her inability to differentiate between main ideas and supporting details, as she appears to have paid almost the same amount of attention to these three different levels of ideas. The subjects' comprehension of the major point, or the title of the text, will be disregarded because all of them recalled

it.

Figure 2: The Percentage of Recall from Each Propositional Level



In conclusion, the number and the type of the recalled idea units point out the participants' inability to differentiate between the main idea and the supporting ideas. In addition, the low overall averages of the recalled propositions, ranging from 55% to 27%, reveal the subjects' deficiency in recognizing the main idea of the text. Nonetheless, the descriptive data for the main idea comprehension strategies showed that there were some variations among the four individual participants' performance that indicates differences in their approaches. In the discussion, we will examine recall scores in the light of self-reported comprehension strategies.

3.4. Discussion

Table 10: Scores of Recall and Self-Reported Comprehension Strategies

Subjects	Recall score	Strategy use
Asia	55%	4.5
Wala	31%	3.2
Amal	27%	3.8
Nadia	34%	3.5

Table 10 shows that the subjects' total averages of the L2 Reading Strategy Inventory coincide with their propositional recall results. Subjects who thought they used more main idea comprehension strategies recalled more idea units from the text. This is an indication that successful performance in propositional recall was related to the subjects' reported use of reading strategies. For example, Asia scored 4.5 in the strategy survey and recalled 55% of the propositions of the text, which represent the highest scores in both cases. These findings are consistent with the results of Najar's (1998) research on L2 reading strategy use. The researcher also found that skilled FL readers would use strategies more frequently; in particular the readers more proficient in finding and comprehending main ideas would use Global and Problem-solving Strategies more frequently than the readers who were not as highly skilled. Lower scores in a part of the survey indicate that there might be some strategies in this part that subjects are less familiar with. In such cases, subjects need to be introduced to these strategies, so that they may consider using them during their readings.

Another remarkable finding was that conscious application of global reading strategies correlated positively with reading performance and comprehension, which is consistent with the conclusions of Feng & Mokhtari (1998) and Block (1986). Asia, for

example, scored 4.4 in self-reported Global strategy usage, and she recalled 61% of the text. This finding agrees also with the results of Swaffar, Arens, & Byrnes (1991) and Carrell (1989), whose research on EFL and ESL reading for meaning indicated that users of global reading strategies focus primarily on textual propositions. Likewise, it appears from the observation and the data of this study that support reading strategies such as note taking, translation, underlining of key words, and strategies which utilize some form of main idea recognition led to more effective comprehension of the reading text than cases where there was no evidence of support strategy use. Furthermore, strategies that include main idea recognition and the organization of information into levels of importance lead to more interpretation and analysis of the text owing to the fact that they involve the reader in working with the text to understand it and committing time to the task. Effective strategies require readers to spend time on the task, to interact with the text in an effort to understand it, and to identify the levels of information. According to Najar (1998), this interaction leads to a better understanding of the text content. Hence, using this reading strategy improves FL reading comprehension.

Conversely, lack of FL reading strategies causes most of the problems of misinterpreting the paragraphs of the reading text. In explaining why students could not recall the main idea of the reading text, it is crucial to emphasize that the most important aspect of getting the author's main idea is to understand what s/he is saying in each paragraph by using the required strategies. This is in accord with Jacobowitz (1990). However, according to the researcher's teaching experience, most of EFL readers' problems in paragraph interpretation are: getting a vague general notion of the text without comprehending the main point of the author; failure to realize the relationship

between the main idea and the supporting details of the text and to differentiate between them; or introducing irrelevant concepts that the author never intended. Concerning obtaining a vague general notion of the text without understanding the main point of the author and introducing irrelevant concepts that the author never intended, it is important to mention that these two issues were the main reasons for excluding one of the participants from this study and replacing her with another subject. During the data analyses, the researcher could not find any relevant proposition in the subject's recall of the text. The subject did not even get the major point-the title of the text. The subject wrote about cutting off fat from everyday food and how fat negatively affects health: she conceptualized from her background knowledge without understanding the author's main point. So, the researcher could not relate the subject's data to the objectives of this study because the subject did not fulfill the criteria of this study. The data showed that this participant translated several words in the text into Arabic. Thus, using strategies for the main idea identification is crucial for understanding the main idea of any text. This was a result of her low awareness and use of reading strategies as her total mean of recall was as low as 2.5, which is the lowest compared with the other participants' total means shown in Table 10.

Another explanation of this study's EFL readers' failure to get the main idea of the text was their inability to locate the main idea of the text because they lacked the following reading strategies: reading the introduction and the conclusion; focusing on the topic sentences of the paragraphs; and using appropriate macrostructure formation (Mannes and Kintsch, 1987). The analysis of the subjects' recalls, researcher's observations and their statements during the discussion with the researcher supported this

notion, since they revealed that they read the text word by word, from the first word to the last word, paying the same amount of attention to every word. According to the researcher's observation, some of the participants did not realize where one sentence began and another ended since they read the paragraph as if it were one sentence. They dealt with the text in terms of words, not sentences or paragraphs. They did not pay attention to the introduction or to the conclusion, since they were not aware of the text structure or organization. This was noted by the researcher during the experimental session and also stated by the participants. They read all the words and tried to understand the meaning of each word; they were intent on not missing a word. This explanation agrees with Swaffer, Arens and Byrnes's (1991) discussion that readers with low proficiency are more likely to use bottom-up strategies, such as paying the most attention to the meaning of individual words.

Also, one of the most important reasons that some of the subjects missed some main ideas was that they could not decide on their importance. For instance, Amal stated that she focused on every word and paid the same amount of attention to every word. On the other hand, Nadia used the opposite strategy to Amal's. Nadia neglected some important ideas or key-words completely and did not make an effort to understand their meaning. Block (1992) called this strategy "omitting" (when readers did not recall a component that was in the text). Some words that Nadia failed to understand and later could not recall were examples of omission. This omission of important ideas or words shows that Nadia could not decide on their relative importance.

Nadia also had a problem with connecting words to each other in a sentence, and with connecting different sentences with each other in a paragraph to understand the idea. By

not paying attention to the beginning and the end of the sentences to comprehend their ideas, she merged a part of one sentence with another part of another sentence in the text in her written recall. For example, she wrote “*green tea reduces cholesterol and prostate cancer.*” However, the text says “green tea reduced cancer risk, lycopene in tomatoes and tomato products reduced risk of some types of cancer, especially prostate cancer.” So Nadia brought “cholesterol” from the last sentence in the previous paragraph that says: “organosulfur compounds in garlic lowered cholesterol levels”. From this example, it was obvious that Nadia merged the first two sentences from one paragraph with the last sentence of the previous paragraph.

Moreover, according to the researcher’s observation of two of the subjects during the experimental session, vocabulary difficulty was one of the most serious problems, which resulted from the fact that subjects simply did not know the simple non-technical words. This is in agreement with Coady (1993), who assumes that the lack of word recognition skills is often a cause of difficulties in developing L2 reading comprehension.

In contrast, all the subjects brought their background knowledge to bear on understanding the main idea of the text by remembering and recalling what they had heard elsewhere about functional foods and their health benefits. For example, they recalled types of foods not mentioned in the text. Also Amal used the base form of some words as a strategy to understand the new words. For instance, Amal returned the word “convincingly” to “convinced” as she was thinking aloud while reading the text.

3.5. Conclusion

The findings of the pilot study indicate that FL reading strategy awareness and use affected the main idea identification and comprehension of these participants. The purpose of this pilot study was to discuss Libyan Arabic-speaking university graduate readers' awareness and use of EFL reading strategies for identifying the main idea of a reading text, and to reveal the importance of using these strategies for comprehending the main idea of a text. This study examined four female subjects' metacognitive awareness and use of three categories of reading strategies that include: Global reading strategies, Problem-solving reading strategies and Support reading strategies. The researcher used written recalls to reveal the subjects' comprehension of the main ideas of the reading text. In addition, a reading strategy inventory was used to measure the subjects' reported awareness and use of reading strategies. A low score on this inventory indicated that there were some strategies that subjects need to learn about and consider using when reading. So, according to Zhang (2001), it is not enough to simply know the appropriate reading strategies. EFL readers must also be able to regulate and monitor the use of these strategies in order to comprehend reading texts. Helping EFL readers to think about their reading processes and encouraging them to build up their confidence to use their reported strategic knowledge may enhance their reading comprehension. This metacognitive knowledge might also help EFL readers to understand that linguistic proficiency in a FL is not the only factor in assisting their reading comprehension (Mokhtari & Reichard, 2002). Such knowledge could help them to realize that reading strategies play an obvious role in comprehending the main idea of any reading text.

The results of this pilot study illustrated the correlation between reading strategy

awareness (as measured by the Reading Strategy Survey of Mokhtari & Reichard, (2002)) and use (as observed by the experimenter) and main idea comprehension. Subjects who used more main idea comprehension strategies recalled more idea units from the text. This notion is supported by the fact that those subjects who believe that they implement L2 reading strategies and actually use them were more successful performers in the propositional recall task. For instance, Asia scored 4.5 in the Reading Strategy Survey, which was the highest and she recalled 55% of the text, which was the highest recalled amount. Her data also demonstrated that she used underlining and note-taking.

The results suggested that not all support reading strategies were equally effective in helping the readers to identify the main idea and to understand the content of the text. It appears from the data that strategies such as vocabulary identification and translation are useful only when applied in conjunction with strategies which encourage the utilization of some form of main idea recognition. On the other hand, the data shows that support strategies such as note-taking and underlining key-words or ideas that involve organizing the information of the text into levels of importance and main idea identification lead to more successful task performance. Therefore, EFL readers who used FL reading strategies of main idea identification were more capable of comprehending and identifying the main idea of the text.

One issue that was not addressed in the pilot study was L1 reading strategy awareness and use. Results of the pilot study indicated that it is crucial to know how L1 readers perform when reading L1 texts, including which strategies are more or less effective. Hence we decided to include an L1 reading comprehension component in the main study. In addition, the researcher noticed from the pilot study that the issues of general reading

proficiency, topic interest and familiarity and text difficulty may interfere in the reading comprehension process and affect main idea comprehension and recall. Furthermore, as one of the principle aims of the present study is to determine whether there is a facilitatory relationship between strategy awareness and use, we included the sixth question. Accounting for these factors required altering the research methodology of the pilot study in order to answer the following research questions in the main study.

3.6. Research Questions

- 1- What is the relationship between explicit classroom training and strategy awareness?
- 2- To what degree does reading strategy awareness affect the comprehension of main ideas in L1 reading?
- 3- To what degree does reading strategy awareness affect the comprehension of main ideas in L2 reading?
- 4- What is the relationship between general reading proficiency level and reading comprehension strategy awareness or use?
- 5- What are the effects of text difficulty, topic familiarity and topic interest on main idea comprehension and recall?
- 6- Is there a facilitatory relationship between reading comprehension strategy awareness and use that leads to more effective recall of main ideas?

3.7. Research Hypotheses

The research hypotheses for the present study are as follows:

- 1- Concerning research question 1, we predict that readers who have received explicit training in reading strategies for main idea comprehension will have better knowledge of these strategies than readers who have not had such training. English-speaking readers will have better knowledge of reading comprehension strategies than Arabic-speaking readers.
- 2- With respect to research question 2, readers who have greater strategy awareness will perform better on the recall tasks in their first language.
- 3- Regarding research question 3, readers with greater strategy awareness will do better in recalling their L2 text.

Within the context of previous research (pilot study), other considerations came to light such as the reading proficiency level, reading strategy types, and topic familiarity, difficulty and interest. All these issues affect reading comprehension and main idea(s) identification. Thus we hypothesize:

- 4- In response to research question 4, we predict that FL and L1 general reading proficiencies alone do not necessarily correlate positively to the reading comprehension and recall of main idea(s) as much as when they are combined with strategy awareness and use. Thus we predict that readers with high reading strategy awareness who are also capable of using these strategies accurately comprehend and identify main ideas better than readers with high general reading proficiency alone.
- 5- Concerning research question 5, text difficulty, topic familiarity and interest may affect reading comprehension and main idea identification. If the participants' assessment

of the text show that the text is difficult, not interesting and unfamiliar, readers will not be able to comprehend it or recall it properly.

6- Regarding research question 6, knowing reading comprehension strategies does not indicate that you are able to use them effectively; we predict that readers who actively use these strategies effectively will perform better on the recall tasks than those who simply purport awareness of them.

CHAPTER FOUR

Methodology

This chapter explains the research methodology adopted to address the research questions elaborated in the previous chapter. This methodology chapter begins with a description of the overall experimental design, followed by a description of the participants, the pre-experimental evaluative measures, experimental tasks and experimental procedures. The chapter concludes with a description of the scoring rubric to be adopted.

4.1. Experimental Design

Researchers recommend the utilization of multiple methods and instruments, such as interview questions, questionnaires, and data from observations and recall protocols, to assess awareness and use of strategies (Singhal 2001; Schmitt 1990). Consequently, this study was composed of pre-experimental tests for both the control and the experimental groups to measure their English language reading levels in L1 and FL, respectively.

These pre-experimental evaluative measures are followed by the experimental tasks that included two reading texts, one in English that served as an L1 text for the control group and as a FL text for the experimental group and an Arabic text that served as an L1 text for the experimental group. Besides these reading texts, multiple dependent measures were used in the present study. These include:

A- A reading strategy survey that measures the participants' awareness of reading strategies.

B- The number of idea units recalled in immediate free recall designed to measure the

effectiveness of the strategy usage of the participants.

C- A reader assessment task that measures the text difficulty, topic interest and familiarity for the participants.

D- Retrospective semi-structured interviews that shed some light on the reading strategies used by the participants to comprehend the reading texts.

The following section describes the participants of this study.

4.1. 1. Subjects

The participants in this study were 112 male and female Libyan-Arabic native speakers between the ages of 18 and 25 from three different Libyan governmental universities: Naser University in Tripoli (the capital city), Yefren University in Yefren (a small town on the Libyan western mountain), and The 7th of April University in Zawia (the third biggest city in Libya). Participants from these three different universities formed three different EFL teaching and learning contexts that may vary according to location and life style. Experimental group participants had all studied EFL for about six years (see section 1.2). They were all native speakers of the same L1 (Libyan Arabic), were entirely educated in Libya, and had no additional English courses in or out of Libya. The control group was composed of 16 English native speakers between the ages of 19 and 25 from the University of Ottawa in Ottawa, Ontario, Canada; all were university students with similar proficiency levels of reading in their first language based on their scores on English as a first language reading test (Nelson-Denny Test, 2004). The Arabic speakers' EFL reading proficiency levels were based on their CanTEST (2004) scores. The criteria used in selecting the native English-speaking participants included their willingness to participate in the study, which required them to commit one and a half

hours to participating in all of its phases. All of the experimental group subjects were third-year students and the control group subjects were all second-year students majoring in ESL/EFL teaching. The two main differences between both groups were, first, that English is the L2 for the experimental group and the L1 for the control group and second, that the control group were taught explicit reading strategies through their primary school education while the experimental group were not. This second difference was the main reason for selecting these groups, as the aim of this study was to investigate the effect of reading strategy awareness and use on reading comprehension of main ideas of texts.

Participants will not be referred to in here by their names, but will be assigned numbers. The criteria for the selection of the participants in the experimental and the control groups include EFL training (for the experimental group), university education, age, and cultural and educational background knowledge. These criteria are in agreement with Vann and Abraham's (1990) discussion of the three types of knowledge that are required for understanding any reading text. Taking these issues into consideration helped to avoid any related problems that may have affected the subject's comprehension and consequently have affected the results of the study.

4.2. Pre-Experimental Evaluative Measures

4.2.1. *Nelson-Denny Reading Test*

All the control subjects took the Nelson-Denny Reading Test (Brown, Fishco & Hanna, 1993). The purpose of this test was to establish the reading level and ability of the participants in this group and to ensure that there were no major language level differences between them. This test is a popular measure of reading achievement that has been used with college students for over fifty years (Heerman & Seltzer, 1983). The test is routinely used for assessment purposes and for screening reading problems; it is also frequently used by researchers in the USA and Canada (Masterson & Hayes, 2004).

The Nelson Denny Reading Test (Brown, Fishco & Hanna, 1993) provides measures of comprehension, reading rate and vocabulary. In this study, only the reading comprehension section of form G of the Nelson Denny Reading Test was given to the control group, since only this section was pertinent for the present research. The reading comprehension section of the Nelson-Denny Reading Test (form G) contains seven reading passages and a total of 38 questions, each with five answer choices. The time limit for this section is twenty minutes; an extended-time administration of up to thirty-two minutes is available for first time performers. Subjects were given twenty-five minutes to finish the test by recording their answers on machine-scorable sheets. Scores were based on the number of correct responses. Since there was no penalty for incorrect answers, subjects were instructed that it was to their advantage to answer every question they read. The total score for the reading comprehension section is 38, since one mark is assigned to each correct answer.

4.2.2. Second Language Reading Test (CanTEST)

The Canadian Test of English for Scholars and Trainees (CanTEST) (2004) was given to the participants in the experimental group. Only the reading comprehension section (the second test) was used in this study to measure and categorize the EFL reading comprehension levels and abilities of the participants. All participants in the experimental group took the reading comprehension section of the CanTEST (2004) one day before the experiment began. The CanTEST is a standardized English proficiency test developed and validated by the Second Language Institute at the University of Ottawa. It is used to determine the abilities of candidates who are non-native English speakers to meet the admission requirements of Canadian post-secondary institutions. Reading is measured via two tests. The first test was not used in this study because it measures different reading skills from the ones of interest here.

The second reading test focuses exclusively on reading comprehension; it is not a test of grammatical knowledge or structure. The test consists of three passages ranging from 400-700 words. Each passage is followed by a number of multiple-choice questions with four answer choices, as well as short-answer questions based on the whole passage. There is a total of twenty questions for all three passages. The total possible score of this section is twenty, since each correct answer is assigned one mark, and there is no penalty for incorrect answers. Questions are always based on an entire passage and never on a single sentence.

The EFL reading comprehension levels of the participants would later be correlated with subjects' reading strategy awareness and self-reported and observed strategy use in order to determine both how reading level relates to strategy use and how strategy use

relates to the amount of recalled idea units. The scores of the participants were categorized into three levels. As the highest score was eleven out of twenty, the scores from eight to eleven were considered high intermediate, the scores from five to seven were considered medium, and the scores from one to four were considered low. This categorization was discussed with and validated by Professor Hope, the coordinator of the CanTEST centre at the University of Ottawa (personal communication, January, 2005).

4.3. Experimental Tasks

This section includes a description of the reading texts, the reading strategy survey, the recall protocols, the reading assessment task and the retrospective semi-structured interviews used in this study.

4.3.1. Reading Texts

Raymond (1988) recommends that there should be careful consideration of participants' background knowledge in text selection. The choice of texts affects the participants' motivation and potential for understanding, as well as the validity and reliability of the experiment (Bensoussan, 1998). In like manner, Eskey (2005) also recommends considering the issues of linguistic level, interest, familiarity and relevancy to the readers needs. Accordingly, a familiar topic, that of juggling work and studies was selected for the reading task. As subjects had previously indicated high interest in this topic, we expected that their knowledge and interest would inspire them to read carefully.

There were two texts used in this study. The first text, "*How to Juggle Study and Work*" from The Guardian Newspaper (2004), was selected from the Internet without

modifications. The text is 714 words long. The content of the text discusses the topic in a manner that is strongly related to the university student's life, thus making the text not only familiar and interesting, but also relevant to their everyday lives (Eskey, 2005). The text is also authentic and non-technical, because it was written by a native speaker for publication in a mass circulation newspaper and addresses native speakers of English. Photocopied versions of the text were distributed to participants.

A comparable Arabic text of 542 words, "*University Students Work in Construction and House Cleaning*", published in Dar Alhayat newspaper (2004), was also employed in the study. The English and Arabic texts are similar in organization, structure and topic. The Arabic text was also selected from the Internet. It was reformatted into a printable form and photocopied versions were distributed. The English and Arabic texts are included in appendix E.

4.3.2. The Survey of Reading Strategy

The Reading Strategy Survey of Mokhtari and Sheorey (2002) is intended to measure adult ESL university students' metacognitive awareness of and use of reading strategies. It has been field-tested and has demonstrated high reliability and validity (Mokhtari and, Reichard 2002). The survey comprises 30 statements on EFL reading strategies (see Appendix B for English and Arabic versions).

The Arabic version of the reading strategy awareness was translated from the Mokhtari and Sheorey (2002) Survey of Reading Strategies. Participants completed this task before the reading comprehension task. They were reminded that their responses should refer only to the strategies that they think they use during their reading of school-related materials. The act of completing the survey can help participants to incorporate

strategies that will improve their metacognition awareness when reading the target text (Mokhtari and Sheorey, 2002). In addition, the information obtained from this instrument can be used to quantitatively interpret the types of strategies participants consider to be more important. It can also be used to identify and evaluate their levels of awareness of utilising the appropriate strategies (Schmitt, 1990). The three different strategy categories of this survey were fully described in chapter three of the pilot study. Despite the reliability and validity of this instrument as a self-report instrument, it does not tell us whether or not participants really use the reading strategies that they reported being familiar with. Therefore, semi-structured interviews were conducted to verify the consistency and accuracy of the information provided in the survey.

4.3.3. Retrospective Semi-Structured Interviews

The purpose of these interviews was fourfold: to elicit information from the participants that clarified their ways of reading the text and the order in which they read it; to explain what they did to understand and remember the text; to describe the strategies they used to make sure they understood the text; and to find out if they used any strategies other than those included in the strategy survey to help them comprehend the text. The interview data served a supplementary role, providing background against which to understand and interpret the statistical quantitative data yielded from the various experimental tasks. According to Wenden and Rubin (1987), reader interviews are generally extremely productive concerning strategy use. The best way to know what strategies participants actually use as they read is to ask them. Therefore, the most valuable data in a descriptive study is the data that are gathered through participant interviews.

Semi-structured interviews were conducted individually with twelve students from the experimental group and three from the control group. The sub-group of interviewees from the experimental group were selected to represent each of three reading comprehension proficiency levels, based on their results on the CanTEST and on the selected participants' willingness to discuss the reading strategies they used to comprehend the text and to identify the main ideas. Four subjects were randomly selected from the high level, four subjects from the medium level and four from the low level. Based on Nelson-Denny test results for the control group, one control subject from each level was randomly selected to be interviewed. All those selected agreed to be interviewed.

The interviews were carried out after the experimental tasks were completed. Some were conducted on the same day as the experiment and others took place on the following day. Arabic speaking interviewees were addressed in Arabic to permit them to discuss their reading strategies fluently regardless of their L2 proficiency.

All interviews were tape-recorded to be transcribed and analysed at a later time. The analysis would serve as qualitative verification and clarification of the results of the strategy survey, as well as of the recall portion of the study, which is discussed in the following section. The interviews consisted of seven questions carefully formulated by the researcher to elicit pertinent information from the subjects regarding their approach to reading and recalling the passages (see Appendix J for the interview questions).

4.3.4. Number of Idea Units Recalled in Immediate Free Recall

Barnett (1988) suggests examining students' written recall protocols to learn more about how they process texts. Also, the recall protocol procedure is seen as a highly valid and effective L2 reading comprehension assessment that provides both qualitative and

quantitative information (Barnett, 1988). Unlike other methods of evaluation, this procedure allows misunderstandings and gaps in comprehension to surface (Heinz, 2004). Kintsch and Keenan (1973) state that sentences have a base structure consisting of propositions, which represent their semantic content. The texts used in this study were therefore analysed into propositional bases following the approach used by Carrell (1987), Zerhouni (1996), Schellings, Van Hout-Wolter, and Vermunt (1996) and Roloff (1999), which simulates text comprehension according to the Kintsch and Van Dijk (1978) model.

4.3.4.1. English Text Analysis

An idea unit analysis was carried out on the English text resulting in the division of the text into 63 semantic propositions. The English text analysis was approved by Professor Patricia Raymond⁴ who is an expert in this area. (See Appendix F for the complete propositional analysis and hierarchical levels of the English text).

The analysis also yielded a hierarchy of propositions that reflects their relative importance in the text (Mannes & Kintsch, 1987). Six hierarchical levels were assigned to the reading text: a Macro propositional level (MP), which is at the top of the hierarchy and corresponds to the title of the text, reflects global comprehension processes. The primary propositional level (PI) represents the main ideas. A secondary propositional level (PII) corresponds to ideas of comparable importance to the PI propositions and serves to clarify and/or expand the main ideas. A tertiary propositional level (PIII) represents ideas of lesser importance, which provide further details regarding secondary propositions. A quaternary propositional level (PIV) represents the details within the text

⁴ -At the time of the study Professor Raymond was a faculty member in The Second Language Institute at the University of Ottawa

that are related to names of institutions and organizations, as well as those that provide clarification for tertiary propositions. A fifth propositional level (PV) represents names of people such as, scientists, researchers and professors, and names of places such as, cities and countries. The PV level represents the micro-level that reflects local comprehension processes (see Appendix F). Table 11 displays these six levels and the number of propositions within the English text.

Table 11: English Text: Levels and Numbers of Propositions

Text components	Number of propositions
No. of MP	1
No. of PI	10
No. of PII	16
No. of PIII	24
No. of PIV	5
No. of PV	7
Total no. of propositions	63

MP: Macro point (the title of the text), PI: first level propositions, PII: second level propositions, PIII: third level propositions, PIV: fourth level propositions, PV: fifth level propositions.

4.3.4.2. Arabic Text Analysis

The Arabic text analysis was carried out in a similar manner to that of the English text. The Arabic text analysis was cross-validated by a colleague (A. Mahfoudi)⁵ who was a native Arabic-speaker and sufficiently familiar with the Kintsch and Van Dijk (1978) model to use it for recoding and revising the analyses. An agreement between his analyses and the researcher's was reached after a discussion of their various viewpoints.

⁵ A. Mahfoudi is presently a Professor at the University of King Abdul-Aziz in Saudi Arabia

Table 12 illustrates six levels and numbers of propositions for each level of the Arabic text. (See Appendix G for the complete propositional analysis and hierarchical levels of the Arabic text).

Table 12: Arabic Text: Levels and Numbers of Propositions

Text components	Number of Propositions
No. of MP	1
No. of PI	8
No. of PII	12
No. of PIII	19
No. of PIV	7
No. of PV	4
Total no. of propositions	51

MP: Macro point (the title of the text), PI: first level propositions, PII: second level propositions, PIII: third level propositions, PIV: fourth level propositions, PV: fifth level propositions.

4.3.5 Reader Assessment Task

The Reader Assessment task adapted from both Carrell (1989) and Raymond (1993) was designed to elicit subjects' judgements of each reading text in terms of its difficulty, interest, background knowledge, affect, clarity, organization and content. As well, this task was used as a buffer between reading and recalling the text to minimize the effects of short-term memory. Thus, subjects and controls were asked to fill out a reader assessment questionnaire after reading each text. The questionnaire consisted of ten questions to be answered on five point Likert scales from negative (1) to positive (5) (see Appendix H). The questionnaire was translated into Arabic for the experimental group and the Arabic version was administered to them following both English and Arabic texts.

Arabic-speaking subjects completed the task twice, once for the English and once for

the Arabic texts, while control subjects completed it only once, for the English text. After the completion of each Reader Assessment task, subjects recalled the text that they had just read by writing down all that they could remember from it. Only responses to questions 1, 4 and 5 were considered for the present research.⁶

4.4. Experimental Procedures

Most parts of the present study were conducted in group sessions. This included the reading strategy survey, the Arabic reading text, the Reader Assessment questionnaire and the recall tasks. The semi-structured interviews were conducted individually. Prior to the first group session, the researcher gave a brief presentation regarding the project and the purpose of the study. Subjects of the experimental group received envelopes and were instructed to take out only the materials specific to the tasks that they were being asked to perform. The materials were ordered in the envelopes in the same sequence as the tasks. The participants were instructed to return the related materials to the envelope after completing each task.

The experiment was conducted in two sessions. The first session lasted thirty minutes and consisted of three tasks. The first task was answering the Arabic version of The Reading Strategy Survey. Next, the Arabic Reading Text was introduced and participants were asked first to read it and then to immediately answer the Reader Assessment questionnaire. They were then asked to recall the Arabic Reading Text in written form.

⁶ Information gleaned from this instrument was used to investigate only the effects of text difficulty, topic familiarity, and interest on main idea identification. Responses to the remainder questions were disregarded, as they are asking about issues that are beyond the scope of this research.

Thus, the translated version of the reader assessment questionnaire served as a “buffer” between the reading of the text and the recall protocol task. There was a fifteen minute break before the beginning of the second session.

At the beginning of the second session, the participants were asked to read the English reading text carefully, as they would be asked to recall it later in written form. Upon completing the reading text, each participant completed the Reader Assessment Task. Then, they were asked to recall as much of the text as possible and write it down. There was no time limit either for reading or recalling the texts. The second session lasted 60 minutes with most participants completing the task within 45 minutes. The retrospective semi-structured interviews were scheduled with the interviewees for a later date.

4.4.1. Instructions to Subjects

Insufficient knowledge about an experimental task may cause a reader not to engage seriously, which consequently affects study results (Vann and Abraham, 1990). Thus, it was important for the subjects to link the required strategies with task demands to pinpoint discrepancies between what a given task requires and what the subjects do. Therefore, the subjects’ envelopes included written Arabic directives instructing them to read at their own rate, to take notes and to feel free to underline important words or sentences if they wished. In order to orient the subjects to read for the purpose of a written recall of the text (see appendix C), the pre-reading instructions told them that they would be asked to recall as much of the text as possible and to write it down using their own words or those of the author, without consulting the text or their notes. All recalls were written on paper provided to the subjects, with instructions not to look back at the

passage.

All experimental subjects shared the same native language background with the researcher. They were instructed that they would be able to write their recalls in either Arabic or English or in both languages if they found this easier. This freedom of language of response was designed to avoid the problem of limited L2 production abilities, which could affect the results of the study. For example, Lee (1986) found significant differences in the quantity of idea units recalled depending on the recall language, suggesting that recall language can affect the results of a study. The inability to produce L2 was also considered to be a disadvantage of the recall protocol procedure by Heinz (2004). A discussion of the scoring of the reading strategy survey and the recalls follows in the next subsection.

4. 5. Scoring of Tasks

This section explains how the Reading Strategy Survey and the Recall Task were scored.

4.5.1. Scoring of Reading Strategy Survey

Subjects' self reported reading strategy utilization was assessed via their responses on a 5-point Likert scale provided after each statement (ranging from '1', I never do this to '5', I always do this). Three levels of self reported reading strategy usage were identified following Mokhtari and Reichard (2002). They are: high level (mean of 3.5 or higher), medium level (mean of 2.5 to 3.4), and low level (mean of 2.4 or less).

4.5.2. Scoring of Recall Protocols

The recall protocols were analysed for both the quantity and quality of idea units

recalled from the texts. The quantity refers to the number of recalled ideas. The quality of the idea units refers to whether the ideas recalled were top-level or main ideas, low level ideas, or details. Different weights were assigned to recalled items, according to the type and the number of the 63 propositions or idea units contained in the original text. This numerical weighting was previously used by Zerhouni (1996) and Rolof (1999) and is meant to reflect the different hierarchical levels of the propositions. Such weighting also facilitates the various statistical comparisons between scores. The macro propositional level (MP) received 16 points, the highest score allocated. Level I propositions (PI) received 8 points; Level II propositions (PII) received 4 points, Level III propositions (PIII) received 2 points, Level IV propositions (PIV) received 1 point, and Level V propositions (PV) received 0.5 point. The weighted values and the total possible score for each propositional level are shown in Table 13 below:

**Table 13: Maximum Possible Scores for Each Level of the Text Propositions
and for the Total Textbase Recall**

Prop. Level	No. of Props	Points for each proposition	Total points for each level
MP	1	16	16
PI	10	8	80
PII	16	4	64
PIII	24	2	48
PIV	5	1	5
PV	7	0.5	3.5
Total	63		216.5

The text contains one macro proposition with a maximum score of 16 points; ten first level propositions with a maximum score of 80 points; sixteen second level propositions with a maximum score of 64 points; twenty-four third level propositions with a maximum

score of 48 points; five fourth level propositions with a maximum score of 5 points; and seven fifth level propositions with a maximum score of 3.5 points. In total, the text contains 63 propositions with a total possible score of 216.5.

4.5.3. Interrater Reliability

To ensure inter-rater reliability, raters scored protocols from each text separately. Each rater read each protocol twice and compared it to the propositional structure established for the text before assigning it a score. Sometimes, it was necessary to compare recalls across subjects to avoid any inconsistencies. When all of the recall protocols had been scored, 15 excerpts from each text were selected randomly and given to another colleague to be scored again to ensure reliability and consistency.

4.5.4. Scoring the Retrospective Interviews

Since the purpose of these interviews was to identify the range and types of strategies actually used by the participants, strategies were categorized according to a predetermined classification scheme proposed by Mokhtary and Sheorey (2002). Each identified reading comprehension strategy was listed and counted only once for each participant, even if it was reported a number of times.

CHAPTER FIVE

Results (Quantitative and Qualitative Analyses)

Introduction

Brantmeier (2004) assumes that selection of statistical procedures is an integral part of the research process and that this choice is motivated by research questions and validated through a discussion of results. The variables for the present study and their treatment are discussed in the following section. Next, the research Hypotheses are addressed via the selected statistical measures, which include the T test, the regression test, the F test and ANOVA. Then, variation in main idea comprehension and recall between groups and languages will be discussed. This chapter will conclude with a summary of the main results of the study.

5.1. Research Variables

The research variables for the study were:

- The subjects' awareness of reading strategies for identifying the main ideas of the reading text as measured by the Survey of Reading Strategies
- The subjects' use of the necessary strategies for understanding the main idea of the text as measured via post-test interviews and recall analyses
- The NA subjects' second/foreign language reading proficiency level (Can TEST)
- The NE controls' L1 (English) reading proficiency level (Nelson-Denny)
- Reader assessment of text scores with respect to text difficulty, familiarity and

topic interest

- Subjects' recall of the texts, English and Arabic measured by the number and types of propositions recalled in the recall protocol
- Subjects' identification of the main ideas of the reading text, with respect to the text recall, the raw frequencies for each propositional level (PI to PV)

The effect of two last variables was analyzed as follows: condition (group) and Prop (level of propositions). Condition has two categories (L1 and L2) and proposition has five categories (PI to PV). In this case, we have a 2x5 factorial ANOVA where condition is a between subject factor and where proposition is a within-subject factor. Proposition recall is the proportion of total propositions recalled for each level (PI to PV). In this case, we have a 2 x 5 mixed design ANOVA with Proposition level repeated. MP (macro-point – text title) was not included because it is scaled differently (dichotomously). It was analyzed separately and a T test was used to compare the MP recall and the overall recall performance of the performance of the native English speaking group to that of the Arabic speaking group in L1 and L2.

5.2. Hypothesis 1 states that NE readers, who have received explicit training in reading strategies for main idea comprehension, will have better knowledge of these strategies than NA readers, who have not had such training. Knowledge of reading strategies was measured via the Survey of Reading Strategy Awareness. Overall strategy awareness means for both groups are shown in Table 14.

Table 14: L1 Reading Strategy Awareness Means for Both Groups

Strategy type	Means of English group N=16	Std. Dev.	Std. Error	Means of Arabic group N=112	Std. Dev.	Std. Error
1- Global	6.5	1.8	*	3.7	.54	.052
2- Support	5.5	2.1	*	3.9	.58	.056
3- Problem-solving	7.4	1.7	*	4.3	.53	.050

* = The small sample size precluded the calculation of Standard Error

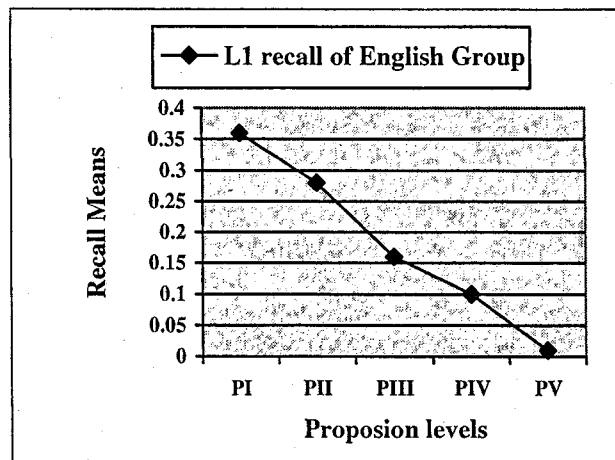
Due to the small number of participants in the NE control group (16) compared to the NA experimental group (112), a statistical comparison could not be performed across the two groups. A comparison of the group means indicates however, that the native English speaking group is much more aware of all three types of strategies than the NA group. This is suggestive of support for Hypothesis 1.

5.3. Hypothesis 2 states that readers who have greater strategy awareness will perform better on the recall tasks in their first language.

The results, illustrated in Table 15 and Figure 3, indicate the NE group's propositional pattern for the English text.

Table 15: L1 Propositional Recall Means for English Speaking Controls

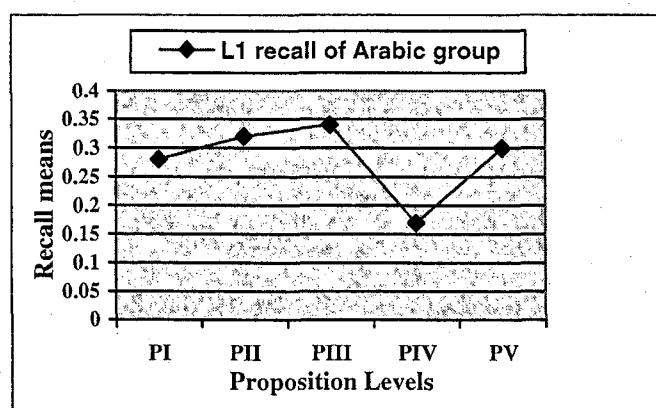
Group	Proposition	Mean	Std. Error
English speakers' L1	1	.36	.40
	2	.28	.23
	3	.16	.21
	4	.10	.18
	5	.01	.18

Figure 3: L1 Recall Pattern for English Speaking Group

The NE group recall pattern goes down systematically from the highest proposition (PI), which contains the most important idea units to the lowest proposition (PV), which contains the least important idea units.

**Table 16: Propositional Recall Means of L1
For Arabic speaking group**

Group	Proposition	Mean	Std. Error
Arabic speakers' L1	1	.28	.19
	2	.32	.20
	3	.34	.19
	4	.17	.18
	5	.30	.27

Figure 4: L1 Recall Pattern for Arabic Speaking Group

The NA group's L1 recall performance is shown in Table 16 and Figure 4.

Note that the native Arabic group paid more attention to the third level propositions than the first and second level idea units. Also they focused more on the fifth level propositions than on the first level ones. These differing patterns of recall of the two groups indicate a greater awareness of the hierarchical structure of the text on the part of the NE group. This suggests some support for Hypothesis 2.

Both within and cross group analyses were conducted to further test Hypothesis 2. Despite the fact that the NA group had low strategy awareness means with little variability for all the three strategy categories (see Table 17), we were still able to demonstrate some effects of strategy awareness on propositional recall.

Table 17: Reading Strategy Awareness Means of Arabic Group Arranged by Means

Global		Support		Problem-solving		All strategies	
Student N=	M	Student N=	M	Student N=	M	Student N=	M
34	4	54	4	70	4	57	3
65	3	49	3	41	3	48	4
13	2	9	2	1	2	7	2
Total=112	3.7	Total=112	3.9	Total=112	4.3	Total=112	

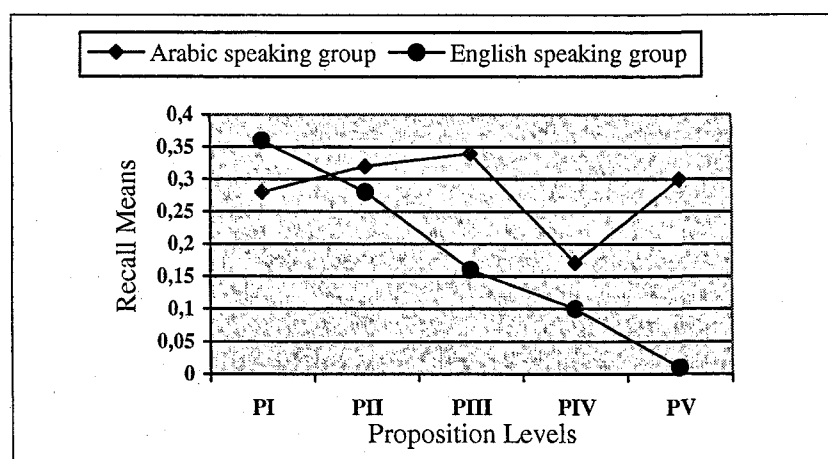
Regression tests indicate that there is a significant effect of support and global strategies awareness on the recall of PI in the L1 of the Arabic-speaking group [$F(2, 108) = 3.469, P = .035$]. In addition, Problem-solving strategies also have a significant effect on the recall of PII of the L1 of the Arabic-speakers [$F(1, 111) = 4.364, P = .039$]. However, there was no significant effect of strategy awareness on the overall recall pattern of main ideas in Arabic [$F(3, 108) = 1.078, P = .362$]. These results only partially support Hypothesis 2.

Unfortunately, the small size of the NE group precluded our carrying out of a similar regression analysis comparing their strategy awareness to their overall pattern. Although the native English-speaking group outperformed the experimental group in the amount of recall of P1, in which the most important ideas were located (see Table 18 and Figure 5), it is also worth noting that the Arabic speaking group significantly outperformed the English speaking group in the number of ideas recalled from levels two to five. Thus, a significant difference in the recall of L1 between the two groups was obtained [$F(1, 126) = 5.77, P = .02$]. This further supports Hypothesis 2. The results for L1 propositional recall for English and Arabic speakers are given in Table 18 and Figure 5.

Table18: Propositional Recall Means of L1 for Both Groups

Arabic speakers' L1		English speakers' L1
Proposition	Mean (Std. Error)	Mean (Std. Error)
1	.28 (.19)	.36 (.40)
2	.32 (.20)	.28 (.23)
3	.34 (.19)	.16 (.21)
4	.17 (.18)	.10 (.18)
5	.30 (.27)	.01 (.18)

Figure 5: Propositional Recall for English and Arabic Speaking Groups in L1



A statistical analysis demonstrates that there is a significant effect of proposition level on the recall of L1 text [$F(4, 504) = 16.90, p < .001$] for both groups. We can infer from these results that strategy awareness of main idea comprehension has affected recall in the first language. This is nicely illustrated in Table 18, in which the means of proposition recall descend systematically for the NE control group. However, the means of proposition recall for the L1 Arabic text by NA subjects show unsystematic amounts of recall from different proposition levels. These findings add additional support for Hypothesis 2.

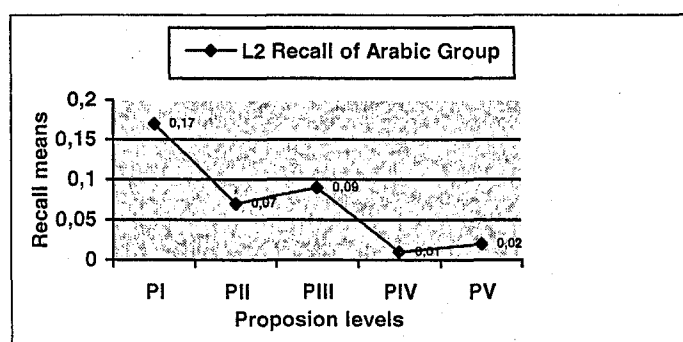
5.4. Hypothesis 3 as Hypothesis 3 predicted that readers with greater strategy awareness will do better in recalling their L2 text, the analysis will be restricted to the native Arabic speaking group's results for the English text compared to the strategy awareness scores. L2 propositional recalls for English (L2) are shown in Table 19.

Table 19: Means of English Recalls for each Idea Level by Arabic Group

Proposition levels	Mean	Std. Deviation	No. of subjects
English-PI	17	15.6	112
English –PII	7.4	7.4	112
English –PIII	9	8.1	112
English –PIV	1	4.5	112
English –PV	2.4	7.3	112

As illustrated in Table 14, the most familiar strategies for the L2 group were problem-solving, followed by support, followed by global strategies. In fact, a repeated measures ANOVA of the three strategy types indicates that their means are significantly different from one another [$F(2, 216) = 53.577, P = < .001$]. Nonetheless, the very small standard error means (Table 14) indicate that all our EFL subjects have similar low levels of strategy awareness ranging from 3 to 4 (see Table 17). Consequently, it is not surprising that a regression analysis indicated that there is no clear statistical correlation between EFL subjects' recall shown in Table 19, and L2 reading strategy awareness [$F(3, 108) = 1.27, P = .287$]. However, regression analyses indicated that there is a significant effect of Problem-Solving strategies solely on the recall of PI in the second language [$F(1, 111) = 4.387, P = .039$]. As was previously noted in Table 14, Problem-solving strategies were the most familiar to the NA subjects. These results suggest only partial support for Hypothesis 3.

Figure 6: Pattern of Proposition Recall of L2 for Arabic Speakers.



The recall results by the NA subjects for the L2 English text are also graphed in Figure 6.

Note in Figure 6 how recalls for PII are lower than for PIII. Similarly, the recalls for PIV are lower than those for PV. The consequent zigzag pattern of recalls suggests support for Hypothesis 3, in that the NA subjects' low level of main idea comprehension may have contributed to their poor recall performance.

5.5. Hypothesis 4 states that FL and L1 general reading proficiencies do not necessarily contribute to the recall of main idea(s). Thus we predict that readers with high reading strategy awareness who are also capable of using these strategies accurately comprehend and identify main ideas better than readers with high general reading proficiency alone. The first step in addressing research hypothesis 4 was to assess the participants reading levels, using the Nelson-Denny (N-D) reading test for the NE controls and the CanTEST for the NA experimental subjects. The scores of the control and experimental groups are presented below in Tables 20 and 21, respectively.

Table 20: Reading Ability Levels of the NE Control Group

Individual Subjects' #	N-D Test score out of 38	Score Percentage	Level
2	37	97%	High
6	36	94%	High
5, 7, 10, 16	35	92%	High
12	34	89%	High
14	33	86%	High
4	32	84%	High
3	28	73%	Med
1, 15	24	63%	Med
13	22	57%	Low
8	21	55%	Low
9	18	47%	Low
11	16	42%	Low

Table 21: Reading Ability Levels of the NA Experimental Group

Number of Subjects	CanTEST Scores	Score Percentage	Level
3	11	55%	High intermediate
3	10	50%	High intermediate
12	9	45%	High intermediate
10	8	40%	High intermediate
15	7	35%	Med intermediate
21	6	30%	Med intermediate
17	5	25%	Med intermediate
14	4	20%	Low intermediate
12	3	15%	Low intermediate
3	2	10%	Low intermediate
2	1	5%	Low intermediate

The highest CanTEST scored score was 11 out of 20 and the lowest was 1 out of 20.

As all of the experimental subject's scores ranged within the intermediate level, they

were further divided into three levels by grouping those with scores between 1 to 4 at the low intermediate level, those with scores between 5 and 7 at the mid intermediate level, and those with scores between 8 and 11 at the high intermediate level. This categorization was approved by Professor Hope, the coordinator of the CanTEST center at the University of Ottawa (personal communication (March 20, 2005)).

Covariance analysis and regression tests indicated that the effect of L2 reading proficiency, as measured by the CanTEST, was not significant [$F(10, 101) = 1.43, p = .179$]. This indicates that L2 reading proficiency is not a useful predictor of main idea comprehension and recall or of other propositional level recalls. In other words, L2 reading proficiency did not reveal any correlation with or any effect on the propositional recall patterns and scores of English text for Arabic speakers. This is illustrated by the performance of the highest scorers on the CanTEST, with scores of 11, who scored only 18% and 20% in their recall of main ideas. In contrast, the low CanTEST scorers, with scores of 3 and 4, scored 27% and 28% respectively in their main idea recall. Accordingly, these results support Hypothesis 4, which suggests that general reading proficiency alone does not affect L2 reading comprehension.

This disassociation of general reading proficiency and main idea identification also held for the NE control group. Although the NE group was too small to permit a statistical analysis, if we examine their Nelson-Denny reading test scores (see Table 20) we note that they do not appear to be correlated with their propositional recall scores. For instance, highly proficient readers, whose percentage scores were 92% and 86% on the Nelson-Denny test, had percentage scores for main idea recall as low as 17% and 24% respectively. However, low proficiency readers in this group, who scored only 55% and

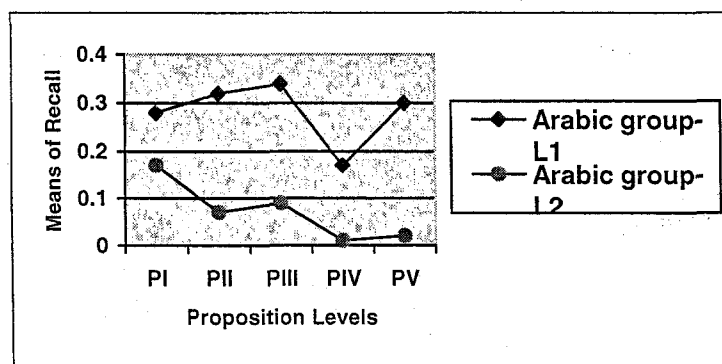
57% on the Nelson-Denny test, scored higher than highly proficient readers in the recall of main ideas, at 27% and 33% respectively. This general reading proficiency does not appear to affect the L1 reading comprehension of main ideas, suggesting additional support for Hypothesis 4.

Although we did not have a formal test of Arabic reading proficiency for the NA group, it is safe to assume that their reading proficiency levels are higher for Arabic than for English. If reading proficiency contributes to main idea identification and hierarchical propositional recall, then we should see this, reflected in the NA group's superior recall of the Arabic over the English text. Of course such a comparison assumes strategy awareness and text organization as constants.

Table 22: L1 and L2 Propositional Recalls of the Native Arabic Group

Prop. Level	L1 Arabic Text	L2 English Text	N =
	Mean (Std.D)	Mean (Std.D.)	
PI	.28 (.19)	.17 (.15)	112
PII	.32 (.20)	.07 (.07)	112
PIII	.34 (.19)	.09 (.08)	112
PIV	.17 (.18)	.01 (.04)	112
PV	.30 (.27)	.02 (.07)	112

**Figure 7: Pattern of Proposition Recall of Arabic and English Languages
(L1 & L2) for Native Arabic Group**



The NA subjects' recall means and patterns for the Arabic and English language texts are shown in Table 22 and Figure 7. A 2 x 5 within-subjects ANOVA indicated that overall the language used had an effect, with superior recall for the Arabic one [$F(1, 111) = 224.77, P = <.001$] and proposition level had a non-linear effect from PI to PV in both languages [$F(4, 444) = 37.54, P = <.001$]. Thus, the interaction between these two independent variables of language and proposition level is significant [$F(4, 444) = 19.68, p = <.001$]. We can see the erratic manner of propositional recall on Figure 7. For the Arabic text, recall increased from PI to PIII, dropped off sharply on PIV, and then sharply increased on PV to be higher than PI. The pattern is different, and somewhat less erratic, for the English text, here we observe a drop in recall from PI to PII, an increase from PII to PIII, a drop from PIII to PIV. PIV and PV are almost equivalent in English (see Table 22 and Figure 7). Thus, reading proficiency affects overall amounts of recall, favoring L1 over L2.

Furthermore, The NA subjects' recall for the English L2 text shows a more accurate descending order than their recall performance in their L1. This is an additional piece of evidence that general reading proficiency alone has no effect on recall performance given that these university level students are proficient readers in their L1, as they are students and all their education was in their L1. Thus results for both groups appear to support Hypothesis 4.

5.6. Hypothesis 5 predicted that text difficulty, topic familiarity and interest may affect reading comprehension and main idea identification. If the participants' assessment of the text show that the text is difficult, not interesting and unfamiliar, readers will not be able

to comprehend it or recall it properly.

Responses to questions regarding text ease, topic familiarity and interest on the reader assessment questionnaire (see Appendix H) are shown in Table 23 with respect to both the English and Arabic texts for NA group and with respect to the English text for the NE

Table 23: Scores of Text Ease, Topic Interest and Familiarity of English and Arabic Texts for NA Group and NE Group

	Arabic Text					English text									
	Native Arabic Student N= 112					Native Arabic Student N= 112					Native English Student N= 16				
Scores	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Text Ease	0	4	9	38	61	7	37	43	13	6	0	0	0	4	12
Topic Interest	2	28	30	29	23	10	47	29	13	6	0	3	5	6	2
Topic Familiarity	29	22	22	28	9	27	18	26	27	8	0	0	3	6	7

group. Most of the NA group (80 of 106) rated themselves at 2 and 3 on the ease of text question for the English text. For topic interest, the majority of NA group, 76 of 100, also rated themselves at 2 and 3. However, participant numbers were equally distributed between the rates of 1, 3 and 4 for the familiarity variable for the English text. In contrast, for the Arabic ease of text variable, almost all of the students in NA group (99 of 112) rated themselves at 4 and 5. For the Arabic text topic interest variable, answers were evenly distributed between 2, 3 and 4. For topic familiarity of the Arabic text, equal numbers of students rated themselves at 2 and 3, and almost the same number of students rated themselves at 1 and 4. On the other hand, all 16 students in the native English-speaking (NE) group rated themselves at 4 and 5 for text ease. For topic interest, English speaking student numbers were distributed from 2 to 5. For the topic familiarity, most of

the English-speaking students rated themselves at 4 and 5, and only 3 of them rated themselves at 3.

Regression analyses were performed on the NA group results to try to predict main idea recall in both English and Arabic on the basis of text difficulty, familiarity and topic interest. The results indicate that only familiarity was a useful predictor of the macro-point (title) recall of the English text by the NA group [$F(1, 106) = 5.838, P = .017$]. Moreover, the regression analysis indicated that none of the three variables were useful for predicting idea level recalls in English for the native Arabic speaking group [$F(3, 105) = 2.467, P = .066$]. In addition, a regression analysis indicated that there was no correlation between these three variables and main idea recall in Arabic for the native Arabic speaking group [$F(3, 109) = .120, P = .948$]. Thus, the results for the NA speakers do not support Hypothesis 5.

Table 24: Percentages of Texts' Ease, Interest and Familiarity for Both Groups

Group	Ease percentage	Interest percentage	Familiarity percentage
Native Arabic-L2	55%	51%	54%
Native Arabic-L1	87%	69%	53%
Native English-L1	95%	68%	85%

A statistical analysis could not be performed for the NE control group due to the small number of participants. As shown in Table 24, the NE group has higher scores for ease of text (95%) and familiarity (85%) on the English text than the NA group does for their L1 Arabic text (87% and 53% respectively). However, the scores of both groups for the interest variable in their L1 text were very similar (68% for the NE group and 69%

for the NA group). The NA group had almost identical scores for the three variables in their L2 (55%, 51% and 54% respectively). Furthermore, they had the same score for text familiarity in both languages (54% in the L2 and 53% in the L1 text). In the light of these similar scores for the two groups, it is unlikely that these factors could have accounted for the different performances of the two groups on text recall and hierarchy of propositions.

5.7. Hypothesis 6 states that knowing reading comprehension strategies does not necessarily indicate that you are able to use them effectively; we predict that readers who actively use these strategies effectively will perform better on the recall tasks than those who simply purport awareness of them.

This Hypothesis is partially supported by the analysis reported above showing that strategy awareness alone is generally not a good predictor of propositional recall. In addition, we conducted qualitative analyses of the interviewees' reports of strategy use in relation to their recall performance.

The three interviewees from the control group were selected according to their Nelson-Denny test scores. One from each linguistic level was selected. They were participants 1, 2 and 8. The eleven interviewees from the experimental group were selected according to their CanTEST scores. There were three from the high level, 5 from the mid level and three from the low level. The interview questions appear in Appendix I.

Table 25: Reported Strategy Usage by the NA and NE Group Interviewees

Strategy Category	Strategy	NA students N=11(TPS)*	% of TPS	NE students N = 3(TPS)*	% of TPS
Support	- Note taking	0		1	
Support	- Underlining	2		2	
Support	- Paraphrasing	1		0	
Support	- Translation	5		0	
Total	4	8 (44)	.18	3 (12)	.25
Global	-Schemata activation	1		1	
Global	-important parts selection	4		1	
Global	-Context clues application	1		0	
Total	3	6 (33)	.18	2 (9)	.22
Problem-solving	-Careful and slow reading	1		1	
Problem-solving	-Speed adjustment	11		3	
Problem-solving	-Re-reading	7		3	
Problem-solving	-Guessing	2		0	
Total	4	21 (44)	.48	6 (12)	.50

* TPS = Total Possible Score

Table 25 shows that problem-solving strategies were the most frequently reported category by interviewees in both the NA and NE groups. Four different strategies from the support strategy category were mentioned by the NA group and the NE group. Global strategies were the least used, as only three of them were mentioned by either group. Examples of the answers to the interview questions are reported in Tables 26 and Table 27 and ordered according to their place in the Survey of Reading Strategy (SORS) of Mokhtari and Sheorey (2002). The strategies are represented in the same numerical order as they occur in the survey.

Table 26: The Interviews Analysis of the Selected NE Group Participants

Strategy # and type from Mokhtary & Sheorey (2001)	Interviewees reports	Subject	Reading Level
2- Taking notes while reading (Support)	I jotted down some notes depicting the main idea beside each paragraph.	8	Low
10- Underlining information (Support)	I underlined important point and re-read what I had underlined.	2 1	High Mid
3- Background knowledge activation (Global)	I connected what I know to the text to understand it	1	Mid
12- When reading, I decide what to read closely and what to ignore (Global)	I focused on important sentence to understand them well.	2	High
7- Reading slowly and carefully to ensure I understand (Problem-solving)	I read it very slowly and I did my best to understand as much as possible	8	Low
11- Reading speed adjustment (Problem-solving)	I read the text quickly / moderate to quickly/ moderately to slowly because it was easy.	2 1 8	High Mid Low
25- Re-reading difficult parts for comprehension increase (Problem-solving)	I re-read some sentences or notes/ skimming the underlined main points to make sure I understood them.	2 16 1	High Low Mid

Table 27: The Interviews Analysis of the Selected NA Group Participants

Strategy category and # from Mokhtary & Sheorey (2001)		Interviewees reports	Individual Subject #	Reading Level
Support	10- Underlining information	I underlined difficult words and the important things to remember them.	17 12	Mid High
	18- I paraphrase to better understand what I am reading	I rephrase sentences to remember them.	66	Mid
	29. When reading, I translate from English into my native language.	I translated new/important words to Arabic to remember the text	36 6 66 12 105	Mid Low Mid High High
Global	12- When reading, I decide what to read closely and what to ignore	I focused on the first 3 and the last 2 paragraphs because main ideas usually there/ I read first paragraph, one paragraph from the middle and last one	68 66 6 105	Low Mid Low High
	17. I use context clues to help me better understand what I am reading	I tried to understand the new words from the context	110	Mid
Problem-solving	7- I read slowly and carefully to make sure I understand what I am reading.	I read slowly to understand the text.	68	Low
	11- Reading speed adjustment.	I read the text quickly/moderately/slowly	36, 66, 5, 17, 110 67, 12, 105 68, 87, 6	Mid High Low
	25- Re-reading difficult parts for comprehension increase	I re-read the important sentences.	68 105	Low High
		I re-read the text or the new words 2 or 3 times to remember it.	68, 6 67 17, 36	Low High Mid
	28. When I read, I guess the meaning of unknown words or phrases.	I guessed the meaning of unknown words and tried to bring the nearest meaning	36 87	Mid Low

5.7.1. Combined Quantitative and Qualitative Analyses of the Interviewees Data

The results suggest that strategy awareness was not a good predictor for the recall performance. So the interview data may help us to understand why strategy awareness was not enough. In order to see if the previous reports of strategy use seem in line with the awareness data and the recall performance, in this section, a comparison of each interviewee's strategy awareness, reading proficiency, reported strategy use and recall pattern of the L1 and L2 texts for Arabic-speaking subjects and of the L1 text for English-speaking subjects.

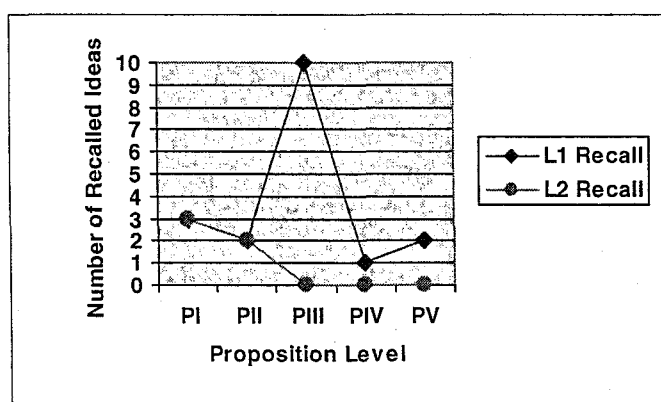
1- Subject 5 (NA)

Table 28: Strategy Awareness Means, CanTest Score and Reading Level for Subject 5

Global Strategies	Support Strategies	Problem-Solving Strategies	CanTest Score
3.5	4.2	4.8	6 Mid

Reported strategy use: *I read the text moderately. I read every word; I did not skip anything in the text.*

Figure 8: L1 and L2 Recall Patterns for NA Participant 5



Despite the high awareness means of Support and Problem-solving strategies, this subject did not implement any of them. This lack of use of any of these strategies is

clearly reflected on the recall pattern of L1 text.

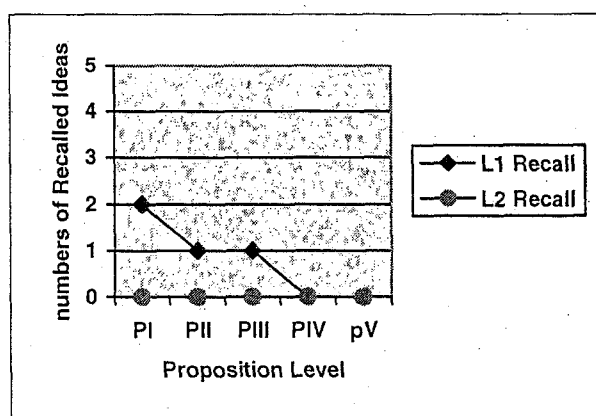
2- Subject 6 (NA)

Table 29: Strategy Awareness Means, CanTest Score and Reading Level for Subject 6

Global Strategies	Support Strategies	Problem-Solving Strategies	CanTest Score
2.6	3.8	3.2	2 Low

Reported strategy use: *I read the text slowly. I read it word by word. I translated the text to Arabic. I re-read the text.*

Figure 9: L1 and L2 Recall Patterns for NA Participant 6



The effect of the low awareness means of the three types of strategies, the low level of L2 general reading and the lack use of any Global strategies can be seen obviously in the recall performance of the L2. Subject 6 (NA) used only one strategy from the Support category and one from the Problem-solving category. Despite of the few recalled ideas from the L1 text, the L1 recall pattern is somehow descending systematically from P1 to P2.

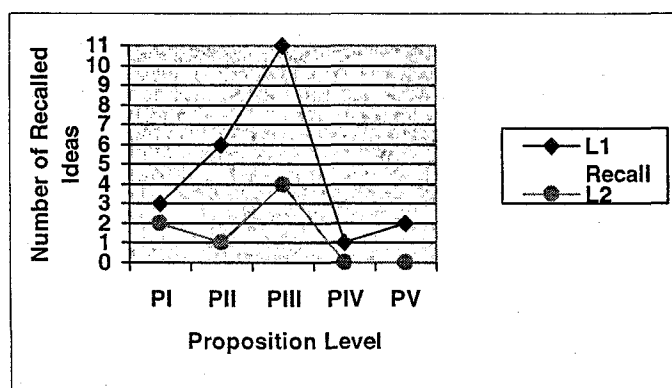
3- Subject 12 (NA)

Table 30: Strategy Awareness Means, CanTest Score and Reading Level for Subject 12

Global Strategies	Support Strategies	Problem-Solving Strategies	CanTest Score
4	3.5	4.5	11 High

Reported strategy use: *I read the text moderately. I underlined the difficult words and the important things. I translated the new words to Arabic. I re-read the underlined sentences and words.*

Figure 10: L1 and L2 Recall Patterns for NA Participant 12



In spite of the high awareness means of Global and Problem-solving strategies, subject 12 reported the use of only two Support strategies, one Problem-solving strategy and nothing from the Global strategy category. This lack of strategy use can be seen in the irregular patterns of recall. Both patterns of L1 and L2 suffered in parallel despite of the subject's high level of reading proficiency.

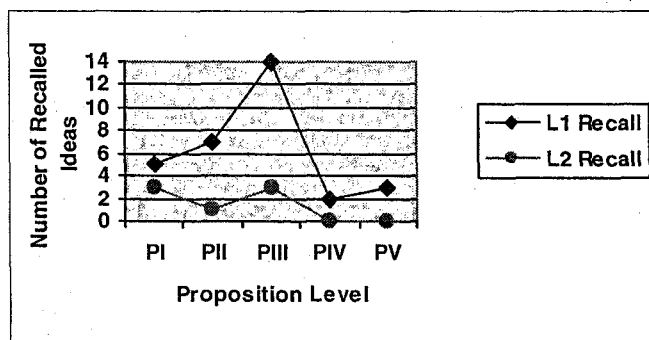
4- Subject 17 (NA)

Table 31: Strategy Awareness Means, CanTest Score and Reading Level for Subject 17

Global Strategies	Support Strategies	Problem-Solving Strategies	CanTest Score
3.3	4.4	3.2	6 Mid

Reported strategy use: *I read the text moderately. I re-read it. I underlined important things.*

Figure 11: L1 and L2 Recall Patterns for NA Participant 17



This subject reported high awareness of Support strategy category and low awareness of Problem-solving strategy category. However, in terms of use, she used one strategy from each of the two categories. This lack of reading strategy use is translated into her irregular recall patterns of both L1 and L2.

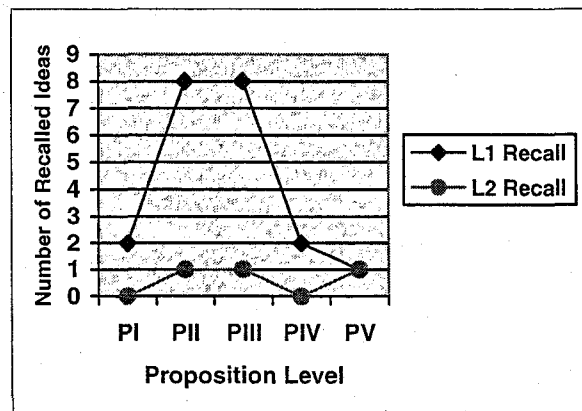
5- Subject 36 (NA)

Table 32: Strategy Awareness Means, CanTest Score and Reading Level for Subject 36

Global Strategies	Support Strategies	Problem-Solving Strategies	CanTest Score
3.3	4.4	3.2	6 Mid

Reported strategy use: *I read the text quickly. I translated the text word for word to Arabic. I guessed the meaning of the unknown words. I re-read some sentences.*

Figure 12: L1 and L2 Recall Patterns for NA Participant 36



Despite of the low mean of Problem-solving strategy category the subject reported the use of two strategies from it. However, he reported more awareness of Global category but did not use any strategy from it. Further, he used only one strategy from the support category which has the highest mean. The effect of the insufficient use of these strategies can be obviously seen in the two irregularly descending patterns of both languages with higher recalled number of ideas from L1. It can be noticed that subject 36 recalled the same number of ideas from levels 1 and 4 and from 2 and three in both languages.

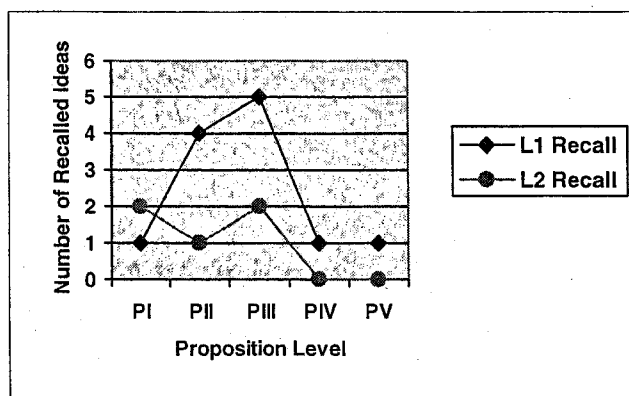
6- Subject 66 (NA)

Table 33: Strategy Awareness Means, CanTest Score and Reading Level for Subject 66

Global Strategies	Support Strategies	Problem-Solving Strategies	CanTest Score
3.9	2.6	3.6	6 Mid

Reported strategy use: *I read the text quickly. I translate the new words first and then read the whole text. I rephrase few sentences. I focused on the first three paragraphs more than the rest of the text.*

Figure 13: L1 and L2 Recall Patterns for NA Participant 66



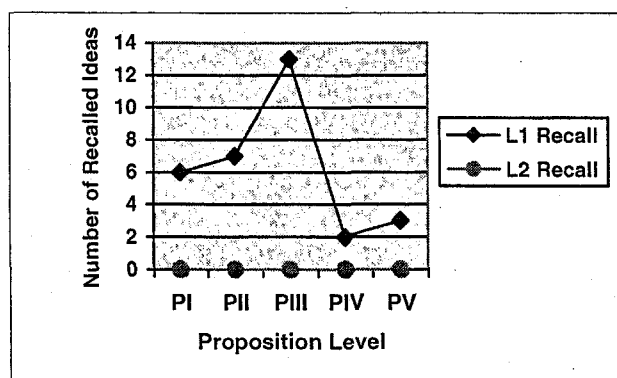
Although, Global strategy category has the highest awareness mean, subject 66 (NA) did not use any one from it. He used two from the support category, while he reported the lowest awareness of it. This lack of use negatively affected the recall patterns of both languages. It can be seen that subject 66 (NA) recalled the same number of ideas from the first, fourth and the fifth levels in L1.

7- Subject 67 (NA)

Table 34: Strategy Awareness Means, CanTest Score and Reading Level for Subject 67

Global Strategies	Support Strategies	Problem-Solving Strategies	CanTest Score
3.5	3.8	4	11 High

Reported strategy use: *I read the text quickly. I re-read each paragraph 2 or 3 times.*

Figure 14: L1 and L2 Recall Patterns for NA Participant 67

Despite of the high strategy awareness means of Support and Problem-solving categories, subject 67 (NA) used only one Problem-solving strategy and none from the Support category. This subject submitted a blank L2 recall sheet in spite of his high level of L2 reading proficiency.

His L1 recall pattern is also irregular, which reflects the effect of none-efficient use of reading comprehension strategies.

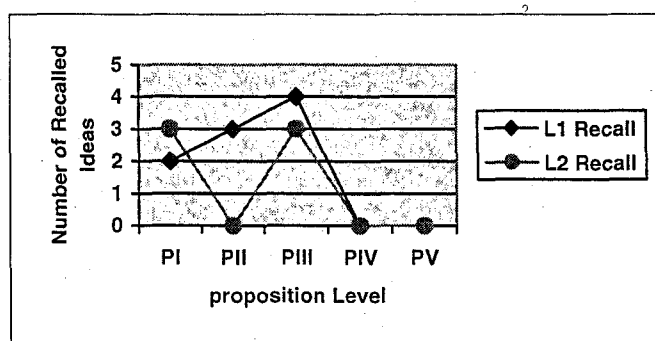
8- Subject 68 (NA)

Table 35: Strategy Awareness Means, CanTest Score and Reading Level for Subject 68

Global Strategies	Support Strategies	Problem-Solving Strategies	CanTest Score
3.7	3.3	4.6	2 Low

Reported strategy use: *I read the text quickly at the beginning and then I read it slowly. I read the whole text from the first paragraph to the last one. I re-read the whole text then I re-read some important sentences.*

Figure 15: L1 and L2 Recall Patterns for NA Participant 68



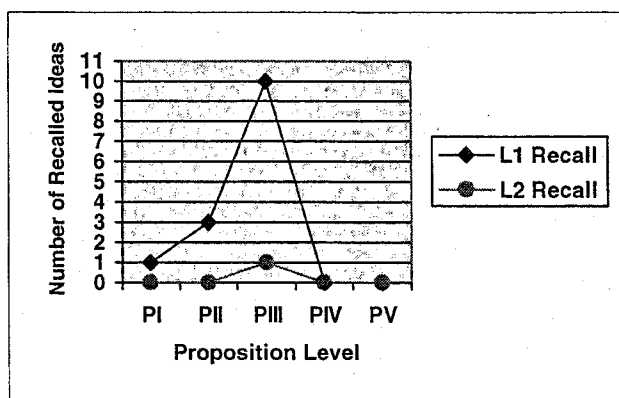
Albeit of the low level of L2 reading proficiency of subject 68 (NA), he reported high awareness of Problem-solving strategies and used three of them. However, none was used from the other two strategy categories. As it can be noticed, subject 68 (NA) recalled the same number of first and third levels of L2 ideas. The unsystematically descending recall patterns can be returned to the lack of strategy effective use in both languages.

9- Subject 87 (NA)

Table 36: Strategy Awareness Means, CanTest Score and Reading Level for Subject 87

Global Strategies	Support Strategies	Problem-Solving Strategies	CanTest Score
4.6	4.8	5	1 Low

Reported strategy use: *I read the text moderately. I read the whole text in order word by word. I guessed the meaning of the new words. I focused on the main idea and not the details.*

Figure 16: L1 and L2 Recall Patterns for NA Participant 87

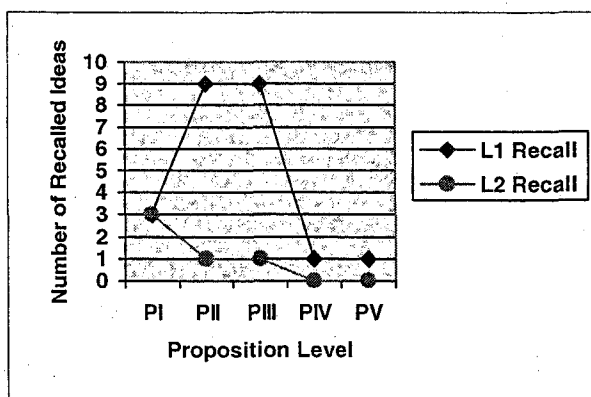
Even with the low reading proficiency level of subject 87 (NA), she reported high awareness of the three types of reading comprehension strategies. However, she reported use of only two strategies, one Problem-solving and one global. Further, although, she reported that she focused on main ideas, her both recall patterns indicate her more focus on the third level ideas than on first and second levels.

10- Subject 105 (NA)

Table 37: Strategy Awareness Means, CanTest Score and Reading Level for Subject 105

Global Strategies	Support Strategies	Problem-Solving Strategies	CanTest Score
4.2	4.8	4.7	11 High

Reported strategy use: *I read the text slowly. I read the whole text word by word. I translate the important words and I got the main idea. I re-read the important sentences.*

Figure 17: L1 and L2 Recall Patterns for NA Participant 105

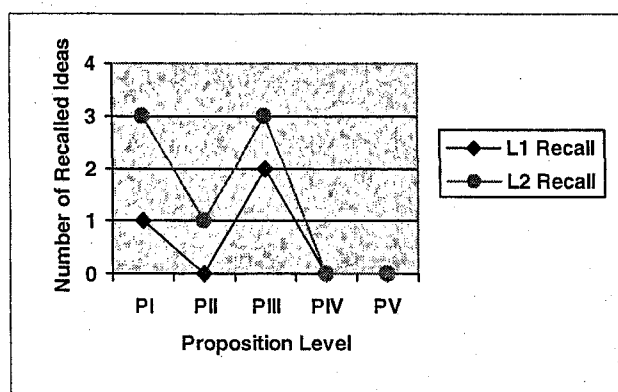
Albeit of the high awareness means, subject 105 (NA) reported use of only two strategies, one Support and one Problem-solving. Although this subject is a high proficient L2 reader, her L2 recall pattern indicates a recall of few first level ideas. Also she recalled the same number of second and third level L2 ideas. Similarly, she recalled the same number of second and third level L1 ideas with noticeably higher amount of L1 than L2.

11- Subject 110 (NA)

Table 38: Strategy Awareness Means, CanTest Score and Reading Level for Subject 110

Global Strategies	Support Strategies	Problem-Solving Strategies	CanTest Score
4.2	4.4	4.7	6 Mid

Reported strategy use: *I read the text slowly. I read the whole text word by word. I tried to understand the new words from the context.*

Figure 18: L1 and L2 Recall Patterns for NA Participant 110

Even though subject 110 (NA) reported high awareness of the three types of reading comprehension strategies; he used only one global strategy. What is interesting here is that the two language recalls have exactly the same unsystematically descending patterns with higher number of the first three levels of L2 recalls. This reflects the same negative effect of the lack of efficient strategy use on both languages.

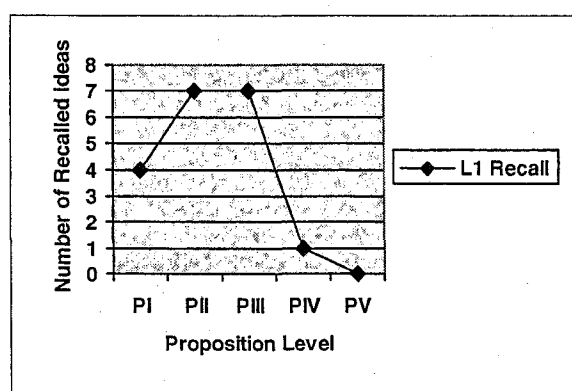
English-speaking Group Interviewees

12- Subject 1 (NE)

Table 39: Strategy Awareness Means, ND Test Score and Reading Level for Subject 1

Global Strategies	Support Strategies	Problem-Solving Strategies	ND Test Score
3.1	2.7	3.8	24 Mid

Reported strategy use: *I read the text moderate/quickly. I read the text from the beginning to the end. I underlined key points. I connected what I know with the text content. I re-read the underlined points.*

Figure 19: L1 Recall Pattern for NE Participant 1

Subject 1 (NE) reported higher awareness of Problem-solving than support and Global strategies. Likewise, she used more problem-solving strategies than Global and Support strategies. Regardless of the fewer recalled amount from P1, Figure 19 indicates that subject 1 (NE) recalled the same number of ideas from second and third levels going in a descending way from P3 to P5.

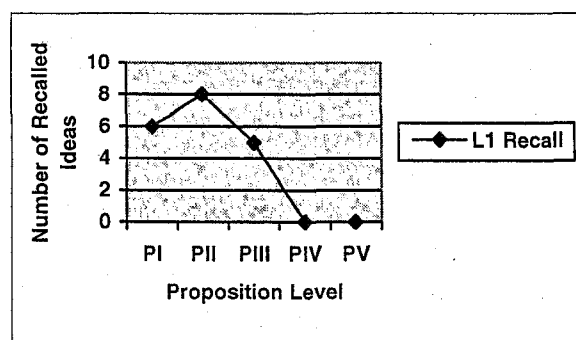
13- Subject 2 (NE)

Table 40: Strategy Awareness Means, ND Test Score and Reading Level for Subject 2

Global Strategies	Support Strategies	Problem-Solving Strategies	ND Test Score
3.5	3	4.3	37 High

Reported strategy use: *I read the text quickly. I underlined important sentences and re-read them. I connected what I already know to the text.*

Figure 20: L1 Recall Pattern for NE Participant 2



Subject 2 (NE) awareness of Problem-solving strategies was the highest followed by Global strategies. The least awareness was of Support strategies. This is reflected on the almost descending recall pattern of her L1, as it almost goes down systematically from P2 to P4 and P5.

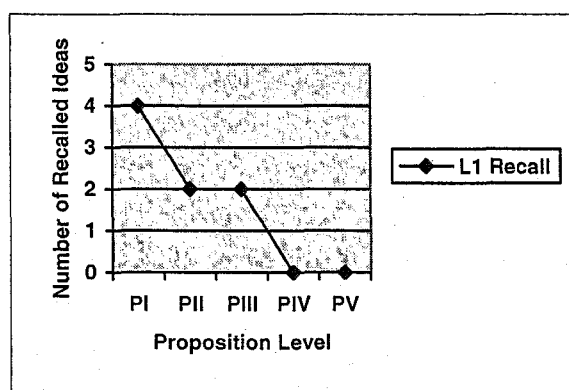
14- Subject 8 (NE)

Table 41: Strategy Awareness Means, ND Test Score and Reading Level for Subject 3

Global Strategies	Support Strategies	Problem-Solving Strategies	ND Test Score
3.2	3.8	4.1	21 Low

Reported strategy use: *I read the text very slowly and I did my best to understand as much as possible. I jotted down some notes depicting the main idea beside each paragraph. I skimmed the main points to make sure that I understand them.*

Figure 21: L1 Recall Pattern for NE Participant 3



Albeit of the low level of L1 reading proficiency of subject 8 (NE), she had a high awareness of Support and Problem-solving strategies and she also reported effective use of several support and problem-solving strategies. This in turn is reflected on her almost descending L1 recall pattern.

These presentations indicate that strategy awareness alone is not associated with recall performance as most of the Arabic-speaking interviewees with reasonable high strategy awareness performed poorly in their recall tasks of L1 and L2 such as student 12, 87, 105 and 110. Concerning L1 recall performance, subjects with high strategy awareness 5, 12, 36, 87, 105 and 110 performed poorly in their L1 recalls. This indicates that awareness alone is not enough to enhance reading comprehension performance it should be associated with effective use of these strategies. Thus, the qualitative analyses support research Hypothesis 6, which predicted that knowing reading comprehension strategies does not indicate that you are able to use them effectively.

These interview reports will be further analyzed and elaborated throughout the discussion in chapter six.

5.8. Summary of the Main Results of the Study

The main results of the quantitative analyses of this study are summarized and presented below:

Our results showed that native English speakers were more aware of reading comprehension strategies than Arabic speakers, thus supporting Hypothesis 1. The problem-solving strategy was the most familiar category for both English and Arabic speaking groups. The least familiar category for the Arabic speaking group was global strategies, with the support strategy category falling in the middle. For the English speaking group, the least familiar category was support strategies. However, in all cases the awareness means for the English speaking group were significantly higher than those for the Arabic speaking group. Thus, in answer to research question 1, it appears that explicit classroom training results in greater strategy awareness.

As predicted by Hypotheses 2 and 3, the English speaking group significantly outperformed the Arabic speaking group in the number of main ideas recalled in L1 and L2. We attribute this to the English speaking group's higher awareness of reading comprehension strategies. The overall performance of the two groups on their L1 texts suggests an answer to research question 2: Strategy awareness is strongly related to greater comprehension of main ideas in L1 reading.

The English speaking group were more familiar with reading comprehension strategies than the Arabic-speaking group. This strongly supports the view that their greater familiarity with these strategies resulted in their greater use, which in turn led to their superior recall of main ideas and a greater recall of main than lower level propositions. Therefore, there seems to be a link between reading comprehension strategy

awareness plus effective use and main idea identification. In contrast, there was no correlation between purported strategy awareness and the recall of main ideas of the Arabic-speaking group in both L1 and L2. Thus, in answer to research question 3, lack of awareness of appropriate reading strategies notably affects comprehension of main ideas of L2 texts.

Our results failed to support Hypothesis 4, which predicted that general reading proficiency would enhance main idea comprehension and recall in either English as an L1 or as an L2. Thus, in answer to research question 4, general reading comprehension proficiency level and strategy use are surprisingly independent of one another. The implications of this finding will be discussed in the following chapter.

Hypothesis 5, which predicted that text familiarity, difficulty and topic interest would positively affect the comprehension and recall of main ideas, was supported for the NE group only. The NE group who reported more text familiarity, ease and interest recalled more ideas than the NA group whose means were lower for these three measures. However, For the NA group, only the familiarity factor had a positive effect on the recall of main ideas in both L1 and L2. Thus, in answer to research question 5, of text difficulty, topic familiarity and topic interest, only topic familiarity, when it was appropriately applied, had a limited positive effect on reading comprehension and text recall. This result provides some support for the assertion that prior knowledge activation may facilitate main idea comprehension within the context of a global strategy.

Hypothesis 6, which predicted that readers who may use these strategies effectively would perform better on the recall tasks than those who simply purport awareness of them, was supported by the non-significant correlation between strategy awareness and

recall performance. Also it is additionally supported by the qualitative analyses of the interview reports, which also indicated that strategy awareness alone was not associated with the recall performance; because it needs be accompanied by the effective use of the underlying strategies in order to positively affect the recall performance in L1 and L2 for both NE and NA subjects. This, in partial answer to research question 6, we note that purported awareness of reading strategies is not sufficient to improve reading performance. Strategy awareness must be combined with effective implementation for there to be a resulting positive effect on reading comprehension.

In the next chapter, the data and results pertinent to each of the main research questions will be interpreted and discussed in the light of L2 research and theories.

CHAPTER SIX

Discussion

The main goal of this study was to investigate Libyan Arabic students' awareness and use of reading comprehension strategies for main ideas identification while reading in Arabic and English. Reading strategy awareness and use by Canadian English students were examined to provide controls for the experiment. The effect of language proficiency, reading ability and L1 background were addressed. The study also addressed the effects of text difficulty, familiarity and interest on the recall of main ideas.

In this chapter, the results pertaining to each of the main research questions are discussed with reference to L2 research and theories. Data from the analyses that were reported separately in chapter five are integrated in the following discussion in light of the four main questions that this research was designed to address (Questions 1 and 2 are combined together in this chapter).

6.1- To what degree does reading strategy awareness affect the comprehension of main ideas in L1 reading?

6.1.1- L1 Strategy Awareness and Main Ideas Identification

As shown in Table 14 in the previous chapter, the Arabic-speaking group had low means in the three types of reading strategy awareness compared to the English-speaking group. This may indicate that they are not aware enough of L1 reading comprehension strategies, as they had not studied them explicitly through their schooling (Zerhouni, 1996). In contrast, Table 14 shows that the English speaking group reported high awareness of the three types of reading strategies, most likely because they developed

and gained these strategies throughout their primary and secondary education as discussed in chapter two. Thus, by the time they reach the university level, they have become proficient and highly skilled readers. Notably, the linear pattern of the native English speakers' propositional recall of English text as shown in table 18 and Figure 4 together with their high degree of strategy awareness, strongly suggest a high frequency of efficient use of these strategies. There is also a linear relationship between their strategy awareness and their recall performance, showing that the greater the awareness, the higher the propositional recall (see Tables 15 and Figure 3).

In contrast to the English speaking group, the Arabic-speaking group is significantly less aware of reading comprehension strategies. This relative lack of awareness is reflected in the Arabic-speaking group's irregular pattern and lower scores of propositional recall for the L1 (Arabic) text (see Table 16 and Figure 4).

Although the Arabic speaking group reported some strategy awareness, especially with respect to problem-solving strategies, they have essentially had to develop their own reading strategies independently, outside of the classroom. This is because their educational programs and curriculum did not include explicit exposure to reading comprehension strategy training and development (Zerhouni, 1996). For the most part, these self-developed strategies, such as word for word translation, memorization and word by word reading, were not helpful for reading for main idea identification. For instance, student 36 reported "after translating the text word for word I still could not understand some of it". Student 12 also stated "I got the new words and translated them into Arabic, but I could not understand everything". Student 17 said "I underlined and tried to remember the important things, but I could not understand". It is important here

to indicate that student 17 underlined very detailed information, such as proper names and numbers, thinking that those were the most important ones in the text. This strongly suggests that Arabic speaking participants are unaware of the reading comprehension strategies that lead to main idea identification. This was further demonstrated by their irregular patterns of propositional recall (see section 5.7.1 in Chapter 5).

This problem was not limited to the English (L2) text. Many students in the NA group could not comprehend the main idea of the Arabic text either. For example, student 81 miscomprehended the main idea and the supporting details of the Arabic text completely. She recalled that *“the University contracted with a cleaning company to clean the students’ residence. One student was in his room while the cleaners were cleaning his room. He noticed that the job was easy and these people get 15 dollars per day which is too much. He decided to do this job with his friends for only 8.50 for each student. They were working all the week accept [sic] holidays and weekends.”* This was not from the text and some recalled ideas contradicted those mentioned in the text, such as *“working on weekends and holidays because this suits students and residents.”* Other students misunderstood some ideas. For instance, they understood the idea of *“the service this year expanded to cover a group of handicapped, elderly and pregnant residents.”* as the workers included this group of people. In other words, students thought that these people were service providers; however, they were service receivers. In addition, students 36 and 81 understood the opposite meaning of the idea of *“students were working only on the weekends and the holidays in cleaning and maintaining houses”*. They recalled this idea as *“students scheduled the working hours avoiding working on Saturdays, Sundays and holidays”*. This misinterpretation of ideas from the L1 (Arabic) text for student 36 can be

associated with his low reading strategy awareness mean (3.7) and with his word for word translation, which denotes the inaccurate use of one of the reading comprehension support strategies. Moreover, student 45 understood and recalled the idea of “*students made a cleaning company and work for 8 dollars per hour*” as if “*they cleaned their homes by themselves to save their money that they should pay to the other cleaning companies*”. Also student 46 recalled the idea of “*cleaners get 15 dollars per hour*” as “*cleaners get 15 dollars per day*”. Furthermore, student 85 and 101 did not comprehend the main idea of the Arabic text as they recalled that “*it is a great idea for students to volunteer to clean their community by themselves instead of hiring a cleaning company in order to depend on themselves and help other families in their community*”. This confusion of L1 main ideas comprehension and misunderstanding could be a result of L1 strategy unfamiliarity and misuse and underscores the importance of efficiently implementing reading strategies in order to succeed in academic reading comprehension tasks.

When reading for main idea comprehension, it is inappropriate to pay more attention to very detailed information than to the main points of the text (Kim, 1995). Thus, students must be able to distinguish between main points and subsidiary points (Tomich, 2000 and Broek et al, 2003). Students demonstrated their misuse of appropriate support strategies by underlining the proper names mentioned in the text, such as *Cary Cooper* and *Brain*, later recalling them while ignoring the most important pieces of information located in first and second level propositions. This demonstrates that the low strategy awareness means on the part of the NA subjects was exacerbated by their inability to implement the known strategies effectively.

This inappropriate use of imperfectly mastered strategies by NA subjects may help to explain why greater strategy awareness was not significantly related to pattern of text recall in either L1 or L2 for this group (see Tables 14, 22 and figure 7). This strongly suggests that purported awareness of reading strategies is different from their effective implementation when dealing with the texts. We can thereby conclude that strategy awareness is not sufficient for main idea identification. It should be associated with accurate implementation of those underlying strategies.

This appears to be the case for the NE group, for whom there was a clear relationship between the high means of strategy awareness of the English-speaking group and their linear pattern of their main idea recalls.

In addition, NE subjects paid more attention to higher level idea units than lower level idea units, suggesting their accurate use of the three types of cognitive reading strategies. The interviews lend further support to this view of the importance of accurate strategy use. The NE group read in broad phrases and skipped less important words. They were also able to discern and follow the author's organization of information. This also underscores the usefulness of the knowledge of text structure, which is crucial for determining relative importance of text ideas (Schellings, Van Hout-Wolters and Vermunt, 1996). Furthermore, they distinguished between important information and details as they read and they underlined the important sentences only. Some NE subjects reported that they re-read the underlined sentences to ensure they understood them. In fact, the data indicates that all the English speaking participants used an underlining strategy. The interviewees reported that underlining key points helps them to remember and recall them. This supports Blanchard and Mikkelsen's (1987) statement that

underlining is a popular and a more successful strategy for better readers than for less able readers. One participant relayed that she noticed the first sentence in each paragraph seemed to be the main point for that paragraph, so she underlined them to help her remember what that paragraph was about for later recall. This indicates that the knowledge of the structure of the text is of paramount importance for comprehension and recall (Surber, 2001; Aslanian, 1985). Several participants jotted notes beside each paragraph depicting its main points. Student 8 reported that after finishing reading the text and taking notes, she skimmed the main points of the text and her notes to ensure that she understood the main ideas of the text. This reflected in her descending recall pattern from higher level ideas to lower level ideas (see section 5.7.1 in Chapter 5).

Another useful strategy is illustrated by subject 1 in the NE group, who reported that she connected the text information to her prior knowledge in order to help her understand it. This is consistent with Afflerbach's (1990) and Surber's (2001) suggestions that prior knowledge of the content domain helps the reader anticipate the meaning of the text and construct the main idea and recall it. This student's statement supports Stromso, Braten and Samuelstuen's (2003) assumption that building connections between ideas located in the text with ideas located in the reader's personal experience or prior knowledge makes the text more meaningful.

Based on the interviews, it appears that English students knew which strategies could be used more effectively to achieve text comprehension. English participants have strong knowledge of the implementation of reading comprehension strategies. This supports Campbell and Malicky's (2002) finding that adult L1 readers are able to make effective use of their knowledge as they read. This qualitative analysis of the effective strategy use

of English speaking participants is authenticated by the quantitative results. It is further demonstrated by their high propositional recall means and by their systematic descending order of their means of the propositional recall from PI to PV, (see Table 15 and Figure 3). This combination of high awareness of the utility of the three types of reading comprehension strategies and their proper implementation contrasts markedly with our findings for the NA subjects.

Native Arabic speakers reported that they read the Arabic text word by word from the first word to the last word. For example, student 36 said “I read the text word by word from the beginning to the end in order to clarify it to myself”. Student 6 also stated “I tried to understand word by word”. Although this could be explained in the light of their lower strategy awareness than NE subjects, knowledge of the proper use of the three types of reading comprehension strategies is also a factor. For example, even students who reported their awareness of support reading strategies were not aware of how to use them appropriately. This can be observed in their underlining of the proper names of people and places and numbers in the L1 text. For example, students 10, 12, and 13 underlined the word “Montreal” and the names of speakers such as “Zidan Ben Alami and Neveen Salwas”. These students also underlined the number of services that had been done last year “270”, the payment rate per hour “\$ 8.30” and the number of students working in the cleaning company organized by university students “64”. This inappropriate application of one of the support reading strategies indicates the unawareness of the NA group participants of how to use underlining to assist them in comprehending and identifying the main idea of the L1 text. For example student 12 reported her use of underlining, which indicates her awareness and use of this strategy,

but her data analysis indicates her inaccurate use of this strategy as she underlined the very detailed ideas instead of the important ideas. This in turn affected her recall negatively as shown in her recall pattern (see section 5.7.1 in Chapter 5). This is further underscoring the importance of both knowledge and appropriate use of reading comprehension strategies for effective recall.

Unlike NE subjects, NA participants did not report using the global strategies of focusing on important information and focusing on the topic sentence of each paragraph. Rather, they focused on unimportant information. For instance, almost all of the NA participants focused on the recall of the amounts of money, the numbers of students and the numbers of the jobs that they did, even if they were not correct. This is in accordance with Surber's (2001) finding that readers would often focus on a single issue to the exclusion of others discussed in the text. While the numbers that the NA speakers tried to recall were located at the lowest level of propositions, they ignored the more important information that was located at higher levels of propositions. Surber (2001) suggests that such students need to learn how to determine which information should receive the greatest attention.

Another example of misuse of strategies by NA subjects is the reflective nature of their recalls. Several participants integrated their opinions and points of views regarding the topic of the text. These personal associations negatively influenced their recall scores, because they ignored what was in the text and wrote from their own reflections on the text topic. In addition, some participants used information from their own lives to fill in the gaps in their understanding by focusing in their recalls on telling their own life experience stories rather than on retelling what was mentioned in the text. These cases

mirror one of the cases reported by Block (1986). Block used think-alouds to examine the comprehension strategies used by college-level students, both native and non native speakers of English. Some of Block's students added information from their own life experiences. Block calls this "addition" strategy to refer to the misuse of a prior knowledge activation strategy that does not assist students' comprehension by making the text more meaningful.

One example from the present study of the use of "addition" from a prior knowledge strategy is student 8's adding "*Cleaning companies in all the countries of the world provide service to people from different classes in the society.*" This notion is not from the text. Another interesting example of an addition strategy is from student 80, who added from her background knowledge that "*Most of the university international students in Canada work as dish washers in restaurants*". This idea unit was not in the text, but because she has heard it somewhere, she recalled it when she read about the working students' topic. This indicates that she did not focus solely on the ideas in the text. This also supports the hypothesis that readers who use strategies effectively will perform better on the recall tasks than those who simply purport awareness of them.

Likewise, the data indicates that very many students did not monitor their comprehension while reading, which is one of the key global strategies. Some of these students mixed their recalls of ideas from the first paragraph with some ideas from the fifth paragraph, which are not in sequence. This suggests that they did not pay attention to the different ideas in each paragraph, which was a result of reading the whole text as one paragraph while focusing on the word level. This was also a result of the lack and the misuse of the global strategies of connecting the comprehended ideas from each

paragraph to form the main idea of the text, monitoring their comprehension from time to time while reading, using contextual clues, checking understanding when coming across new information and deciding what to read closely and what to ignore. This is in agreement with Salataci and Akyel's (2002) finding that non-proficient L1 and L2 readers do not possess knowledge about reading strategies. They also reported that readers' knowledge of comprehension monitoring can help them overcome their reading comprehension difficulties.

Another example of the lack of global strategy use by NA subjects is the complete misunderstanding of the main idea of the text by subjects 48 and 52, recalling it instead as if the text was about "*the life situation of the Arabic students who study abroad on their own expenses as international students*". Furthermore, NA subject 73 wrote in his recall about the topic of "*how to keep our city and country clean by making responsible companies*", which does not reflect the main idea of the Arabic text. This student did not recall a single idea unit from the text. All his recalled ideas were from his prior knowledge about a different topic.

Another example of how the misuse of these strategies can affect main idea comprehension is NA subject 37's recalling that "*the idea of students' cleaning companies was applied in Tunisia*". This was triggered by her having read that "*one of the workers for the cleaning company that was invented by a Canadian student in Montreal was Zidan (a Tunisian student)*". Thus student 37 understood that Zidan was talking about Tunisia. This shows that she did not review her comprehension of the first paragraph, in which it was mentioned that "*at the beginning of spring Canadians used to clean and maintain their homes after the snow melts and there are special companies for*

this...” NA subject 76 provides another example of miscomprehending main ideas of the Arabic text by recalling that “*one of the students noticed that university students were working for a cleaning company as they were cleaning his family home and they get \$15. He liked the idea and told his friends about it and they had their own cleaning company.*” However, that is not what is in the text.

It is worth noting that while several NA subjects did not recall the first level ideas, they did recall very detailed information such as names and numbers that are located at the lowest level. This is because NA students may attend to the surface level of text or the lower propositional levels, and fail to accomplish deeper levels of interpretation. This is in accord with Amer and Khouzam’s (1993) study of native Arabic students majoring in English language, in which they found that students paid too much attention to the wrong level of meaning in a text, and attempted to remember the details of the text via “rote memory”. This resulted from adopting local reading strategies instead of applying global strategies. Participants of the present research study also concentrated more on details such as numbers and people’s names rather than on the main idea of the text. This indicates their lack and misuse of global reading comprehension strategies, which include the strategy of deciding on the importance of information (Block, 1992).

As suggested by Knight, Padron and Waxman (1985), students might not have the opportunity to develop these strategies in their classes, especially if teachers focused on the development of decoding skills and not on those cognitive strategies, which enhance reading comprehension and main idea identification. According to Falk-Ross (2002) there are multiple factors responsible for these difficulties, such as type of linguistic preparation and inadequate educational preparation. Therefore, students in the present

study might not have been able to transfer any successful L1 reading strategies to their L2 reading, as they were not aware of many of them.

6.1.2- Transfer of L1 Reading Strategies and Knowledge to the L2

According to Brisbois (1995), transfer is possible only after a threshold level of L2 proficiency has been attained. Thus, the correlation between transfer and proficiency becomes stronger as L2 proficiency increases. Brisbois (1995) found that beginner readers who had not yet reached a high enough L2 threshold used L2 vocabulary knowledge more than L1 reading skills to read in the L2. This finding is supported by one of the findings of the present study. As most of L2 readers focused on understanding the text word by word, they presumably depended on their vocabulary knowledge of L2 more than their L1 reading skills. This may also have been due to their L1 reading skill and strategy deficiencies, which hindered them in transferring their L1 reading skills and strategies. Furthermore, their L1 reading strategies may not have sufficiently developed to be useful in either L1 or L2.

Since the L1 and the L2 of the participants of this study are completely different in terms of phonology, structure and scripts, transferring L1 reading strategies and knowledge to the L2 might be of no help to the participants (Jimenez et al. 1996, Taouk & Coltheart, 2004). Given the greater differences than similarities between Arabic and English, the lack of evidence of transfer from the L1 is not surprising.

In summary, there are several compelling reasons to suggest that L1 reading strategy and knowledge did not help these students in their L2 reading. The first reason may be the big difference between both languages. This difference may impede effective strategy transfer from L1 to L2. Or, NA participants may simply be incapable of transferring their

L1 reading strategies to their L2 reading context due to their unawareness and lack of such reading strategies. Finally, the difference between their two recalls may have been a result of their long experience in L1 reading and their daily exposure to the L1 reading materials.

However, this last explanation is unlikely, as most of the low intermediate participants' recalls in both languages suffered in parallel. This result coincides with Taillefer and Pugh's (1998) claim that weak readers' L1 and L2 recall scores suffer in parallel. Consequently, these students may need to enhance their L1 reading proficiency by learning L1 reading strategies and then learn how to transfer their effective L1 reading strategies to the L2 context.

6.2- To what degree does reading strategy awareness affect the comprehension of main ideas in L2 reading?

6.2.1- L2 Strategy Awareness and Use and Main Idea Identification

The means of proposition recall of the English L2 text by native Arabic speakers in Table 22 show different amounts of recall, with different proposition levels going up and down unsystematically. Second language readers' mean of first level proposition recall is only 17, which is very low, followed by the third level proposition mean of 9, which is higher than the second level proposition mean of 7.4. Then comes the fifth level proposition mean of 2.4, which is higher than the fourth level proposition mean of 1. These different amounts of recall denote the unawareness of L2 reading strategies of the native Arabic group, which validates the third research hypothesis. It states that there is a correlation between FL reading strategy awareness and the comprehension of the main

idea of a reading text.

The results of Table 17 indicate the low awareness means for the three types of L2 reading strategies of the Arabic speaking (NA) group (global 3.7, support 3.9 and problem-solving 4.3). Lower awareness means, compared to the English speaking group means, are associated with the Arabic speakers' reports that they lost the meaning of the sentences while decoding them. This supports Singhal's (2001) finding that less proficient readers tend to focus on reading as a decoding process rather than as a "meaning-making" process. Arabic speaking students also reported that they read the text from the first word to the last word, read in short phrases and pondered on inconsequential words rather than skip such words as unimportant. It is very difficult for L2 readers to skip words because they read locally (Singhal, 2001; Raymond, 1988). This strategy implementation of reading word by word suggests that these participants are unaware of L2 cognitive reading strategy categories. Their self-reported low strategy awareness means indicate that they are not sufficiently aware to achieve adequate text comprehension. This suggests support for Kim's (1995) findings that such students were taught to read through word by word translation of each sentence, without recourse to cognitive strategies that would lead to comprehension of single words from the context.

The results of multivariate tests as illustrated in Table 17 indicate that awareness of the underlying reading comprehension strategies have an overall beneficial effect on the recall of English text for the native English speakers, whose greater awareness of these strategies allows them to outperform the foreign language speakers on an L1 reading task (see Table 23). The issue of language proficiency as an intervening factor will be discussed later. That is because L2 readers' strategy unawareness affects main idea

comprehension negatively. This indicates that Arabic speakers did not recall ideas by systematically paying more attention to higher level ideas and going down to lower level ideas. However, teachers' awareness of the benefits of various reading strategies may provide explicit information about appropriate solutions for their students' reading problems (Paris and Winograd, 1990). One example of missing the main idea is from student 87, who did not get the main idea of the text and recalled only one idea unit from the third level explaining how students differ in their preferred studying times (see section 5.7.1 in Chapter 5). Her interview data indicates that she thought that is what the text was about. This is similar to Singhal's (2001) finding that poor readers demonstrated less accurate comprehension and recall of the stories they read. This is also owing to the fact that the primary concern of EFL students and teachers is to develop language and decoding skills (Knight et al., 1985) and not those three types of cognitive strategies that enhance reading comprehension as they will be discussed below.

6.2.1.1- Global Strategy Awareness in L2

The very low L2 recall scores and the irregular pattern of L2 propositional recalls may denote the unawareness of reading comprehension strategies. This is similar to the findings of Block (1986, 1992), who found from their retellings that many L2 readers tended to focus on details instead of the main idea and did not follow the organization of information in the passage. Similarly, in the present study, several students recalled the first level proposition, which is the topic sentence of the paragraph, but they skipped the second level proposition that supports the topic sentence. However, they recalled the third level propositions which only support the ignored second level propositions. In addition, student 51 recalled the last part of the topic sentence of the first paragraph "*working*

while studying is the norm for many students” and she ignored the following two sentences from the second level and recalled the final part of the last sentence in the same paragraph, which is from the third level of propositions. This example is a clear piece of evidence of unawareness of one of global reading comprehension strategies of deciding on what to read closely and what to ignore, which Block (1992) calls “deciding on importance”. This student clearly did not know where she had to pay more attention to and which pieces of information were most important to remember and recall. This example also can be explained in the light of Singhal’s (2001) suggestion that non proficient readers lost the meaning of the sentence when decoding, reading in short phrases and pondering over inconsequential words. Singhal (2001) also found that unskilled L2 readers in her studies of L2 reading comprehension strategies lacked awareness of reading problems and the ability to take action to solve them.

As non proficient readers attempt to read the text word by word, they also attempt to comprehend and identify every word individually as if it has nothing to do with its neighbors (Smith, 1994). This behavior is one of the causes of miscomprehending the main idea of the text. Consequently, this indicates the unawareness of these students of the global reading strategies as they tend to apply local reading strategies of reading each word and trying to identify its meaning separately by writing the translation above each single word. Whereas, according to Smith (1994), identifying the meaning of the text as a whole would better assist in identifying the meaning of a single word. In other words, it is better to use one of the global strategies, of using the context in which the word is located or the text as a whole, for providing a possible meaning for an individual word. Therefore, Smith claims that using context or the whole text to provide the meaning of a

word instead of using the meaning of single words to construct the meaning of the whole text results in more successful reading comprehension and recall of main ideas.

Miscomprehension of the main ideas is clearly one of these students' problems. For instance, student 62 recalled "*if students study about 20 hours they will suffer*". However, the text states "*if students for example work 20 hours a week, then their work could suffer...*" In addition, student 64 and 73 misunderstood the topic completely, writing in their recalls that the text was discussing the management of study time, how graduates might select suitable jobs after graduation and how they get familiar with their new working life. According to Bensoussan (1998), this kind of misunderstanding of the meaning of the text might be caused by students' activating an inappropriate schema, as they are not aware of the appropriate use of this strategy. Furthermore, several students misunderstood the idea of proposition 19 "*it is better to wait until you have been offered the job before mentioning that you might need time off*". They recalled it as "*you do not need to search for a job but you have to wait until the job is offered to you by someone*" (student 66), which has a completely different meaning. Although, this student's mean of Global strategy awareness was 3.9, which is reasonable enough, but because of his ineffective use of these strategies, he miscomprehended some main ideas and his recall pattern is poor enough to be associated with his unawareness of the accurate use of these reading comprehension strategies (see section 5.6.1 in Chapter 5). Moreover, many students misunderstood the idea of working 12 hours a week and recalled it as working 12 hours a day (student 85).

The relationship between word-by-word reading and failure to understand the main idea of a text is also supported by Lynch, Naslund, Ievers-Landis and Verduin (2003)

who suggest that understanding of meaningful relations between text units is likely to be a major factor in the development of readers' main idea comprehension skills. Yigiter, Saricoban and Gurses (2005) found that this misinterpretation of an idea could be caused by the unawareness of global reading strategies that assist readers in ensuring they have understood a text. These strategies include monitoring, guessing the content, self-questioning and closely reading the new information to ensure that they have understood the relations between paragraphs of the text. This supports the fourth hypothesis stating that knowing reading comprehension strategies does not mean being able to use them effectively. Readers who use these strategies effectively will perform better on the recall tasks than those who purport awareness of them.

One of the consequences of global reading strategy unawareness is that students mix up sentences in their recalls. For example, student 48 mixed up propositions as she wrote proposition 32 followed by the first part of proposition 31 followed by the last part of proposition 36. She wrote "*They are working on weekends, evenings on your skill set.*" However the text author says in proposition 31 "*Some students may prefer to work a few evenings a week,*" and proposition 32 says "*others at weekends.*" And in proposition 36 says "*The type of job you look for will depend on your skill set.*" This mixture of three propositions that are not even in sequence could be a result of word by word reading that promotes concentration on local strategies that include decoding and pronunciation. Although, student 48's Global awareness mean was 4.6, she ignored the use of global strategies of comprehension monitoring that assess comprehension, presumably because of her unawareness of such strategies. She did not pay attention to the end of the first sentence and the beginning of the next one or even the beginning of a new paragraph. She

mixed the last part of the first sentence in a paragraph with the last part of the second sentence in the following paragraph. She appears to have skipped the topic sentence of the following paragraph or, at any rate, did not pay attention to it. Therefore, she did not recall it and instead focused on the second sentence of that paragraph, recalling the last part of it. Carrell (1989) attributes this type of result to the use of local reading strategies typical of FL readers, as well as to their unawareness of global strategies that are favored by proficient L2 readers (Carrell, 1989; Block, 1992).

Furthermore, the NA group participants may not have realized how the text was organized or structured. This would result in a failure to understand the text or to only a vague understanding of it. According to Smith (1994), readers should figure out the manner in which paragraphs are organized and displayed in the text in order to be able to use reading strategies accurately. Therefore, the more readers can be aware of the structure that the author uses, the more they can use different types of reading comprehension strategies and the more they can comprehend and recall what they read.

6.2.1.2- Global Reading Strategy Use in L2

Global reading strategies include having a reading purpose in mind, activating prior knowledge, deciding what to read closely, using context clues, and checking understanding while reading. Table 17 shows that the lowest mean of strategy awareness for the NA group was the global mean, which was 3.7. This result confirms that of Carrell (1989), who found that EFL readers did not use global strategies, but instead favored local strategies. The data of the present study illustrate that L2 reading strategy use and the amount of recall tend to be dependent on each other. Thus, readers cannot simply look at a text to recall it. They must also utilize several strategies; including sources of

information, to understand identify and recall main ideas.

Background Knowledge Activation

Several sources of information may be useful in the process of main idea comprehension. One of these sources is background knowledge (Jacobowitz, 1990). However, if background knowledge activation is not used accurately, it might have a negative effect on the readers, leading them to activate an inappropriate schema and possibly miss the meaning of the text (Bensoussan, 1998). Thus, the text can be interpreted in various ways unintended by the author (Landry, 2002). Block (1992) called adding information from background knowledge an “addition” strategy. For instance, student 14 recalled only the title of the text (How to Juggle Study and Work) and then she wrote from her prior knowledge. She wrote about her friend who works and studies at the same time and how she was able to manage her work and study program. This student used background knowledge activation inaccurately, indicating her possible unawareness of appropriate global reading strategy use. This student should have activated her prior knowledge in order to assist her in comprehending and recalling what was written in the text, rather than to write about her own experience. Other students recalling information from their prior knowledge, wrote “*students from low income families need to work to support their poor families and save money*” (students 81 and 82), which is not in the text. Moreover, student 57 wrote “*University students have few hours for studying as they have classes from the early morning till night*”, which is also not in the text. Student 61 provides example of writing from prior knowledge. This student did not recall anything from the text. She wrote about her studying timetable, her opinion about studying and working, summer jobs in her city and the salaries of students’ summer jobs.

According to Block (1986), the reason behind students' writing from their own lives and scoring 0% in their recalls is to fill in the many gaps in their understanding; therefore their responses focused more on their own experiences than they are on the text. This is in accord with Alderson (2000) and Decker (1994), who emphasize the importance of the knowledge of how to read and of the topic that a reader brings to the text. For example, student 37 added in her recall "*working students are financially independent and not dependent on their society*". In addition, Student 49 recalled proposition 12 that ends with "*they have to determine the hours for studying, working*" and she added "*and resting*" which was not in the text. As Block (1986) would have predicted, these students mixed their own information with information from the text. They mentioned things that are not even hinted at in the text. This is compatible with Aslanian's (1985) findings about reading problems of ESL students, which include that ESL students rely heavily on their background knowledge and experience, they have trouble understanding the main idea in the passage and are not able to make sense out of the paragraph, they are not able to follow the organization of the ideas in the text, and they are not aware of the logic and order of ideas in English and the words and phrases that represent these rhetorical transitions.

Omission is another strategy indicating that these students were not able to follow the organization of the ideas in the text (Block, 1992). For example, student 34 used an "omission" strategy when she omitted the last half of the sentence "*it is better to wait until you have been offered the job*", which changed its meaning. The last part of the sentence was "*....and have had the opportunity to prove yourself before mentioning that you might need time off*". It seems that students such as 34 need to learn the logic and

order of ideas in the text (Aslanian, 1985). Student 42 also recalled the first half of the sentence of “*university is more than getting a degree*” and omitted the rest of it. Student 76 did the same thing and wrote only “*university is more than just about getting*” and student 84 stopped at “*about*” and from the proposition 22 they wrote “*when you look for a job*”. This omission of the rest of these sentences, essentially making them meaningless, is a result of the lack of global reading strategies that aid comprehension of main ideas, such as monitoring, using contextual clues and connecting the meaning of the previous sentence to the next one. This is supported by Yigiter, Saricoban and Gurses (2005), who state that less able readers do not use contextual clues. This could also be a result of word by word reading that might hinder students from using the global strategy of stopping at the end of each sentence and only starting to read a new one after reviewing their comprehension. This is also in agreement with one of Zhang’s (2001) findings that students’ lack of strategic knowledge was reflected in their stronger reliance on linguistic knowledge than on checking their comprehension. Accordingly, Swaffer, Arens and Byrnes (1991) stated that when a reader’s primary focus is on meaning or idea units, reading performance is superior to when a reader’s focus is on individual words or the pronunciation of words.

Several students read a text as if it were one sentence, without paying attention to the starting and ending of each sentence. This problem caused student 78 to recall the middle part of proposition 22 “*it’s best to start with working few*” and to mix the first part of proposition 2 with the last part of proposition 4 by writing “*with ever increasing fees working with the study in the college for the lots of hours....*” She also mixed the first part of proposition 5 with the middle part of proposition 10. This mix up of parts of

sentences is also a result of the above mentioned global reading comprehension strategy problems discussed above. In brief, it is clear from the above discussed reading comprehension problems that strategy awareness is not sufficient for successful comprehension of main ideas. That is why reading strategy awareness alone has not had any significant effect on the recall performance of the participants. Thus, it is desperately important to be accompanied by effective use of these known strategies.

6.2.1.3- Support Reading Strategy Awareness in L2

Our data indicate that Native Arabic-speaking participants were not aware enough of support reading strategies. Their awareness mean was as low as 3.9. Data also indicated that even students who purported their awareness of support strategies were not aware of how to use them accurately. For example, students 3, 10, and 28 with reasonably high awareness means of 4, 4.3 and 4.6 respectively, underlined the word “Bristol” and the proper names of students that were in the text such as “Brian Staines and Cary Cooper”. They also underlined the number of working hours per week “12 and 20”. This inappropriate application of support strategies indicates the unawareness of the NA group of how to use these strategies to assist them to comprehend and identify the main idea of the L2 text. That is why, they recalled only 20%, 23% and 22% respectively. Thus, the third research hypothesis stating that FL Arabic-speaking readers with greater strategy awareness will do better in recalling their L2 text is not supported, as there was no correlation between strategy awareness and recall of main ideas. This denotes that reading strategy awareness alone is not enough, it should be accompanied by the ability of the efficient implication of these strategies. Furthermore, the qualitative data analysis indicated that many of the students did not apply support strategies while reading, as

there was no evidence of underlining, highlighting, note-taking or paraphrasing on their L2 reading texts. However, use of these strategies must be appropriate, as will be discussed below. Therefore, the third research hypothesis, which states that FL readers with greater awareness will do better in recalling their L2 text, is not supported. That is because there was no correlation between strategy awareness and recall performance, since strategy awareness needs to be associated with effective use of these strategies, which comes out from the continuous training and the explicit exposure to the practical use of the underlying strategies.

6.2.1.4- Support Reading strategy Use in L2

Qualitative analysis of the data indicates that the NA group used more support strategies, such as underlining and highlighting, than the NE group. This result is compatible with Anderson's (2005) study, which was the first study to use Mokhtari and Sheorey's (2002) Survey of Reading Strategies. Anderson (2005) found that ESL students reported using a greater number of support strategies, which was not surprising, as it was expected that ESL readers would need more support strategies than L1 readers. Regarding underlining as one of support reading strategies, qualitative analysis of the data also indicates that students who used underlining recalled most of what they had underlined. Their recall amounts were also higher than those who did not underline. This agrees with Schellings and Hout-Wolters (1995), Najar (1998) and Bailey (2002) who found that the more words the students had underlined or highlighted the better were their recalls of the passage.

In addition, Najar (1998) suggests that support strategies such as note taking, highlighting and underlining key ideas are effective because they encourage the reader to

recognize and elaborate on main ideas. Thus, student 13 underlined names of people, places and numbers and later recalled them. Student 18 also underlined names of persons and detailed information such as evening, morning and weekend instead of underlining the main ideas such as “*developing a study plan*” also recalled all the underlined details. These two examples show the inappropriate use of the underlining strategy for reading comprehension of the main idea. This could be appropriate if the participants were asked to identify details instead of the main idea. But since the task was to read, comprehend and recall the main idea of the text, it is inappropriate to underline and recall details. These cases are duplicating Block’s (1986) cases that focused on details instead of main ideas in their retellings. According to Randall and Meara (1988), Arabic speaking participants tended to focus on details instead of main ideas in the text, because of the radical differences between Arabic and Roman characters. The lack of redundancy in Arabic forces the readers to search for details which are unnecessary when dealing with Roman scripts (Randall and Meara, 1988). However, student 29 underlined all first and second level ideas, but recalled only three of them. According to Paris and Winograd (1990), this is because students need to realize the cognitive utility of these support strategies. Other participants who stated in the interview that they did not use any support strategies found the text difficult to comprehend and recall. Yigiter, Saricoban and Gurses (2005) assume that none proficient readers do not employ an underlining strategy in order to assist them to understand the text.

Of the 15 out of 112 students who used underlining, most underlined the third and fourth level ideas. But sometimes they did not recall what they underlined. Thus their scores were very low. For instance, student 29 used underlining but recalled only 6% of

the text. This demonstrates their inappropriate use of support strategies. The highest amount of their recalls was from the third level because they focused on the third level ideas more than the first and the second. For example, student 19 used full translation to Arabic as she translated the whole text word for word, including even the prepositions and pronouns. This example supports one of Levine and Reyes (1998) findings that FL readers try to understand almost every word. However, her focus on translation might have hindered her comprehension as she recalled only the title, one idea unit from the first level and two from the third level. This student also misunderstood the recalled ideas, modifying them to change their meaning. Student 31 also mistranslated some vocabulary in the text, translating “roles” as “appointments”, but did not recall either. This indicates the inefficient use of L2 support reading strategies. Consequently, this supports the fourth research hypothesis stating that knowing reading comprehension strategies does not mean that you are able to use them effectively. Readers who use these strategies effectively will perform better on the recall tasks than those who purported awareness of them.

Furthermore, according to Upton (1997) and Block (1986), translation using L1 as a resource for understanding and producing L2 is not an uncommon cognitive strategy for adult language learners. For instance, students 6, 12, 36 and 105 stated that they translated or explained the text to themselves in Arabic in order to help them comprehend it. Their recall percentages were 1%, 12%, 6% and 9% respectively. These students were translating word for word as they reported. This is not the accurate way of implementing translation. This is why these students failed to recall enough ideas from the text. Consequently, this does not support the finding of Upton and Thompson (2001) that the

use of L1 productively facilitates L2 comprehension for all students regardless of their levels, as it gives them an additional path for processing the text they are reading. So that, the fourth research hypothesis stating that readers who use reading strategies effectively will perform better on the recall tasks than those who purported awareness and use of them is supported.

Further, Kern (1994) argues that “the difficulty in thinking about difficult concepts in L2 places an extra load on memory and comprehension processes” (p.451). The present research data indicates that several students used mental translation while they were reading or thinking about information in both English and Arabic, as this was reflected in their recalls. They wrote in English but they were thinking in Arabic, because it is easier to think in L1 than in L2 and so the brain automatically shifts languages (Upton, 1997). For example, student 7 wrote “*end week*” instead of weekend, which was in the text, because it is said in this word order in Arabic. Kim (1995) investigated EFL Korean students’ recalls and found the same problem. Kim suggests that these students might be taught to read English in the word-for-word translation of each sentence. As a result, EFL students may find it more comfortable to restate sentences and words in their L1 just to confirm their comprehension (Upton, 1997). Adamson (1990) assumes that text interpretation in the native language and bilingual note taking are critical for ESL adult students. Kern (1994) also found that the use of translation to assist comprehension decreased as reading proficiency increased. Eskey (1997) and Upton (1997) observed that less proficient readers tend to focus more on local strategies, including translation, while more proficient readers use global strategies.

6.2.1.5- Problem-Solving Reading Strategy Awareness in L2

Problem-solving strategies include re-reading, reading speed adjustment, guessing, paying closer attention and getting back on track when losing concentration. However, the mean for problem-solving strategy purported awareness of the NA group is 4.3, which is the highest, compared to the other two types of strategies, the qualitative analysis of the interviewees' reports indicated that none of the interviewees adjusted their reading speed while reading the L2 text. Instead, all of them reported that they read the text at a constant speed, whether slowly, moderate or quickly. That is why there was no correlation between the purported strategy awareness and the recall performance. For instance, students 5, 68, 87, and 105 whose Problem-Solving awareness means were as high as 4.8, 4.6, 5, and 4.7 their recall percentages were as low as 9%, 9%, 3% and 9%. This does not support the third research hypothesis stating that Arabic-speaking readers with greater reading comprehension strategy awareness will do better in recalling their L2 text. At the same time this discussion supports the fourth research hypothesis stating that knowing reading comprehension strategies does not mean that you are able to use them effectively. Problem detection and problem solving indicate the readers' awareness of lack of comprehension and as a consequent attempt to regulate their comprehension (Stromso, Braten and Samuelstuen, 2003). The relative absence of such strategies indicates that these students might not be able to detect their comprehension problems and would thus make no attempt to solve them. Therefore, L2 problem-solving strategy unawareness may have played a crucial role in the results of this study.

6.2.1.6- Problem-Solving Reading Strategy Use in L2

According to our quantitative analysis of the participants' Reading Strategy Awareness Survey results, problem-solving strategies are the most known category for the NA group. Nonetheless, the data shows that most of the participants did not use problem solving strategies, such as stopping to think about what they read, reading carefully to make sure they understood the text ideas, and paying closer attention to difficult parts. Only, a few of them reported the use of guessing unknown words and re-reading strategies while none of the rest of the problem-solving strategies were mentioned. Ignorance of these strategies caused a lot of the above mentioned reading problems of miscomprehending the main ideas that cannot be solved in the absence of the accurate application of problem-solving strategies. For instance, students 6, 12, and 68 reported their use of re-reading strategy, but their recall percentages were as low as 1%, 0% and 9% respectively. Also, student 87 reported her use of the strategy of guessing the meaning of new words, but her recall percentage was 3%. This indicates their inaccurate use of these strategies. Regarding the misuse of re-reading strategy, student 12 stated that she re-read the underlined words and sentences. However, she underlined very detailed information such as proper names and numbers. Therefore, her misuse of the underlining strategy caused the inefficient use of the re-reading strategy. This supports the fourth research hypothesis stating that knowing reading comprehension strategies does not mean being able to use them effectively and readers who use these strategies effectively will perform better on the recall tasks than those who purported awareness of them. This result also confirms Barnett (1988) suggestion that readers who use certain problem-solving strategies efficiently understand more of what they read than those who do not

use these strategies. Further, for adult readers, strategy knowledge and accurate use become more important for reading comprehension (Rupley and Willson, 1996).

6.2.1.7- L2 Vocabulary

Reading comprehension strategy unawareness and misuse may affect the readers' comprehension of single words. L2 readers may miscomprehend words because of their misuse of reading strategies. Hence, reading comprehension strategy awareness and use could be the most important component in the reading process for main idea comprehension and identification. However, "Foreign students consider vocabulary their most serious handicap in reading English, because words are the smallest meaningful units of the message and they play a more important role" (Yorio, 1971, p. 107). For this reason many NA students in the present study stated "I tried to understand word by word", "I could not understand some words", "I got the new words and translated them to Arabic". Furthermore, Kim (1995) insists that the reader's vocabulary knowledge is a significant factor in comprehension. Kim (1995) argues that the mismatch between the readers' meaning and the author's meaning in which the reader has already learned the word and its familiarity seemed to have hindered the reader's attempt to guess at the meaning of the word used in the text. Student 24 in the present study is a good example of this phenomenon. She miscomprehended the idea of "*develop a study plan*" and recalled it as "*the student improves himself*" because she focused on the word level not on the sentence level while she was reading. This indicates the mismatch between the author's meaning of the word 'develop' and the reader's meaning as she recalled it as 'enhance or improve'. This is also one of the consequences of reading word by word using local strategies and ignoring one of the global strategies of using the contextual

clues to understand new vocabulary or information. When the reader does not grasp the context itself, word-meaning recognition is also handicapped (Koda, 1996). This is also the case of student 36 in the present study, who recalled 10% of the text and stated “I translated the text word by word but I could not understand some words”. In addition, student 6, whose recall percentage was 1%, stated “I tried to understand word by word but it was very difficult to understand some words”. This supports the third research hypothesis stating that FL readers with greater strategy awareness will do better in recalling their L2 text.

On the other hand, Brisbois (1995) asserts that unfamiliarity with word meanings can lead to misinterpretation of the text as a whole. Therefore, connections between local and global understanding are bi-directional; that is, information from both lexical and contextual processing interact with each other influencing the overall text comprehension (Koda, 1996). These statements are compatible with Zhang’s (2001) finding that vocabulary in his EFL Chinese subjects’ minds was regarded as the basic building material for comprehension, particularly the low scorers. The present study provides good examples for these cases. For instance several students used local reading strategies solely without global ones and stated that they found difficult words that they could not understand. These students’ recalls ranged from 0% to 10% of the L2 text. Therefore, these students need to learn how to dig out meaning from text and discover the relative importance not only of vocabulary items but also of sentences, ideas and paragraphs (Aslanian, 1985).

6.3- What is the relationship between general reading proficiency level and reading comprehension strategy awareness or use?

“In any discussion of second language reading the place to begin is thus proficiency in the language” (Eskey, 2005, p. 566). In the present research study, the results of the CanTEST and of recall protocols show that there was no correlation between L2 general reading proficiency level, reading strategy awareness and use and main idea comprehension and identification, with high CanTEST scorers scoring lower on recall than low CanTEST scorers. For instance, the two highest scorers on the CanTEST 12 and 67 (11 out of 20) scored only 20% and 0% respectively in their recalls of main ideas, despite the fact that their awareness reports of Global, Support and Problem-Solving strategies were 4, 3.5 and 4.5, and 3.5, 3.8 and 4 respectively. These results confirm that awareness and effective use of reading strategy are more important for main idea comprehension and identification than reading proficiency and purported strategy awareness. This is in agreement with Hauptman’s (1979) statement that basic reading ability is not strongly related to overall L2 reading proficiency. The native Arabic speakers may have enough vocabulary. They appear to know enough about grammatical structure and their language proficiency level is fine. But because of their lack of reading strategy awareness and effective use, they do not know on which part of the text they should focus and they cannot identify which sentences were putting forth the important points in the text, thus requiring that more attention be paid to them. Also they did not know what to do to solve their reading problems and which strategies to apply, and when and how to implement them appropriately. According to Barnett (1988), Grabe (1991), Hauptman (1979) and VanDuzer (1999), using appropriate strategies for different reading

tasks increases comprehension. Consequently, it was lack of knowledge of reading strategy and inappropriateness of strategy application of the NA group that hindered the comprehension and accurate recall of main ideas for our NA subjects.

In contrast, several low CanTEST scorers, who scored (3 and 4 out of 20), scored 27% and 28% respectively in their main idea recalls. Although these participants were not proficient readers, they recalled more idea units than their classmates with higher measured reading proficiency levels. These results provide further support for the view that L2 general reading proficiency level does not probably predict propositional recall of a text. It also suggests that reading strategy awareness and proper use could be more helpful and effective than only general reading proficiency in L2 reading comprehension (Swaffar, Arens, Byrnes, 1991). However, not all researchers are in agreement with this view. For example, Carrell (1991) reported that L2 proficiency level is a strong predictor of successful L2 reading; and Block (1986) claimed that reading ability in a second language is a function of proficiency in that language.

With respect to L1, reading proficiency scores as measured by the Nelson Denny test for native English speakers showed that there is no relationship between L1 general reading comprehension proficiency level and strategy use. For instance, highly proficient readers, whose percentile scores were 92% and 86% on the Nelson-Denny test, had percentile scores in the recall of main ideas as low as 17% and 24% respectively. However, less proficient readers in this group (55% and 57% on the Nelson-Denny test,) scored higher than highly proficient readers on the recall of main ideas (27% and 33% respectively). These results suggest that low proficiency readers were more aware of reading comprehension strategies and used them more than high proficiency readers.

Consequently, the former recalled more idea units and paid more attention to main ideas in the reading text. These results are in agreement with Swaffar, Arens and Byrnes (1991) statement that misreading is attributable to faulty application of schemata rather than language proficiencies. For example, NE subject 8, with a low reading proficiency (55%), performed better than her classmates from high and mid reading proficiency levels with respect to her descending recall pattern from high level ideas to low level ideas (see section 5.7.1). On the other hand, Taillefer and Pugh (1998) reported that language proficiency is the most important factor in reading texts for meaning. Olshavsky (1976) and Hare and Smith (1982) report that proficient readers used reading comprehension strategies more often than less proficient readers. In a similar vein, Kosminsky and Kosminsky (2001) and Rupley and Willson (1996) claim that less proficient readers usually have difficulty in using strategies that contribute to reading comprehension.

Furthermore, this lack of a cumulative correlation between the Nelson-Denny scores and the recall scores raises the interesting question of what the Nelson-Denny test is actually measuring. Perhaps the abilities that the Nelson-Denny test measures are not the ones that students need to know to be successful in their academic reading. It seems that it is not enough to simply teach readers how to read. Students also need to go beyond basic decoding and learn how to extract the main idea from academic texts. Such extraction may also depend on other factors, including topic interest, text familiarity and difficulty.

6.4- What is the effect of text difficulty, topic familiarity and topic interest on main ideas comprehension and recall?

6.4.1. Text Difficulty

There was no significant correlation between subjects' rating of text difficulty and their recall scores. Although this could have been due to the close distribution of the NA group scores, a closer examination of the interview results confirms that the two are not in fact related. This result makes it easier to argue for the importance of strategy awareness and effective use. For example, student 12 stated "the text was not difficult" and recalled 12% of the text ideas. Student 105 also reported "the text is medium, not very difficult" and recalled only 9% of the text ideas. Further, student 6 reported "the text is neither easy nor difficult" and recalled 0% of the text ideas. As they did not find the text difficult, perhaps the poor recall of these students is due to their poor reading strategy awareness, which ranged between 50% and 60%. Furthermore, these students might not have accurately implemented the required strategies that help them to comprehend the text and recall its main ideas. It is also possible that these students are poor judges of text difficulty or that their judgment criteria are relevant to the recall tasks. Further, readers may not be aware of their serious and obvious comprehension problems when they are reading difficult texts. They are also not aware when they do not accurately understand the main ideas of such texts.

6.4.2. Topic Interest

The lack of correlation between this factor and the recall task of the L2 text is supported by statements made by participants during the interviews. For example, NA participant 36 stated "The text is good and interesting". This student recalled only 6% of

the text. Also NA participant105 reported “I liked the topic it is good”, but her recall percentage was 9%. In addition, NA participant12 reported “The text was interesting and suitable for our level”, but she recalled only 12% of the text ideas. Further, student 17 stated “The text is interesting and I liked it”. However, her total recall percentage was 11%. These low scores of main ideas and high scores of topic interest support the quantitative results that the topic interest factor has no effect on the recall amounts of main ideas.

These results conflict with those of Wade and Adams (1990), who assert that information rated as interesting was recalled better by both skilled and unskilled readers. They also contradict Olshavsky’s (1976) statement that greater interest relates to greater use of reading comprehension strategies. It is noteworthy that Wade and Adam’s (1990) and Olshavy’s (1976) students were not only interested in reading the assigned topic, but also scored high marks in their recalls. They were also aware of the main idea reading comprehension and identification strategies. In contrast, students in the present study were interested in reading the assigned text, but they scored very low in recalling its main ideas. This underscores the saliency of being aware of main idea comprehension and identification strategies. Another factor was raised by NA participant 5 who stated that he remembered the ideas he liked and ignored the points that he did not like, and he recalled only what he agreed with. This statement is also in accord with Wade and Adams (1990) and Olshavsky’s (1976) findings.

6.4.3. *Topic Familiarity*

Regarding topic familiarity, familiarity with text significantly affected reading comprehension and recall. For instance, 14 students scored 1 (very little background knowledge) and their recall scores were 0%. In contrast, students 26, 32, 42, 77 and 86 scored 4 and 5 (a fair amount of background knowledge and quite a lot) and their recall scores were 36%, 32%, 27%, 25% and 25% respectively. This is an additional indication of the significant effect of familiarity on reading comprehension and on the recall of main ideas. Students who had greater background knowledge and who applied it appropriately scored higher than those who were not familiar with the topic, or than those who applied their prior knowledge improperly in a reflective manner as mentioned above. These results support Johnson's results cited in Carrell and Eisterhold (1983) asserting that a text on a familiar topic is better recalled than a similar text on an unfamiliar topic. These results are also in accord with Carrell (1987), Steffensen (1988) and Kozminsky & Kozminsky (2001), who assume that readers will comprehend and recall more ideas if texts comprise a familiar topic for which readers have enough background knowledge. These results agree with Pressley, Ghatala, Woloshyn, and Pirie (1990), who argue that adult readers might be more able to notice whether they have missed the main ideas when they are familiar with the content area of a text.

Students 1, 14, 33, 60, 73, 82 and 95, who scored 4 and 5 (a fair amount of background knowledge and quite a lot), had recall scores of 0%. This indicates that these students were familiar with the topic but could not recall the main idea of the text. For instance, student 6 reported "I have an idea about the text", but she did not recall the main idea of the text. This is presumably because of her low strategy awareness mean of 3.2.

Hence, this example indicates that strategy awareness has a stronger effect on main idea recall than topic familiarity. Nonetheless, the results do not necessarily conflict with the findings of Carrell (1987), Steffensen (1988) and Kozminsky & Kozminsky (2001). Instead, they indicate that background knowledge may not be a sufficient condition for good recall. Despite their familiarity with the subject matter, these students were unaware of the reading comprehension strategies that might help them to understand the text and recall its main ideas.

Therefore, these score differences in text ease, familiarity and topic interest (Table 23) and in reading strategy awareness (Table 14) between the experimental and the control group could be related to their significant differences in the recall of main ideas of the English text shown in Tables 15 and 19 above. Consequently, these results support the researcher's assumption of the great importance of the underlying reading comprehension strategy awareness and use for main idea identification. In brief, this discussion of the text difficulty, topic interest and familiarity indicates that despite the role of these three issues, reading strategy awareness and use remain critical to reading comprehension and main idea recall.

6.5- Is there a facilitatory relationship between reading comprehension strategy awareness and use that leads to more effective recall of main ideas?

Equation of strategy awareness and use seems to be quite standard in the literature on reading strategies. However, awareness and use appear to be independent from one another, as knowledge about reading strategies does not necessarily imply knowing how to use them. As we have seen in the present study, even when NA students were aware of such strategies, they tend to misapply them. For example, students who employed underlining tended to underline details instead of main points. This claim is also supported by the lack of a significant effect of the reading comprehension strategy awareness on the recall performance of L1 and L2 texts. Thus, strategy awareness and effective use are both required for better comprehension and recall performance; it is impossible for students to use strategies without being aware of them and being aware of these underlying strategies is not enough to be able to use them accurately.

The following chapter summarizes the findings of the present study and outlines some of its limitations. The chapter also suggests implications of our results for the classroom and provides suggestions for future research.

CHAPTER SEVEN

Conclusion

The main findings of the present research will be summarized in the first section of this chapter. This will be followed by a discussion of the study's limitations and suggestions for future research. Classroom implications of the study are addressed in the final section.

The results of the present study demonstrated that the native Arabic (NA) speaking group lagged behind the native English (NE) speaking control group in strategy awareness and use. The NE speaking control group generally reported greater use of reading comprehension strategies than the NA speaking group for the L1 texts. The NE control group students were also more aware of global, problem-solving and support reading strategies than the experimental group. NE speaking group interviewees mentioned several strategies from these three strategy categories that were not cited by any NA group interviewee. The use of these three strategy categories was reported significantly more often by NE group students than by NA group students. This suggests the facilitatory relationship between strategy awareness and use, as unaware students could not use any salient strategies. Thus, awareness alone is not enough for better reading comprehension performance.

Students from NA group who did not use any support strategies, such as note taking, underlining and translation, recalled the least propositions from both L1 and L2 texts. Furthermore, the use of local reading strategies, such as focusing on word-level processing, led to recalling the supporting details more than the main idea of the reading text.

Recall by the NE group was consistent with the hierarchy principle, as there were significant differences in the mean recall amounts from each propositional level and their recall means descending in a hierarchal manner from PI to PV. In contrast, L1 recall by the NA group yielded no significant differences between the propositional levels. The highest amount of recall was from PIII, followed by PII then PV then PI. This unsystematic recall yielded a zigzag pattern of L1 recall by the NA group. Nor was the L2 recall by the NA group consistent with the hierarchy principle, as their highest amount of recall was from PI followed by PIII, PII and PV, with the least amount recalled from PIV. This inconsistency with the hierarchy principle demonstrated the NA students' lack of awareness and means of application of the required reading strategies for comprehension and identification of main idea.

All students from the NA group who recalled nothing (their recall scores were 0%) from the English text also failed to recall the main idea of the Arabic text. So their recall scores were in parallel. This could be because of their lack of the required reading strategy awareness or their misuse of them. This is also possibly because traditional Libyan methods of teaching and representing language and literacy do not include the use of reading strategies in L1 reading. Thus, Libyan students could not transfer useful L1 reading strategies to their L2 reading. In other words, Libyan students' lack of reading strategy awareness and its consequences were related to these readers' specific L1 and FL literacy experiences and to their educational curriculum and methodology. From these results we can see that the NA students need to enhance their L1 reading proficiency and to learn how to transfer good L1 reading strategies to the L2 reading context. Lack of knowledge of strategies for main idea comprehension in reading may negatively affect

the general academic performance of these university students.

A positive correlation was found for both the control and the experimental groups between background knowledge of the topic and text comprehension. Students in the NE control group were generally able to make satisfactory connections between their prior knowledge and the main ideas of the text in order to facilitate text comprehension. In contrast, some of the NA students' unawareness of or misuse of this strategy resulted in misinterpretation of the text and contributed to their low recall scores of its main ideas. Although prior knowledge is important for L2 comprehension, this result indicates that such knowledge must be appropriately activated and used in order for it to translate into a higher degree of text comprehension.

The control group participants used more problem-solving reading strategies than the experimental group students while reading their L1 texts. Experimental group students reported awareness of more problem-solving strategies than they used. Thus, their comprehension and recall means were lower than the NE group in amount and different in hierarchical pattern. This confirms previously reported findings that good readers actually do use more problem-solving reading strategies, such as re-reading, changing speed and imaging than poor readers do (Hare, 1981; Feng & Mokhtari, 1998). This also indicates and supports the existence of a facilitatory relationship between strategy awareness and use, as they complement each other. Some limitations of the study are discussed in the following section.

7.1-Limitations of the Present Study

The present research explored reading strategy awareness and use for main idea identification in academic reading. This study was limited to 112 Arabic speaking university students majoring in teaching English as a foreign language (TEFL) from three different Libyan governmental universities and 16 English language speaking students from the University of Ottawa majoring in teaching English as a second language (TESL). Thus, the results obtained from the present study may apply only to those students in the experimental and the control groups. This small number of the control group participants may prevent the researcher from generalizing the results of this study to students at other educational institutions or in other cultures. In addition, the small control group hindered some statistical analyses that were applied to the experimental group.

Another limitation could be that the results obtained may have been affected by other intervening variables, which were not considered in the present study. These variables include participants' attitudes towards the performed tasks, personal experience in reading, personal learning styles, understanding of the task demands and other individual differences. However, these limitations do not change the fact that such a study may generate insights about the use of strategies for these two groups that contribute to a better understanding of the importance of main idea comprehension and strategy awareness and use for academic achievements of similar Arabic speaking students, or other students with non-European language backgrounds. Future research that may address some of the limitations of the present study is proposed in the following section.

7.2- Suggestion for Future Research

Further research is needed on larger groups of Arabic speaking EFL students from different educational backgrounds in order to replicate the results of the present study. Research also needs to be conducted to determine if instruction in reading comprehension strategies will result in increased achievement by EFL students in text comprehension and main idea identification. Also, further research should be done to determine the most effective instruction techniques and academic support for helping students improve their academic achievement and become more successful learners.

7.3- Classroom Implications

In the light of the present and previous research findings, it might be possible to enhance readers' reading comprehension by having teachers focus students' attention on identifying main ideas and important supporting details in texts. One approach would be to make students aware of the text structure and organization that can be gleaned from previews, introductions and summaries (Wade & Adam, 1990). This can be accomplished by incorporating some elements of strategy awareness into L2 reading instruction and by teaching some of the basic reading strategies, such as skimming and anticipating (Zhang, 2001).

Also, teachers need to introduce students to strategies for organizing information, which show the relationship between main ideas and supporting details (Feng and Mokhtari, 1998). One way of doing this is to pair students' metacognitive knowledge with their use of reading strategies in real reading contexts (Zhang, 2001). This can be done by training students to read the first sentence from each paragraph and then state the

topic of the text. Teachers may also ask students to read one paragraph and discuss with them the main idea of this paragraph and the location of the topic sentence and the supporting sentences. This would help students identify the role of each sentence in the paragraph in a support hierarchy. By engaging in exercises of this type, students may increase their awareness of text structure and organization; thereby enhancing their reading comprehension and main idea identification ability. This in turn may improve their general academic performance. This can be reached through explicit practical teaching of these strategies and continuous training from the very beginning stages of schooling, because training to implement these strategies is more important than just telling students about them. Thus, awareness and use facilitate each other to improve comprehension and recall of main idea.

Teachers can also encourage students to share their positive experiences of using reading comprehension strategies. This can be done through applying small group reading activities in the classroom, such as asking each student to read one paragraph and explain its main idea to the group and how he or she was able to identify it. This would allow good readers', who are more aware of the strategies they use and also tend to invoke strategies more flexibly, to share this knowledge with less proficient readers. This may in turn encourage less proficient readers to think about their reading processes and build up their confidence in using this new strategic knowledge (Feng and Mokhtari, 1998). Teachers of reading can also focus learners' attention on the three categories of reading strategies (global, problem-solving and support) to help them improve their reading comprehension ability. One way of doing so is to ask students to complete Mokhtari and Sheorey's (2002) Survey of Reading Strategy (SORS) to raise their

awareness of these strategies and ultimately increasing their effective usage of them through continuous practical training.

It is crucially important, before asking teachers to incorporate strategy instruction in their classrooms, to convince them that students may have reading problems that must be resolved and that resolution of these problems is more important than teaching the meaning of specific words and concepts (Block, 1992). This could be done by providing teachers with programs and seminars on FL reading strategies. The goal of these programs would be to introduce teachers to cognitive and metacognitive reading strategies and to convince them of their importance to students' ultimate success in reading. Such seminars are especially needed where EFL teachers have never been explicitly exposed to these strategies and are unaware of how to teach and implement them effectively in their classes.

Lastly, it would help students and further our understanding of reading if classroom teachers were to take up teacher-researcher roles through training L2 readers in the effective use of the reading strategies in real reading tasks and assessing the outcomes. These approaches could include having students fill out reading strategy questionnaires, recall protocols, think-aloud exercises and journal reports to help teachers explore the kinds of reading strategic knowledge students possess and lack. These activities may also help teachers to diagnose their students' problems and consequently modify their teaching methods to solve them, thereby enhancing their students' reading achievement.

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Appendix A: Arabic Alphabet

أ	ب	ت	ث	ج
ح	خ	د	ذ	ر
ز	س	ش	ص	ض
ط	ظ	ع	غ	ف
ق	ك	ل	م	ن
هـ	و	ي		

APPENDIX B: Survey of Reading Strategies

The purpose of this survey is to collect information about the various strategies you use when you read academic materials in English. (e.g., reading textbooks for homework or examinations).

Each statement is followed by five numbers, 1, 2, 3, 4, and 5, and each number means the following:

'1' means that 'I never do this'

'2' means that 'I do this only occasionally'

'3' means that 'I sometimes do this'

'4' means that 'I usually do this'

'5' means that 'I always do this'

After reading each statement, circle the number which applies to you. Note that there is no right or wrong response to any of the items on this survey.

Statement	Never					Always				
1. I have a purpose in mind when I read.	1	2	3	4	5					
2. I take notes while reading to help me understand what I read.	1	2	3	4	5					
3. I think about what I know to help me understand what I read.	1	2	3	4	5					
4. I take an overall view of the text to see what it is about before reading it.	1	2	3	4	5					
5. When text becomes difficult, I read aloud to help me understand what I read.	1	2	3	4	5					
6. I think about whether the content of the text fits my reading purpose.	1	2	3	4	5					
7. I read slowly and carefully to make sure I understand what I am reading.	1	2	3	4	5					
8. I review the text first by noting its characteristics like length and organization.	1	2	3	4	5					
9. I try to get back on track when I lose concentration.	1	2	3	4	5					
10. I underline or circle information in the text to help me remember it	1	2	3	4	5					
11. I adjust my reading speed according to what I am reading.	1	2	3	4	5					
12. When reading, I decide what to read closely and what to ignore.	1	2	3	4	5					
13. I use reference materials (e.g. a dictionary) to help me understand what I read.	1	2	3	4	5					
14. When text becomes difficult, I pay closer attention to what I am reading.	1	2	3	4	5					
15. I use tables, figures, and pictures in text to increase my understanding.	1	2	3	4	5					

16. I stop from time to time and think about what I am reading.	1	2	3	4	5
17. I use context clues to help me better understand what I am reading.	1	2	3	4	5
18. I paraphrase (restate ideas in my own words) to better understand what I am reading.	1	2	3	4	5
19. I try to picture or visualize information to help remember what I read.	1	2	3	4	5
20. I use typographical features like bold and italics to identify key information.	1	2	3	4	5
21. I critically analyze and evaluate the information presented in the text.	1	2	3	4	5
22. I go back and forth in the text to find relationships among ideas in it.	1	2	3	4	5
23. I check my understanding when I come across new information.	1	2	3	4	5
24. I try to guess what the content of the text is about when I read.	1	2	3	4	5
25. When text becomes difficult, I re-read it to increase my understanding.	1	2	3	4	5
26. I ask myself questions I like to have answered in the text.	1	2	3	4	5
27. I check to see if my guesses about the text are right or wrong.	1	2	3	4	5
28. When I read, I guess the meaning of unknown words or phrases.	1	2	3	4	5
29. When reading, I translate from English into my native language.	1	2	3	4	5
30. When reading, I think about information in both English and Arabic.	1	2	3	4	5

Adapted from Mokhtari & Sheorey (2002)

Arabic Version of Reading Strategies Survey

دراسة حول طرق القراءة الاكاديمية باللغة الانجليزية كلغة اجنبية

الغرض من هذا الفحص جمع بعض المعلومات عن الطرق المختلفة التي تستعملها عند القراءة الاكاديمية باللغة الانجليزية كقراءة المقررات الدراسية لاداء الواجبات او الاعداد للامتحانات.

كل النقاط التالية تشير الى طريقة قراءتك للمواد الدراسية ذات الطابع الاكاديمي.

كل نقطة تليها خمسة ارقام 1 2 3 4 5 كل رقم يعني الاتي:

1 تعني اطلاقا 2 تعني نادرا 3 تعني احيانا 4 تعني عادتا 5 تعني دائما

بعد قراءة كل نقطة ضع دائرة حول الرقم الذي ينطبق عليك. لاحظ انه لا توجد اجابة صحيحة واخرى خاطئة.

دائما	اطلاقا	
5	4	3
2	1	
1- احدد الغرض من القراءة منذ ان ابدأ أقرأ.		
5	4	3
2	1	
2- أكتب ملاحظاتي خلال القراءة لتساعدني على الفهم.		
5	4	3
2	1	
3- افكر فيما اعرفه مسبقا عن الموضوع ليساعدني الفهم.		
5	4	3
2	1	
4- اقي نظرة على العنوان الرئيسي والعناوين الجانبية اولا لاعرف عما يتحدث النص.		
5	4	3
2	1	
5- عندما يصبح المقال صعب أقرأ بصوت مرتفع لأفهم ما أقرأ.		
5	4	3
2	1	
6- افكر فيما اذا كان المحتوى يتفق مع غرضي من قراءت		
5	4	3
2	1	
7- أقرأ بعناية وبيطء لتأكد من انني أفهم ما أقرأ.		
5	4	3
2	1	
8- أراجع المقال اولا لاعرف مواصفاته كالطول وطريقة العرض.		
5	4	3
2	1	
9- عندما أفقد التركيز احاول أن اعيد تركيزي وانتباهي لما أقرأ.		
5	4	3
2	1	
10- أضع خطوط تحت المعلومات التي اريد ان اتذكرها في المقال.		
5	4	3
2	1	
11- أعدل من سرعة قراءتي حسب صعوبة الموضوع الذي اقرأه.		
5	4	3
2	1	
12- خلال القراءة اقرر ما يجب ان اركز عليه وما يجب ان اتجاهله.		
5	4	3
2	1	
13- أستعمل القاموس ليساعدني علي فهم ما أقرأ.		
5	4	3
2	1	
14- عندما يصبح المقال صعب اركز وانتبه اكثر لما أقرأ.		
5	4	3
2	1	
15- استخدم الصور والجداول والاشكال التوضيحية الموجوده في المقال ليزداد فهمي له.		
5	4	3
2	1	
16- أتوقف من وقت لآخر و افكر فيما أقرأ.		
5	4	3
2	1	
17- ارقم النقاط الرئيسية حسب اهميتها لتساعدني على تحديد الفكرة الرئيسية للنص.		
5	4	3
2	1	
18- أعيد صياغة الافكار بأسلوبي لتساعدني على فهم ما أقرأ.		

- 19- أحاول ان اصور او أتخيل ما أقرأ ليساعدني على فهمه. 5 4 3 2 1
- 20- أستعمل اشكال الطباعة كالخط العريض والخط المائل لتعريف دلالات المعلومات. 5 4 3 2 1
- 21- أقوم بتحليل نقدي و تقييم للمعلومات المعروضة في المقال. 5 4 3 2 1
- 22- ارجع لما قرأت و لما سأقرأ لاجد ارتباط منطقي بين الافكار المعروضة. 5 4 3 2 1
- 23- أراجع مدى فهمي عندما اجد معلومة جديدة في المقال. 5 4 3 2 1
- 24- احاول ان اخمن ماهي الفكرة الرئيسية للموضوع عندما أقرأ. 5 4 3 2 1
- 25- عندما يصبح الموضوع صعب اعيد القراءة ليزداد فهمي للنص. 5 4 3 2 1
- 26- أسأل نفسي أسئلة اود ان تكون اجاباتها في النص 5 4 3 2 1
- 27- أفحص تخميناتي حول الموضوع لأرى اذا كانت صحيحة ام لا. 5 4 3 2 1
- 28- عندما أقرأ اخمن معاني الكلمات الغير معروفة و الجديدة. 5 4 3 2 1
- 29- عندما أقرأ اترجم من الانجليزية الى العربية. 5 4 3 2 1
- 30- خلال القراءة افكر باللغتين الانجليزية و العربية في المعلومات التي أقرأها. 5 4 3 2 1

APPENDIX C: Reading Instructions and Text for the Pilot Study

- Read the following text at your own rate. Afterwards, you will be asked to recall in writing as much of the text as possible.
- Feel free to write on the text pages during your reading if that helps you to comprehend it.
- After you have completed reading, place the text into the envelope provided.
- Now, read the instructions for the recall tasks.

- اقرأ النص التالي على مهل وبتمعن حيث سيطلب منك تذكر اكبر قدر ممكن منه بعد قراءته مباشرة بدون الرجوع اليه.
- لك مطلق الحرية في استعمال القلم والتخطيط او الكتابة على صفحات النص اذا كان ذلك يساعدك على الفهم اكثر

Functional Foods

April 24, 2002

By **Kathleen Meister**

Foods that may have health benefits beyond the traditional nutrients that they contain are often called "functional foods." The concept of functional foods has become popular in recent years, first in Japan and later in other countries, including the U.S.

While it would be helpful if we could prevent a wide range of specific diseases by consuming certain foods, in most cases the science behind such an approach isn't very strong yet, and in some cases there is no scientific evidence at all.

In the U.S., the term "functional foods" has no official, universally accepted definition. Foods don't have to pass any test or meet any standard in order to be described as "functional." To help shed some light on the issue, a new report from the American Council on Science and Health, facts about "Functional Foods", ranks a variety of functional foods health claims according to the strength of the scientific evidence.

In the U.S., the best way for consumers to find out whether a food has any scientifically established health benefits beyond basic nutrition is to look for a special type of statement called a "health claim" on the food label. Health claims must be pre-approved by the Food and Drug Administration (FDA) before they can be used. This differs from the procedure used for structure/function claims on the labels of foods or dietary supplements. Structure/function claims are expected to be truthful, but they do not require FDA pre-approval. While the scientific data underlying statements on various food packages are not equally reliable, it's a start.

ACSH classifies the strength of the scientific evidence for the benefits of various functional foods currently on the market as follows:

Very strong: whole oat products (lowered cholesterol levels and reduced heart disease risk), foods containing psyllium (lowered cholesterol levels and reduced heart disease risk), whole soy foods and foods made with soy protein (lowered cholesterol levels and reduced heart disease risk), special fortified margarines made with plant stanol or sterol esters (lowered cholesterol levels and reduced heart disease risk), sugarless chewing

gums and candies made with sugar alcohols (do not promote tooth decay). The FDA has approved health claims for all of these products.

Strong: Fatty fish containing omega-3 fatty acids (reduced risk of heart disease).

Moderate: Cranberry juice (reduced risk of urinary tract infection), organosulfur compounds in garlic (lowered cholesterol levels).

Weak to moderate: Green tea (reduced cancer risk), lycopene in tomatoes and tomato products (reduced risk of some types of cancer, especially prostate cancer).

Weak: Dark-green leafy vegetables containing lutein (reduced risk of macular degeneration), meats and dairy products containing conjugated linoleic acid (various health benefits), cruciferous vegetables (reduced cancer risk), probiotics (beneficial effects on gastrointestinal function and immunity).

ACSH will update its information on functional foods as new research is done.

Safety concerns have been raised about some functional foods, especially foods containing added medicinal herbs. Concerns have also been raised about the possibility that the promotion of functional foods may mislead people into thinking that eating them is more important than choosing a balanced diet or taking other steps to prevent or treat health problems. Exaggerated claims for some functional foods and inconsistent regulations may contribute to consumer confusion.

Consumers need to be cautious and sceptical when evaluating claims made for functional food products. ACSH recommends that consumers who are interested in incorporating functional foods into a healthy lifestyle should first consider products that carry FDA-approved health claims. These foods have been convincingly demonstrated to be beneficial for their intended purposes when consumed as part of a generally well-balanced and healthful diet. Consumers who wish to try functional foods that do not carry FDA-approved health claims should realize that there is no substantial proof that these foods have the special benefits claimed for them.

Functional foods are only one aspect of diet, and diet is only one aspect of a comprehensive lifestyle approach to good health, which should include regular exercise, tobacco avoidance, maintenance of a healthy body weight, stress reduction, and other

positive health practices. Functional foods can sometimes be part of an effective strategy to promote good health, but they should never be considered a substitute for other good health habits and they should never be used instead of medically prescribed therapy for any health problem.

Instructions for the Recall Task

- Recall as much of the text as possible by writing down all that you remember from it on the attached blank pages.
- You can write in Arabic, English or in both languages.

• بدون الرجوع الى النص استرجع او تذكر اكبر قدر ممكن من النص

• يمكنك الكتابة باللغة العربية او الانجليزية او بكلتا اللغتين

APPENDIX D: Propositional Analysis

Prop #	Propositions	Type	Points
1	Functional foods.	MP	16
2	Foods that may have health benefits beyond the traditional nutrients <i>that they contain</i> are often called “functional Foods”.	I	8
3	that they contain	IV	1
4	The concept of functional foods has become popular in recent years.	II	4
5	First in Japan and later in other countries including U.S.	III	2
6	While	II	4
7	it would be helpful if we could prevent a wide rang of specific diseases by consuming certain foods.	II	4
8	In most cases the science behind such an approach is not very strong yet.	III	2
9	And in some cases there is no scientific evidence at all.	III	2
10	In the U.S.,	III	2
11	the term	IV	1
12	“functional foods” has no official, universally accepted definition.	I	8
13	Foods don’t have to pass any test or meet any standard in order to be described as “functional”.	II	4
14	To help shed some light on the issue,	IV	1
15	A new report from the American Council on Science and Health,	III	2
16	facts bout “Functional Foods”.	I	8
17	Ranks a variety of functional foods health claims according to the strength of the scientific evidence.	II	4
18	In the U.S., the best way for consumers to find out	III	2

19	whether a food has any scientifically established health benefits beyond basic nutrition	I	8
20	Is to look for a special type of statement called a “health claim” on the food label.	II	4
21	Health claims must be pre-approved (by the Food and Drug Administration (FDA)) before they can be used.	III	2
22	by the Food and Drug Administration (FDA)	IV	1
23	This differs from the procedure used for structure/function claims on the labels of foods or dietary supplements.	III	2
24	Structure/function claims are expected to be truthful,	III	2
25	But they don’t require FDA pre-approval.	III	2
26	While the scientific data underlying statements on various food packages are not equally reliable,	III	2
27	It is a start.	IV	1
28	ACSH classifies the strength of the scientific evidence for the benefits of various functional foods	I	8
29	currently on the market:	III	2
30	as follows	IV	1
31	Very strong:	II	4
32	whole oat products (lowered cholesterol levels and reduced heart disease risk),	III	2
33	Foods containing psyllium (lowered cholesterol levels and reduced heart disease risk),	III	2
34	Whole soy foods and foods made with soy protein (lowered cholesterol levels and reduced heart disease risk),	III	2
35	Special fortified margarines (lowered cholesterol levels and reduced heart disease risk),	III	2
36	made with plant stanol or sterol esters	IV	1
37	Sugarless chewing gums and candies <i>made with sugar alcohols</i> (do not promote tooth decay).	III	2

38	made with sugar alcohols	IV	1
39	The FDA has approved health claims for all of these products.	III	2
40	Strong:	II	4
41	Fatty fish (reduced risk of heart disease).	III	2
42	Containing omega-3 acids	IV	1
43	Moderate:	II	4
44	Cranberry juice (reduced risk of urinary tract infection),	III	2
45	Organosulfur compounds in garlic (lowered cholesterol levels).	III	2
46	Weak to moderate:	II	4
47	Green tea (reduced cancer risk),	III	2
48	Lycopene in tomatoes and tomato products (reduced risk of some types of cancer, especially prostate cancer).	III	2
49	Weak:	II	4
50	Dark- green leafy vegetables <i>containing lutein</i> (reduced risk of macular degeneration),	III	2
51	(Containing lutein)	IV	1
52	Meats and dairy products <i>containing conjugated linoleic acid</i> (Various health benefits),	III	2
53	Containing conjugated linoleic acid	IV	1
54	Cruciferous vegetables (reduced cancer risk),	III	2
55	Probiotics (beneficial effects on gastrointestinal function and immunity).	III	2
56	ACSH will update its information on functional foods as new research is done.	III	2
57	Safety concerns have been raised about some functional foods,	I	8
58	Especially foods containing added medicinal herbs.	II	4
59	Concerns have also been raised about the possibility that	III	2
60	The promotion of functional foods may mislead people into thinking that eating them is more important than choosing a	III	2

	balanced diet		
61	or taking other steps to prevent or treat health problems.	III	2
62	Exaggerated claims for some functional foods and inconsistent regulations may contribute to consumer confusion.	III	2
63	Consumers need to be cautious and sceptical when evaluating claims made for functional food products.	I	8
64	ACSH recommends that consumers who are interested in incorporating functional foods into a healthy lifestyle	II	4
65	should first consider products that carry FDA-approved health claims.	II	4
66	These foods have been convincingly demonstrated to be beneficial for their intended purposes	III	2
67	when consumed as part of a generally well-balanced and healthful diet.	III	2
68	Consumers who wish to try functional foods <i>that do not carry FDA-approved health claims</i> they should realize that there is no substantial proof that these foods have the special benefits claimed for them.	III	2
69	that do not carry FDA-approved health claims	IV	1
70	Functional foods are only one aspect of diet, and diet is only one aspect of a comprehensive lifestyle approach to good health,	I	8
71	Which should include:	II	4
72	regular exercise,	III	2
73	Tobacco avoidance,	III	2
74	Maintenance of a healthy body weight,	III	2
75	Stress reduction,	III	2
76	And other positive health practices.	III	2

77	Functional food can sometimes be part of an effective strategy to promote good health,	I	8
78	But they should never be considered a substitute for other good health habits	I	8
79	And they should never be used instead of medically prescribed therapy for any health problem.	I	8

APPENDIX E: Reading Texts

English Text

How to juggle study and work

Tola Awogbamiye

Saturday March 27, 2004

The Guardian

With ever increasing fees, working while studying is the norm for many students. Faced with potentially huge debts, some students may be tempted to take part time jobs that involve working lots of hours, but this may have a detrimental impact on their studies.

University is more than just about getting a degree: extracurricular activities and a social life are also important. How can students balance studying with working part-time and also ensure that they do not miss out on university life?

Develop a study plan. Once you have your timetable, and an idea of when your assignments are due, develop a plan of the best times for you to study, whether this be evenings, mornings or weekends. This will help you determine which hours and days you can work.

Choose a job that is flexible. You may need time off from your job during exams or if you have deadlines for coursework, so choosing the right job, where the employer is understanding and willing to be flexible, is important.

You can mention this at interview, but Brian Staines of Bristol University Careers Office says: "It may be better to wait until you have been offered the job, have worked for a while, and have had the opportunity to prove yourself before mentioning that you might need time off.

"When you look for a job, it's best to start with working a few hours and then once you get used to the job and know how much you can cope with, you can increase the hours.

"It's always easier to increase rather than decrease the number of hours you work," says Cary Cooper, professor of psychology and health at Lancaster University Management School.

Choose a job that fits in with your study pattern. Working out your study pattern, ie whether you're at your best in the mornings, evenings or late. Some students are night owls preferring to study late at night, others are larks.

Some students may prefer to work a few evenings a week, others at weekends. "Although work is important they need to find a job with hours that fit around their optimal times for studying rather than the other way round," says Professor Cooper.

Don't take a job that's too demanding. The type of job you look for will depend on your skill set. Apart from the usual student-type jobs, there are roles in offices which can be done at weekends and evenings - jobs such as being a presentation operator using PowerPoint or even evening and weekend secretarial work.

Although these jobs pay well, it may be a challenge to balance studying with these types of job. "A job developing PowerPoint presentations may be too mentally demanding and tiring because you will be looking at a screen most of the time," says Cary.

Be industrious in your search for work. There may be part-time jobs available in call centres or as photocopy clerks in banks and law firms. There may even be jobs in security, which give you the opportunity to study 'on the job', perhaps on site at an unoccupied building, so it's a good idea to cast the net a bit wider when looking for part-time work.

Know your limits. There isn't a figure for the maximum number of hours that students can work before it impacts negatively on their studies since this will vary from student to student.

However, Brian Staines says: "At Bristol, we believe that if students work more than 12 hours a week during term time, this could have a negative effect on their studies. We have a job shop at Bristol offering part-time jobs and all the jobs are

a maximum of 12 hours.

"If students for example work 20 hours a week, then their work could suffer unless they are incredibly disciplined," he explains. "Also university is about more than just studying. Social time and extracurricular activities are also important."

Balancing part-time work with studying is a challenge that more and more students will face.

"A part time job, which involves long hours, may help their finance in the short term but could have a negative impact on long-term job prospects if they don't get a good degree," adds Brian.

Arabic Text

جامعيون يمتهنون الصيانة وتنظيف المنازل

مونتريال - علي حويلي الحياة 27/04/2004

مع اطلالة فصل الربيع يتهيأ سكان الاحياء في المدن الكندية للمباشرة بصيانة منازلهم وتنظيفها، وهي عادة درجوا عليها كل عام بعد انتهاء فصل الشتاء. ولئن كانت هذه الاعمال من اختصاص شركات أنشئت خصيصاً لهذه الغاية، الا ان بعض الطلبة، على ما يبدو، اخذوا على عاتقهم منافسة تلك الشركات وكسر احتكارها وتوفير نمط جديد للعيش والعمل لعشرات الجامعيين والجامعات الراغبين في تحسين اوضاعهم المادية او إدخار بعض المال لاتمام دراساتهم او لانفاقة في العطلة الصيفية على السفر وزيارة الاماكن السياحية في هذا البلد او ذاك.

تعود هذه الفكرة الى ريتشارد بيرنيه (طالب جامعي - 23 سنة) الذي يقول: "لفت انتباهي هذا العمل حينما كانت احدى الشركات تتولى تنظيف منزلنا. وكان القائمون به لا يتجاوز عددهم اثنين او ثلاثة اشخاص والادوات التي يستعملونها غالباً ما تكون متوافرة في المنازل. الا ان ما يتقاضونه لقاء هذه الخدمات كان باهظاً اي 15 دولاراً عن كل ساعة عمل. وهذا مكلف جداً بالنسبة لعائلة متوسطة الحال".

ويضيف: "طرحنا الفكرة على بعض الزملاء في الجامعة فلاقنا قبولاً وترحيباً. تقدمنا بطلب الى وزارة العمل وحصلنا على ترخيص رسمي وعلى قرض مالي مقداره خمسة الاف دولار وانشأنا مؤسسة اقتصادية اجتماعية للصيانة والتنظيف في مونتريال".

كان على اعضاء المؤسسة ان يتعاملوا مع هذا الاستحقاق بكل جد ومسؤولية فقسموا العمل في ما بينهم وهيأوا له مستلزمات النجاح كله.

استناداً على تجربة العام الفائت، حافظ نظام العمل على حاله واقتصر على ايام نهاية الاسبوع (السبت والاحد) والاعياد. وهذا ما يتناسب مع أوقات السكان والطلاب على السواء. تولى مكتب المؤسسة الاعلانات اما عبر الاتصالات الهاتفية او عبر توزيع منشورات كانت توضع في صناديق البريد. وهذه السنة أنشأنا موقعاً خاصاً للمؤسسة على الانترنت. اما العاملون فبلغ عددهم 24 طالباً وطالبة انجزوا خلال العام الماضي 270 خدمة للمنازل والمكاتب في احد احياء مونتريال الشمالية. والاجر المحدد لكل منهم 8,30 دولار في الساعة اي ما يعادل نصف المبلغ الذي تتقاضاه شركات التنظيف. اما العمل فلا يتعدى تنظيف الاثاث والسجاد والمراحيض وطلاء الجدران والابواب والنوافذ وتلميع الواحبات الزجاجية والارض الخشبية واصلاح بعض الاعطال في الحفريات وغالات الابواب علاوة على تنظيف الحداثق المحيطة بالمنازل بعد زوال الثلوج عنها.

الجديد هذا العام، كما تقول نيفين سالواز المسؤولة عن قسم التنظيف والصيانة، هو "تزايد الطلبات واتساع نطاق العمل ليشمل لأول مرة مجموعة من السكان العجزة والمسنين والمعوقين والحوامل والامهات الحديثات الولادة

وهؤلاء يستفيدون من مساعدة حكومية خاصة مقدارها 4 دولارات عن كل ساعة عمل تستوفيهها المؤسسة لاحقاً. كما تتضمن اجندة الاعمال لهذا الموسم مرافق اخرى كغسيل السيارات وغرس الزهور على جوانب الشوارع وتنظيف الحدائق العامة التابعة للبلديات وبلغ مجموع الطلبات المتوجب تنفيذها لهذا العام نحو 540 طلباً.

ويكشف زيدان بنعلمي (طاب جامعي تونسي - 22 عاماً) المسؤول عن التوظيفات الجديدة, "ان عدد المسجلين على لوائحنا لهذا العام بلغ 64 طالباً وطالبة اي بزيادة نحو ثلاثة اضعاف عن العام الماضي وهم ينتمون الى اثنيات مختلفة بينهم كنديون وهايتيون وعرب واميركيون - لاتينيون وآسيويون وغيرهم. نحن نقوم بتدريبهم على استعمال وسائل التنظيف خاصة منها التي تحتوي على مواد كيميائية سامة تجنباً لحدوث اي اذى يمكن ان يصيبهم او يصيب اصحاب المنازل. وما خلا ذلك فالامر لا يتطلب خبرات سابقة ولا شهادات".

يؤكد المسؤولون عن المؤسسة ان نجاح هذه التجربة سيكون حافزاً لتعميمها كي تشمل احياء اخرى في السنوات المقبلة وتشجيع الطلاب على الانخراط فيها وزيادة اعدادهم لا بدافع الكسب المادي وحسب وانما للحصول على الخبرات المهنية والتعرف على اسواق العمل وآليات العرض والطلب.

APPENDIX F: Propositional Analysis for the English Text

Prop. #	Propositions	type	Points
1	How to juggle study and work	MP	16
2	With ever increasing fees, working while studying is the norm for many students.	I	8
3	Faced with potentially huge debts,	II	4
4	some students may be tempted to take part time jobs that involve working lots of hours,	II	4
5	but this may have a detrimental impact on their studies.	III	2
6	University is more than just about getting a degree:	I	8
7	extracurricular activities and a social life are also important.	II	4
8	How can students balance studying with working part-time and also ensure that they do not miss out on university life?	I	8
9	Develop a study plan.	I	8
10	Once you have your timetable, and an idea of when your assignments are due, develop a plan of the best times for you to study,	II	4
11	whether this be evenings, mornings or weekends.	III	2
12	This will help you determine which hours and days you can work.	III	2
13	Choose a job that is flexible.	I	8
14	You may need time off from your job during exams or if you have deadlines for coursework,	III	2
15	so choosing the right job is important,	II	4
16	where the employer is understanding and willing to be flexible.	III	2
17	You can mention this at interview,	III	2
18	but Brian Staines of Bristol University Careers Office says:	V	.5

19	"It may be better to wait until you have been offered the job,	III	2
20	have worked for a while,	III	2
21	and have had the opportunity to prove yourself before mentioning that you might need time off.	III	2
22	"When you look for a job, it's best to start with working a few hours and then once you get used to the job and know how much you can cope with, you can increase the hours.	III	2
23	It's always easier to increase rather than decrease the number of hours you work,	III	2
24	says Cary Cooper,	V	.5
25	professor of psychology and health at Lancaster University Management School.	IV	1
26	Choose a job that fits in with your study pattern.	I	8
27	Working out your study pattern	II	4
28	whether you're at your best in the mornings, evenings or late.	II	4
29	Some students are night owls preferring to study late at night,	III	2
30	others are larks.	III	2
31	Some students may prefer to work a few evenings a week,	III	2
32	others at weekends.	III	2
33	"Although work is important they need to find a job with hours that fit around their optimal times for studying rather than the other way round,"	III	2
34	says Professor Cooper.	V	.5
35	Don't take a job that's too demanding.	I	8
36	The type of job you look for will depend on your skill set.	II	4
37	Apart from the usual student-type jobs,	II	4

38	there are roles in offices which can be done at weekends and evenings - jobs	III	2
39	jobs such as being a presentation operator using PowerPoint	IV	1
40	or even evening and weekend secretarial work.	IV	1
41	Although these jobs pay well, it may be a challenge to balance studying with these types of job.	II	4
42	“A job developing PowerPoint presentations may be too mentally demanding and tiring because you will be looking at a screen most of the time,”	III	2
43	says Cary.	V	.5
44	Be industrious in your search for work.	I	8
45	There may be part-time jobs available in call centers or as photocopy clerks in banks and law firms.	II	4
46	There may even be jobs in security,	II	4
47	which give you the opportunity to study 'on the job',	III	2
48	perhaps on site at an unoccupied building,	IV	1
49	so it's a good idea to cast the net a bit wider when looking for part-time work.	II	4
50	Know your limits.	I	8
51	There isn't a figure for the maximum number of hours that students can work before it impacts negatively on their studies	II	4
52	since this will vary from student to student.	III	2
53	However, Brian Staines says:	V	.5
54	"At Bristol,	IV	1
55	we believe that if students work more than 12 hours a week during term time, this could have a negative effect on their studies.	III	2

56	We have a job shop at Bristol offering part-time jobs and all the jobs are a maximum of 12 hours.	III	2
57	"If students for example work 20 hours a week, then their work could suffer unless they are incredibly disciplined,"	III	2
58	he explains.	V	.5
59	"Also university is about more than just studying. Social time and extracurricular activities are also important."	III	2
60	Balancing part-time work with studying is a challenge that more and more students will face.	I	8
61	"A part time job, which involves long hours, may help their finance in the short term	II	4
62	but could have a negative impact on long-term job prospects if they don't get a good degree,"	II	4
63	adds Brian.	V	.5

APPENDIX G: Propositional Analysis for the Arabic Text

Prop #	Propositions	Type	Point
1	جامعيون يمتهنون الصيانة وتنظيف المنازل	MP	16
2	مع اطلالة فصل الربيع يتهيا سكان الاحياء في المدن الكندية للمباشرة بصيانة منازلهم وتنظيفها,	I	8
3	وهي عادة درجوا عليها كل عام بعد انتهاء فصل الشتاء.	II	4
4	ولئن كانت هذه الاعمال من اختصاص شركات انشئت خصيصا لهذه الغاية,	III	2
5	الا ان بعض الطلبة, على ما يبدو, اخذوا على عاتقهم منافسة تلك الشركات وكسر احتكارها	I	8
6	على ما يبدو,	IV	1
7	وتوفير نمط جديد للعيش والعمل لعشرات الجامعيين والجامعيات الراغبين في تحسين اوضاعهم المادية	I	8
8	او ادخار بعض المال لاتمام دراستهم	II	4
9	او لانفاقه في العطلة الصيفية على السفر وزيارة الاماكن السياحية في هذا البلد او ذاك.	II	4
10	تعود هذه الفكرة الى ريتشارد بيرنيه طالب جامعي-23 سنة الذي يقول.	III	2
11	ريتشارد بيرنيه	V	.5
12	طالب جامعي-23 سنة	IV	1
13	"لفت انتباهي هذا العمل حينما كانت احدى الشركات تتولى تنظيف منزلنا.	III	2
14	وكان القائمون به لا يتجاوز عددهم اثنين او ثلاثة اشخاص والادوات التي يستعملونها غالبا ما تكون متوافرة في المنازل.	III	2
15	الا ان ما يتقاضونه لقاء هذه الخدمات كان باهضا اي 15 دولارا عن كل ساعة عمل.	II	4
16	وهذا مكلف جدا بالنسبة لعائلة متوسطة الحال."	III	2
17	ويضيف:	IV	1
18	"طرحنا الفكرة على بعض الزملاء في الجامعة فلاقنا قبولا وترحيبا.	II	4
19	تقدمنا بطلب الى وزارة العمل وحصلنا على ترخيص رسمي	II	4
20	وعلى قرض مالي مقداره خمسة الاف دولار	II	4
21	وانشأنا مؤسسة اقتصادية اجتماعية للصيانة والتنظيف في مونتريال."	II	4
22	كان علي اعضاء هذه المؤسسة ان يتعاملوا مع هذا الاستحقاق بكل جد ومسؤولية	II	4
23	فقسموا العمل فيما بينهم وهياوا له مستلزمات النجاح كلها.	III	2

24	استنادا على تجربة العام الفائت,	III	2
25	حافظ العمل على حاله واقتصر على ايام عطلة نهاية الاسبوع (السبت والاحد) والاعیاد.	I	8
26	السبت والاحد	IV	1
27	وهذا مايتناسب مع اوقات السكان والطلاب على السواء.	II	4
28	تولى مكتب المؤسسة الاعلانات اما عبر الاتصالات الهاتفية او عبر توزيع منشورات كانت توضع في صناديق البريد.	III	2
29	وهذه السنة انشأنا موقعا خاصا للمؤسسة على الانترنت.	III	2
30	اما العاملون فبلغ عددهم 24 طالبا وطالبة	III	2
31	انجزوا خلال العام الماضي 270 خدمة للمنازل والمكاتب في احد احياء مونتريال الشمالية.	III	2
32	في احد احياء مونتريال الشمالية	V	.5
33	الاجر المحدد لكل منهم 8.30 دولار في الساعة اي مايعادل نصف المبلغ الذي تتقاضاه شركات التنظيف.	III	2
34	اما العمل فلا يتعدى تنظيف الاثاث والسجاد والمرايض وطلاء الجدران والابواب والنوافذ وتلميع الواجهات الزجاجية والارض الخشبية واصلاح بعض الاعطال في الحفريات وغالات الابواب علاوة على تنظيف الحدائق المحيطة بالمنازل بعد زوال الثلوج عنها.	III	2
35	الجديد هذا العام, كما تقول نيفين سالواز المسؤولة عن قسم التنظيف والصيانة, هو "تزايد الطلبات واتساع نطاق العمل ليشمل لأول مرة مجموعة من السكان العجزة والمسنين والمعاقين والحوامل والامهات الحديثات الولادة,	III	2
36	كما تقول (نيفين سالواز) المسؤولة عن قسم التنظيف والصيانة	IV	1
37	نيفين سالواز	V	.5
38	وهؤلاء يستفيدون من مساعدة حكومية خاصة مقدارها 4 دولارات عن كل ساعة عمل تستوفيه المؤسسة لاحقا".	III	2
39	كما تتضمن اجندة الاعمال لهذا الموسم مرافق اخرى كغسيل السيارات وغرس الزهور على جوانب الشوارع وتنظيف الحدائق العامة التابعة للبلديات	III	2
40	وبلغ مجموع الطلبات المتوجب تنفيذها لهذا العام نحو 540 طلبا.	III	2
41	يكشف (زيدان بن علمي طالب جامعي تونسي-22 عام) المسؤول عن التوظيفات الجديدة,	IV	1
42	زيدان بن علمي طالب جامعي تونسي-22 عام	V	.5
43	"ان عدد المسجلين على لوائحنا لهذا العام بلغ 64 طالبا وطالبة اي بزيادة نحو ثلاثة اضعاف عن العام الماضي	III	2
44	وهم ينتمون الي اثنيات مختلفة بينهم كنديون وهايتيين وعرب وامريكيون-لاتينيون واسيويون وغيرهم	III	2

45	نحن نقوم بتدريبهم على استعمال وسائل التنظيف خاصة منها التي تحتوي على مواد كيميائية سامة تجنباً لحدوث اي اذى يمكن ان يصيبهم او يصيب اصحاب المنازل.	II	4
46	وماخلا ذلك فالامر لايتطلب خبرات سابقة ولا شهادات."	II	4
47	يؤكد المسؤولون عن المؤسسة	IV	1
48	ان نجاح هذه التجربة سيكون حافزا لتعميمها كي تشمل احياء اخرى في السنوات المقبلة	I	8
49	وتشجيع الطلاب على الانخراط فيها وزيادة اعدادهم	I	8
50	لا بدافع الكسب المادي فحسب	I	8
51	وانما للحصول على الخبرات المهنية والتعرف على اسواق العمل واليات العرض والطلب.	I	8

APPENDIX H: Reader Assessment of Text

Circle the number that best answers the question. Circle one number for each question.

1. How difficult was this text for you to read and understand?

very difficult	somewhat difficult	of average difficult	not too difficult	easy
1	2	3	4	5

2. How difficult do you think this text will be for you to remember?

very difficult	somewhat difficult	of average difficult	not too difficult	easy
1	2	3	4	5

3. What are you feeling regarding the content of this text?

strong disagreement	disagreement	neutral	agreement	strong agreement
1	2	3	4	5

4. How interesting did you find this text to read?

totally uninteresting	somewhat interesting	interesting	quite interesting	very interesting
1	2	3	4	5

5. How much background knowledge do you think you had in this subject area?

very little	some	an average amount	a fair amount	quite a lot
1	2	3	4	5

6. How clear was the main line of thought or the main idea of the text?

unclear	somewhat clear	moderately clear	mostly clear	very clear
1	2	3	4	5

7. How organized do you think the text was that you read?

unorganized	somewhat organized	moderately organized	mostly organized	very organized
1	2	3	4	5

8. Would you recommend this text to a classmate?

strong disagreement	disagreement	neutral	agreement	strong agreement
1	2	3	4	5

9. Would you like to read another text like this one on the same subject?

strong disagreement	disagreement	neutral	agreement	strong agreement
1	2	3	4	5

10. Would you be interested in discussing the content of this text?

strong disagreement	disagreement	neutral	agreement	strong agreement
1	2	3	4	5

Arabic Version of Reader Assessment of Text

تقييم الطالب للنص

ضع دائرة حول افضل رقم يجيب على السؤال. ضع دائرة حول رقم واحد فقط لكل سؤال.

1- كيف كانت صعوبة النص من حيث القراءة والفهم ؟

صعب جداً	صعب نوعاً ما	معتدل الصعوبة	ليس صعباً كثيراً	سهل
1	2	3	4	5

2- كيف هي صعوبة النص حسب اعتقادك لكي تتذكره ؟

صعب جداً	صعب نوعاً ما	معتدل الصعوبة	ليس صعباً كثيراً	سهل
1	2	3	4	5

3- ما هو شعورك تجاه محتوى النص ؟

غير موافق بشدة	غير موافق	تقريباً موافق	معتدل	موافق بشدة
1	2	3	4	5

4- كيف وجدت النص من حيث متعة القراءة ؟

ممل جداً	ممتع نوعاً ما	ممتع	ممتع فعلاً	ممتع جداً
1	2	3	4	5

5- ما مقدار خلفيتك عن هذا الموضوع حسب اعتقادك ؟

قليلة جداً	بعض الخلفية	مقدار معتدل	مقدار جيد	الكثير جداً
1	2	3	4	5

6- ما مدى وضوح الفكرة الرئيسية للنص ؟

غير واضحة	واضحة نوعاً ما	معتدل الوضوح	غالباً واضحة	واضحة
1	2	3	4	5

7- كيف كان تنظيم الأفكار وتسلسلها في النص ؟

غير منظمة	منظمة نوعاً ما	معتدلة التنظيم	غالباً منظمة	منظمة جداً
1	2	3	4	5

8- هل تنصح أحد زملائك بقراءة هذا النص ؟

لا أوافق بشد	غير موافق	معتدل	موافق	موافق بشدة
1	2	3	4	5

9- هل ترغب في قراءة نص آخر حول نفس الموضوع ؟

غير موافق بشدة	موافق	معتدل	موافق	موافق جداً
1	2	3	4	5

10- هل ستستمتع بمناقشة محتوى هذا النص ؟

لا أوافق بشدة	غير موافق	معتدل	موافق	موافق جداً
1	2	3	4	5

APPENDIX I: Semi-Structured Interview Guide

At the end of each recall protocol session, the researcher asked selected participants to retrospect about their reading session. This was guided by the following questions:

- 4- At what rate (quickly, moderate, or slowly) did you read the text? And why?
- 5- In which order did you read the text? (e.g. 1st paragraph, 2nd paragraph. etc. or 1st, last paragraph.)
- 6- What did you specifically do to understand the text?
- 7- Describe the strategies that you used to make sure you understood the text.
- 8- What did you do to remember the important points of the text?
- 9- Did you do anything else to help you understand and remember the text?
- 10- Is there anything that you would like to add?

Seham Elashhab