CULTURAL SCHEMA AND READING COMPREHENSION: A MEANS TO AN END

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CULTURAL SCHEMA AND READING COMPREHENSION:
A MEANS TO AN END

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ABSTRACT

Studies on good readers have identified a number of reading comprehension strategies to be highly useful. These strategies range from the simple to the complex. A strategy that has been recommended by cognitive scientists is the application of schema to the reading comprehension task. The theory that recommends such a strategy is called schema theory. Schema theory is based on the assumption that the reader's prior knowledge directly impacts new learning situations. Schema or background knowledge includes life experience, educational experience, knowledge of the rhetorical structure of texts, knowledge of how one's language works, and cultural background and knowledge of the world. While schema theory has existed in various forms since the 1930s, it has recently re-emerged and has been redefined as an important concept in reading instruction. Much of the research on schema has shown its importance to reading comprehension.

The aim of this study was to investigate the effects on EFL/ESL reading comprehension of culture-specific content schemata. Precisely, the study aimed to test the following hypothesis: Readers with sufficient and proper cultural background knowledge perform better on reading comprehension activities than those who have insufficient and inappropriate background knowledge. To test the above hypothesis, the study compared the reading comprehension of three groups of beginner subjects. The subjects were female dentistry students at Ajman University Fujairah, branch. The first group (Control Group C) consisted of thirty Emirati female students who knew a lot about traditional Emirati weddings. The second group (Experimental Group A) included thirty Iranian female students who did not know anything about traditional Emirati weddings. The third group (Experimental Group B) comprised thirty female students who had been taught the features and vocabulary of traditional Emirati weddings. In the study, the three groups read and recalled a passage about traditional Emirati weddings, and answered reading comprehension multiple choice

questions (MCQs) and content familiarity questionnaires. To test the hypothesis mentioned earlier, the research answered the following four specific research questions:

1. Do the Emirati Control Group C students have better comprehension when they read an English text describing a traditional Emirati wedding than the Iranian students in both groups?
2. To what extent does pre-teaching enhance Iranian pre-taught Experimental Group B students' reading comprehension?
3. Does the absence of cultural schema hinder the reading comprehension of the Iranian Experimental Group A students?
4. Are there other variables that affect the reading comprehension of the ninety students in the three groups.

To answer the first research question, cultural schema or background knowledge allowed Emirati Control Group C students to outperform Experimental Group A students on all measures. On the other hand, cultural schema allowed Control Group C students to outperform Iranian pre-taught Experimental B students on certain measures. They scored higher on the recall gist and on the sum of the units recalled than Experimental Group B students. Also they omitted fewer units in their recalls than Experimental Group B. To answer question two, the findings showed that pre-teaching allowed Experimental Group B students to outperform Experimental Group A students on all measures. Also, pre-teaching allowed Experimental Group B students to spend less time reading and recalling the text than Control Group C students. Moreover, Experimental Group B students were able to score higher means on recalling units of value 4, to distort fewer ideas in their recalls, and to score higher means in responding to many reading comprehension questions than Control Group C students. Regarding research question three, the findings showed that absence of cultural schema hindered Experimental Group A students from performing well on the reading comprehension tasks. Finally, the findings showed that apart from cultural schema, language proficiency and metacognition, to name a few, are important factors that enhance reading comprehension.

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DEDICATION

This work is dedicated to my wife, Soukaina Hassine, for her cherished and constant support for me throughout my graduate career. Thank you for your patience and understanding, your inspiration and support, and for always being there for me. Your love and presence in my life has given me strength and determination in such a way that only you would know it. I could not have made it this far without you by my side.

CHAPTER I
INTRODUCTION

Need for the Research

Reading plays a crucial role in educational settings and outside these realms. For foreign language learners in academic contexts, reading is the essential prerequisite for school achievement, as well as a virtual springboard for personal and eventual economic success. Therefore, reading has been defined as the most important academic language skill (Carrell, 1988a; Grabe & Stoller, 2002). Richards and Renanaya (2003) point out the special focus that reading receives in foreign language. To them, there are two important reasons for this: "First, many foreign language students often have reading as one of their most important goals" (p. 215). Second, various pedagogical purposes served by written texts help reading to receive this special status.

A very influential theory related to reading comprehension is schema theory. Schema theory provides a meeting place for the studies of language, culture, and cognition. In this context, cultural knowledge and experience are represented in the form of cognitive schema, which underlie the production of cultural discourse. Schema theory maintains that information processing is mediated by mental structures that organize related pieces of knowledge. Schema theory has proved to be of high explanatory power in cognitive studies for more than half a century (Bobrow & Norman, 1975; Minsky, 1975; Rumelhart, 1980; Schank & Abelson, 1977). "[Schema] has been used by both cognitive and social psychologists to explain a wide array of phenomena concerning accuracy and distortion in both perception and memory" (Koriat, Goldsmith, & Pansky, 2000, p. 494). The theory has, however, undergone a change in the way it is modeled alongside the paradigm shift in cognitive science (i.e., classicism to connectionism).

The Definition of Reading

Notions of reading comprehension have changed dramatically over the decades. Theories of learning have shifted dramatically during the 20th century. We have moved from the behaviorist perspective, which dominated the field from the turn

of the 20th century to the sixties and the seventies, to a holistic or interactive approach, which began in the late seventies and continues to shape our thinking about reading comprehension today. Practitioners of the interactive model view reading as a cognitive, developmental, and socially constructed task that goes beyond understanding the words of the page.

Current research views reading as a dynamic process in which the reader constructs meaning based on the information he or she gathers from the text. Reading expert Katherine Maria (1990) defines reading comprehension as "a holistic process of constructing meaning from written text through the interaction of three variables" (p. 14). The first variable, according to Maria, is the knowledge the reader brings to the text such as word recognition ability, world knowledge, and knowledge of linguistic conventions. The second variable is the reader's interpretation of the language that the writer uses in constructing the text. The third variable is the situation in which the text is read. In other words, reading can best be defined as a process which involves the reader, the text, and the interaction between reader and text (Goodman, 1996; Rumelhart & Ortony, 1977). This interaction can occur through reading strategies and through schema. For example, researchers have attempted to identify the mental activities that readers use in order to construct meaning from a text (Anderson, 1991; Hosenfield, Arnold, Kirchofer, Lactura, & Wilson, 1981). These activities are referred to as reading strategies or reading skills. To conclude this section on the definition of reading, research in the area of reading comprehension views reading comprehension as a process. In essence, reading is an active process in which readers use powerful strategies in the pursuit of meaning. So how does research view the reading process?

The Reading Process

Research in this area has shown that successful readers use different strategies than less successful readers (Anderson, 1991; Block, 1986; Carrell, 1989; Devine, 1987; Hosenfield, 1977). For example, successful readers recognize words quickly, use contextual clues, use world knowledge, identify grammatical functions between parts of texts, recognize rhetorical patterns, and read for meaning. Less successful readers, on the other hand, do not employ such a wide repertoire of reading strategies, and even if they are aware of which strategies to use, they are often not aware of how

to use the strategies appropriately (Anderson, 1991). While the above list is by no means exhaustive, research has shown that good readers possess a number of flexible, adaptable strategies that they use before, during, and after reading to maximize comprehension. Other studies in the area of strategy use and reading have shown that strategy training or instruction can enhance reading comprehension (Carrell, Pharis, &Liberto, 1989; Jimenez & Gamez, 1996; Kern, 1989).

In addition to the research on strategy use and reading, the theory of schema has had a great impact on understanding reading. This theoretical framework, aptly termed by Grabe (1991), a "theoretical metaphor" (p. 33), emphasizes the role of preexisting knowledge (a reader's schemata) in providing the reader with information that is implicit in a text. Researchers have identified several specific types of schemata. Content provides readers with a foundation, a basis for comparison, and refers to background or cultural/social knowledge (Carrell & Eisterhold, 1983). In essence, content schema involves knowledge of the world beyond texts. In this context, Ozyaka (2001) states that a reader uses a variety of clues to understand what the writer is implying or suggesting. In that way the reader is able to see beyond the literal meaning of words. Schema, which is defined as background knowledge that enables the reader to make predictions for some successful interactions, plays a vital role in that interpretation since successful interpretation depends to a large extent on shared schemata.

To further elaborate on the reading process, and in accordance with Maria's definition of reading comprehension as a holistic process of constructing meaning, Chastain (1988) defines the reading process as an active cognitive system operating on printed material in order to comprehend the text. He states that during the writing process, the writer tries to activate background and linguistic knowledge to create the writer's intended meaning, and then the reader's task is to activate background and linguistic knowledge to recreate the writer's intended meaning. Then the reader should go beyond the printed words to get the writer's intended meaning. In this respect, Goodman (1988) mentions two views on reading. The first view accepts reading as "matching sounds to letters," whereas the second view defines it as a mystery, since "nobody knows how reading works" (p. 43). In addition, MacLeish (1968) proposes that "the readers of all written languages are getting sounds from the printed page" (p. 43). He describes a writer as one who encodes meaning to sound.

According to Macleish, it does not matter whether encoding is oral or silent; encoding then is carried on from sound to orthography to sound – oral or silent – and later on from sound to meaning. The above discussion on the reading process leads us to the models of reading.

Metaphorical Models of Reading

Reading research has shown that the reading process is not easy to explain, for it is very complex. The complexity of the reading process has urged many researchers to attempt to create a general understanding of this process by means of a reasonable framework. So we often read about general models of reading – not to be confused with the text model and situation model concepts for comprehension processes (Grabe & Stoller, 2002). General models of reading serve useful purposes, most commonly by providing a metaphorical interpretation of the many processes involved in reading comprehension suggested by Grabe (1999) and Urquhart and Weir (1998).

Wallace (2001) discusses the role given to the reader in these models. According to her, the role of the reader changed in the 1980s and 1990s. Reading was accepted as a passive skill in early accounts, then the role of the reader changed and was "typically described as extracting meaning from a text" (p. 22). Lately, reading has started to be described as interactive rather than simply being active. Grabe and Stoller (2002) argue that bottom-up, top-down, and interactive models of reading represent metaphorical generalizations that stem from comprehension research conducted over decades. As an initiation into thinking about reading comprehension, these models serve useful purposes. In this context, an analysis of these models of reading helps to understand the reading process. Understanding the process of reading has been the focus of much research. Models of how the printed word is understood have emerged from this research (Goodman, 1973, 1976; Gough, 1985; Rumelhart, 1985; Stanovich, 1980). These models can be divided into three categories: bottom-up models, top-down models, and interactive models.

Bottom-up Models

Bottom-up, or data-driven models, depend primarily on the information presented by the text. That information is processed from letter features to letters to words to meaning. Bottom-up models emphasize what is typically known as "lower-

level" reading processes. Segalovitz, Poulson, and Komoda (1991) indicate that these lower-level processes consist of

> word recognition, and include visual recognition of letter features, letter identification, the generation of grapheme-phoneme correspondences, utilization of orthographic redundancies such as regularities in letter sequences, the association of words to their semantic representations, possibly the identification of basic syntactic structures within the portion of text currently being read, and with the generation of propositional units. (p. 17)

Regarding Segalovitz, Poulson, and Komoda's suggested scope of the bottom-up models, Grabe and Stoller (2002) argue that, metaphorically, bottom-up models suggest that all reading follows a mechanical pattern in which the reader creates a piece-by-piece mental translation of the information in the text, with little inference from the reader's own background knowledge. Grabe and Stoller add that in the extreme view, the reader processes each word letter-by-letter, each sentence word-by-word, and each text sentence-by-sentence in a linear fashion.

Top-down Models of Reading

In contrast to bottom-up models, top-down models are diametrically opposed to these lower-level processes. "Top-down models all have in common a view of the fluent reader as being actively engaged in hypothesis testing as he or she proceeds through text" (Stanovitch, 1980, p. 34). In top-down models, "high-level processes … direct the flow of information through lower-level processes." Segalovitz, Poulson, and Komoda (1991) point out that this

> higher-level process is concerned with integration of textual information and includes resolving ambiguities in the text, linking words with their integrating propositional units across sentences, generating and updating a schema or representation of the text as a whole and integrating textual information with prior-knowledge. (p. 17)

Put differently, Grabe and Stoller (2002) argue that "top-down models assume that reading is primarily directed by the reader's goals and expectations" (p. 32). Grabe and Stoller add that such a view is general and metaphorical. Top-down models characterize the reader as "someone who has a set of expectations about text information and samples enough information from the text to confirm or

reject these expectations" (p. 32). To accomplish this sampling efficiently, the reader directs the eyes to the most likely places in the text to find useful information. The mechanism by which a reader would generate expectations is not clear, but these expectations might be created by a "general monitoring mechanism." Moreover, according to Grabe and Stoller, "Inferencing is a prominent feature of top-down models" (p. 32), as is the importance of a reader's background knowledge. Finally, top-down views highlight the potential interaction of all processes with each other under the general control of a central monitor.

Interactive Models of Reading

Interactive models combine elements of both bottom-up and top-down models assuming "that a pattern is synthesized based on information provided simultaneously from several knowledge sources" (Stanovich, 1980, p. 35). Stanovich adds that in interactive models, processes at any level can compensate for deficiencies in lower-level processes. Grabe (1991) emphasizes two conceptions of interactive approaches. The first relates to the interaction that occurs between the reader and the text. This suggests that meaning does not simply reside in the text itself, but that as readers interact with the text, their own background knowledge facilitates the task of comprehension. The second conception of interactive approaches relates to the interaction between bottom-up and top-down processes. In this context, Anderson (1999) argues that fluent reading involves both decoding and interpretation skills. He adds that with the research completed on reading processes in both first and second language reading, we know that reading integrates several skills, strategies, and processes and is not a simple event to describe. Moreover, Grabe (1991) reveals the complexity of defining reading by stating that "a description of reading has to account for the notions that fluent reading is rapid, purposeful, interactive, comprehending flexible, and gradually developing" (p. 378). Such a description correlates with the rationale of suggesting the three metaphorical levels of reading. A major aspect of this rationale is that teaching is purposeful. So what are the major purposes of reading?

Purposes of Reading

Grabe and Stoller (2002) reveal the purposes of reading. They argue that when we begin to read, we actually have a number of initial decisions to make and we

usually make these decisions very quickly, almost unconsciously in most cases.

According to Grabe and Stoller, the major purposes to read are reading to search for simple information, reading to skim quickly, reading to learn from text, reading to integrate information, reading to write or search for information needed for writing, and reading for general information.

Reading to Search for Simple Information

According to Grabe and Stoller (2002), reading to search for simple information is a common reading ability, though some researchers see it as a relatively independent cognitive process. It is used so often in reading tasks that it is best seen as a type of reading ability. In reading to searching for simple information, we typically scan the text for a specific piece of information, either an address or a phone number. In prose texts, we sometimes slow down to process the meaning of a sentence or two in search for clues that might indicate the right page, section, or chapter. Similarly, reading to skim is a common part of many reading tasks and a useful skill in its own right. It involves, in essence, a combination of strategies for guessing where important information might be in the text, and then using basic reading comprehension skills on those segments of the text until a general idea is formed.

Reading to Learn from Text

Regarding reading to learn from text, Grabe and Stoller (2002) argue that this typically occurs in academic and professional contexts in which a person needs to learn a considerable amount of information from a text. It requires abilities to remember main ideas as well a number of details that elaborate the main and supporting ideas in the text. It also requires abilities to recognize and build rhetorical frames that organize the information in the text, as well as abilities to link the text to the reader's knowledge base. Reading to learn is usually carried out at a reading rate somewhat slower than reading comprehension – primarily due to rereading and reflecting strategies to help remember information. In addition, it makes stronger inferencing demands than general comprehension to connect text information with background knowledge, such as connecting a character, event, or concept to other known characters, events, or concepts; or connecting possible causes to known events.

Reading to Integrate Information, or to Write and Critique Texts

Concerning reading to integrate information, or to write and critique texts, Grabe and Stoller (2002) add that this requires additional decisions about the relative importance of complementary, mutually supporting, or conflicting information and the likely restructuring of a rhetorical frame to accommodate information from multiple sources. These skills inevitably require critical evaluation of the information being read so that the reader can decide what information to integrate and how to integrate it for the reader's goal. In this respect, both reading to write and reading to critique texts may be task variants of reading to integrate information. Both require abilities to compose, select, and critique information from a text. Both purposes represent common academic tasks that call upon the reading abilities needed to integrate information (Enright, Grabe, Koda, Mosenthal, Mulkathy-Ernt, & Schedle, 2000; Perfetti, Rouet, & Britt, 1999).

Reading for General Information

Finally, Grabe and Stoller (2002) argue that the notion of reading for general comprehension is the most basic purpose for reading, underlying and supporting most other purposes for reading. Moreover, general reading comprehension is actually more complex than commonly assumed. Reading for general comprehension, when accomplished by a fluent reader, requires very rapid and automatic processing of words, strong skills in forming a general meaning representation of main ideas and efficient coordination of main ideas, and efficient coordination of many processes under limited time constraints. To conclude this section on the purposes of reading, it is evident that, in order to apply the interactive reading process approach, the reader has to set purposes prior to any reading task. This leads us to speak of what the reading process requires from a reader in order to be a good reader.

Reading Process and Good Readers

Much work on the process of reading comprehension has been grounded in studies of good readers. Practitioners know a great deal about what good readers do when they read. According to Duke and Pearson (2002), for instance, good readers are active readers. From the outset, good readers have clear goals in mind for their

reading. They constantly evaluate whether the text, and their reading of it, is meeting their goals. Good readers typically look over the text before they read, noting such things as the structure of the text and text sections that might be most relevant to their reading goals. As they read, good readers frequently make predictions about what is to come. Good readers also read selectively, continually making decisions about their reading - what to read carefully, what to read quickly, what not to read, what to reread, and so on. Good readers construct, revise, and question the meaning they make as they read. Good readers try to determine the meaning of unfamiliar words and concepts in the text, and they deal with inconsistencies or gaps as needed. They draw from, compare, and integrate their prior knowledge with material in the text. They think about the authors of the text, their style, beliefs, intentions, historical milieu, and so on. Good readers monitor their understanding of the text, making adjustments in their reading as necessary. They evaluate the text's quality and value, react to the text in a range of ways, both intellectually and emotionally, and read different kinds of texts differently. When reading narrative, for instance, good readers attend closely to the setting and characters, but when reading expository text, these readers frequently construct and revise summaries of what they have read. For good readers, text processing occurs not only during "reading," but also during short breaks taken during reading, even after the "reading" itself has commenced, or after the reading has ceased. Finally, comprehension is a consuming, continuous, and complex activity, but one that, for good readers, is both satisfying and productive. In this context, this study investigates the contribution of cultural schema to any reading comprehension achievement.

This study has a tri-dimensional goal. It is an attempt to explore the interactive process of L2 reading comprehension, to shed light on the contribution of the application of schema theory in general to L2 reading comprehension, and most importantly, to explore the contribution of the application of cultural schema to L2 reading comprehension. All this will have implications for practitioners, teachers, and researchers in the field of L2 reading comprehension. More precisely, this study aims to explore and shed light on cultural schema and its role in EFL/ESL reading comprehension. The study clarifies this issue in practice through actually comparing the mean scores on a ten-reading comprehension MCQ test based on a text dealing with traditional Emirati weddings, an immediate written recall protocol, and a

content-knowledge questionnaire of three groups of female dentistry students at Ajman Univeristy, Fujairah branch, UAE. The first group, Control Group C, consists of 30 Emirati female students. The second group, Experimental Group A, included 30 Iranian female students who did not have any prior knowledge about traditional Emirati weddings. The third group, Experimental Group B, consisted of 30 Iranian female students who had been pre-taught the features and vocabulary of traditional Emirati weddings. More precisely, the study is driven by the following hypothesis: when EFL/ESL readers have sufficient and proper cultural schema prior to any reading task, they perform better on reading comprehension tasks than those who lack or have insufficient and/or inappropriate cultural schema. More precisely, the study aims to answer the following four research questions:

1. Do Emirati Control group C students have better comprehension when they read an English text describing a traditional Emirati wedding than the Iranian students in Experimental Group A and Experimental Group when they read the same text?
2. To what extent does pre-teaching enhance Iranian pre-taught Experimental Group B students' reading comprehension performance?
3. Does the absence of pre-teaching hinder the reading comprehension of the Iranian Experimental Group A students who had no pre-teaching?
4. Are there other variables that affect the reading comprehension of the students in the three groups?

The response to the first research question was that cultural schema about the Emirati traditional weddings helped Emirati Control Group C students to outperform non-pretaught Iranian Experimental Group A students on all measures. In contrast, Emirati Control Group C students performed better than pre-taught Iranian experimental Group B students on certain measures. They scored higher mean scores on recall gist and on the sum of the values of the gist units recalled than pre-taught Experimental Group B students. Also, Emirati control group C students omitted fewer units than Experimental Group B students. Cultural schema also allowed Control Group C students to outperform pre-taught Iranian Experimental Group C on factual questions 1 and 3 as well as vocabulary-in-context question 2.

Regarding the second research question, pre-teaching allowed Iranian pre-taught Experimental Group B to outperform Iranian non-pre-taught Experimental

Group A students on all measures. In contrast, pre-teaching allowed the Iranian Experimental Group B students to outperform Emirati Control Group C students on certain measures. Pre-taught Iranian Experimental Group B students spent less time reading and recalling the text than Emirati Control Group C students. They also scored higher on the recalled units that having the highest values-4 than Emirati Control Group C students. Moreover, Pre-taught Iranian Experimental Group B students made far fewer distortions on recalling the text than Emirati Control Group C students. As for reading comprehension MCQs, once again, pre-teaching allowed pre-taught Iranian Experiment Group B students to outperform Emirati Control group C students on many measures, namely bottom-up combined questions and top-down combined questions, factual question 1, paraphrasing questions 1 and 2, and drawing conclusions question 1. Also, pre-taught Iranian Experimental Group B students managed to come up with scores equal to those scored by Emirati Control Group C students on drawing conclusions question 2 and main idea or title question.

To answer the third research question, the research findings showed that the absence of cultural schema caused Iranian Experimental Group A students to come up with the least scores on all measures both in recalling the text and responding to the reading comprehension MCQs.. Finally, to answer the fourth research question, the findings showed that similarities between cultures, cultural gaps, lack of world knowledge, and insufficient language proficiency are other factors that affected the students' reading comprehension in the three groups.

To conclude this chapter on the need of the research, this study has a tri-dimentional goal. It is an attempt to explore the interactive process of L2 reading comprehension, to shed light on the contribution of the application of schema theory, in general, to L2 reading comprehension, and most importantly, to explore the contribution of the application of cultural schema to L2 reading comprehension. All this will have implications for practitioners, teachers, and researches in the field of L2 reading comprehension.

Summary of the Coming Chapters

Chapter 2 reviews what the literature says about the reading process and purposes of reading, as well as the contribution of cultural schema to EFL reading comprehension. Chapter 3 deals with the different stages of the study. It begins with

the problem statement, then describes the method including the subjects and materials, and ends with procedures and data analysis. Chapter 4 explains the findings of the study. It provides detailed analyses of the participants' recall protocols, MCQ scores, and the answers to the content-familiarity questionnaire. In chapter 5, four major sections are included, namely the summary of the main findings, limitations of the study, pedagogical implications, and suggestions for further research.

CHAPTER 2
LITERATURE REVIEW

Schema Theory

Current theories and models of the reading process espouse the view of reading as a multifaceted, complex, interactive process which involves a number of readers and text variables. From a cognitive interactional perspective, reading is viewed as an active interplay between the reader and the text with comprehension varying as a function of text features and reader characteristics (Swaffar, Arens, & Byrnes, 1991). Text includes features of discourse structure, while reader characteristics comprise prior knowledge and language proficiency. A substantial body of L1 reading research has adopted models of comprehension based on the interaction of prior knowledge and text features, e.g., the Kintch and Dijk (1978) model. A close look at the L1 and L2 reading research focusing on the interplay between text and reader has revealed a strong tendency towards the theoretical principles of schema theory (Anderson & Pearson, 1984; Barnett, 1989; Bernhardt, 1991; Harrison, 1992; Rumelhart, 1980; Rumelhart & Ortony, 1977).

The History of Schema Theory

To clarify the nature of the function of schema, first, I will take a brief look at its historical background. According to Ajidaeh (2003), Plato elaborated the Greek doctrine of ideal types such as the perfect circle that exists in the mind but which no one has ever seen. Later, in 1781, Immanual Kant developed Plato's notion and suggested the word "schema" in his work *The Critique of Pure Reason*. According to Dawkins (1991), Kant's theory of semantics was that concepts could have meaning only when related to a concept which the individual already possesses. The learner relates new ideas to ideas he or she already possesses (Kant, 1781, cited in Dawkins, 1991). For example, Kant described the "dog" schema as a mental pattern which "can delineate the figure of a four-footed animal in a general manner without limitation to any single determined figure as experience, or any possible image that can be represented in concertos" (Kant, 1781, quoted in Dawkins, 1991, p. 96). Thus, important features of the schema concept can already be found in the writings of the

philosopher Immanual Kant in the seventeenth century where he speaks of "innate structures which organize our world."

Years later, in his book *Remembering*, Sir Frederic Bartlett (1932, quoted in Dawkins, 1991) described a schema as "an organization of past reactions, or past experiences" (p. 201). He claimed that this organization is always functioning. When new experiences are encountered, they are understood only as they can be related to an existing schema and simultaneously become a part of it.

It was through the combined efforts of cognitive psychologists, linguists, and specialists in artificial intelligence that formalisms for analyzing language comprehension have emerged. After the formulation of the theory, first language empirical research began to rise. The most common application of schema theory is to reading comprehension in L1 studies (Anderson, Reynolds, & Goetz 1977; Becker, 1982; Bower 1978; Charniack, 1972; Mandler & Johnson, 1977; Minsky, 1975; Rumelhart &Ortony, 1977; Schank & Abelson, 1977; & Thorndike, 1977). Research on the effect of schemata cross-culturally began to appear as early as Bartlett (1932), and continued with later researchers (e.g., Kintsch & van Dijk, 1978). In second language acquisition studies, schema theory has been a late comer and still has not been investigated nearly enough in this field. The most notable authority in the field of schema theory and second language reading is Patricia Carrell (1981; 1983a; 1983b), and Carrell & Eisterhold, 1983). Moreover, a great deal of research relates schema to the reading process. Thus, how is schema related to the reading process?

Schema and the Reading Process

In the process of reading, "comprehension of a message entails drawing information from both the message and the internal schema until sets are reconciled as a single schema or message" (Anderson, Reynolds, Schallert, & Goetz, 1977, p. 187). It is also claimed that "the first part of a text activates schema … which is either confirmed or disconfirmed by what follows" (Wallace, 1992, p. 33), but the process begins much earlier than this. In this context, Swales (1990) argues that "the environment sets up powerful expectations: we are already prepared for certain genres but not for others before we open a newspaper, a scholarly journal or the box containing some machine we have just bought" (p. 88). The reading process, therefore, involves identification of genres, formal structure, and topic, all of which

activate schemata and allow the reader to comprehend the text (Swales, 1990). In this context, it is assumed that readers not only possess all the relevant schemata, but also that these schemata actually are activated. Where this is not the case, then some description of the comprehension may occur. A major characteristic of schema is that it is related to the interactive process.

Reading as an Interactive Process: The Role of Schemata

According to Schallert (1980), schemata "are abstract structures that one holds to be generally true about the world" (p. 20). As far as reading comprehension is concerned, these knowledge structures are cognitive systems which are involved in the interpretation of messages. For Schallert, meaning emerges as a result of the powerful interaction between these structures and the clues made accessible by the author. According to schema theory, on the other hand, reading for meaning involves the activation of knowledge networks of world-based and rhetorically-based information for the purpose of processing a text. Readers are assumed to possess and activate three types of schemata: content, textual, or linguistic schemata. Readers are attempting to generate textual meaning by means of a top-down approach, also referred to as "conceptually-driven" processing. If, on the other hand, readers choose to focus only on the text itself to get its meaning, then they are processing it in a bottom-up mode or "data-driven" processing (Bobrow & Collins, 1975, cited in Rumelhart & Ortony, 1977, p. 128). However, it has been suggested that successful readers rely on both types of processing, alternating between them according to the difficulties posed by the text (Stanovich, 1980). In fact, it is likely that "there will never be a total coincidence of schemas between writer and reader" (Wallace, 1992, p. 82). Moreover research shows that there is a correlation between schema and the interactive reading process. This confirms the existence of different types of schemata.

Schema Types

Many reading researchers have attended to subcategorize the term schema, with the most popular categorization being the distinction between formal schema and content schema. Nevertheless, there is no single categorization of schema. A detailed description of these two types of schema sheds more light on their characteristics.

Formal Schema

According to Alpetkin (2003), formal schema is the knowledge of how texts are organized and what the main features of a particular genre are. In other words, formal schema is often known as textual schema which refers to the organizational forms and rhetorical structures of written texts. It can include knowledge of different text types and genres, and also includes the understanding that different types of texts use text organization, language structures, vocabulary, grammar, level of formality, and registers differently. Schooling and culture play the largest role in providing one with a knowledge base of formal schema.

Many studies have examined the role of text schemata in relation to readers' comprehension. Most of these studies employed similar methodologies in that participants read texts and then recalled information, for the most part in writing. The structures inherent in the texts such as compare-contrast, problem-solving structures in expository texts, and standard versus structurally interleaved versions of stories were analyzed. Recall information was analyzed for specific variables such as the number of propositions recalled, and temporal sequence of story components. For the most part, studies such as those carried out by Bean, Potter, & Clark (1980) and Carrell (1984) suggested that different types of text structures affected comprehension and recall. Some studies also showed that there may be differences among language groups as to which text structures facilitate recall better. For example, Carrell's (1984) study showed that Arabs remembered best from expository texts with comparison structures, next best from texts with comparison structures and collections of problem-solution structures and collections of descriptions, and least well from causation structures. Asians, however, recalled best from texts with either problem-solution or causation structures, and least well from either comparison structures or collections of descriptions.

Content Schema

Regarding content schema, Alptekin (2003), defines it as the knowledge of the world where it can be further divided into two different types of schemata: background knowledge and subject matter. Moreover, content schemata are related to the factual knowledge and cultural conventions which readers are thought to posses,

and actively use when confronting the topic and/or content of a text. Despite the fact that text processing requires a large set of processing strategies, from perceptual to discourse level, it is undeniable that activation of content knowledge in the domain of the text is crucial to comprehension (Weaver & Kintsch, 1991). According to Harrison, 1992, readers do not construct the meaning of a text in a vacuum. Rather, they do so against a background of relevant facts as well as linguistic and pragmatic information which text writers clearly assume when producing a text. The more readily the reader can associate text content with the appropriate knowledge sources, the faster the comprehension will be. This is possible when the text topic or content is familiar to the reader. In this context, studies have attested that readers who are familiar with the content of a text, whether written in their first or second language, comprehend and recall more than those who are not as familiar with text topic or content (Johnson, 1982). Content schema can be classified into different types. One which has attracted growing interest is the culture-specific content schema (Carrell, 1988; Carrell & Eisterhold, 1983).

Cultural Schema

In the discipline of cognitive anthropology, cultural schemas, which are interchangeably called cultural models, are schematic representations of generic concepts distributed among cultural members. Despite the fact that not every cultural member has the same amount of the distributed knowledge or the same degree of schematization of the distributed knowledge, due to the varied accessibility to and intensity of their exposure to knowledge systems (Sharifian, 2003), cultural schemas are used by cognitive anthropologists to study the foundations upon which people of one culture are able to identify each other as cultural members and are able to communicate successfully with each other (e.g. Holland & Quinn, 1987). In other words, cultural schemas, though subject to ongoing modification, have the property of being stable and consistent on the whole (Strauss & Quinn, 1997).

Anthropologist Palmer (1996) posits that cultural schemas are derived from social structure, salient rituals and a host of other cultural phenomena. Moreover, cultural schemas can be instantiated in various cultural artifacts, such as painting, rituals, and narratives (Sharifian, 2003). Idioms, proverbs, or popular sayings are another instantiation of cultural schemas as they are packaged with cultural wisdom

and express culturally constituted understandings. It should be mentioned that research reveals a third type of schema, the abstract schema. According to Alptekin (2003), abstract schema involves cultural knowledge that needs to be made use of to fully comprehend a text. From this brief description, abstract schema seems to be related to cultural schema. The remaining section of this chapter, therefore, will be devoted to different aspects of cultural schema and its application to reading comprehension.

Several studies of second language speakers and reading comprehension indicate that prior cultural experiences are extremely important in comprehending texts (Anderson, 1999; Johnson, 1982; Stefferson & Joag-Dev, 1984). In fact, Brown, Smiley, Day, Townsend, and Lawton (1977) and Pearson, Hanson, and Gordon (1979) argue that students with greater cultural prior knowledge comprehend and remember more. Yule (1996), on the other hand, points out that cultural schemata are developed "in the context of our basic experiences" (p. 87). Bedir (1992) mentions cultural schemata and defines it as "the background knowledge about cultural aspects of the language being learned" (p. 8). Ozyaka (2001) defines cultural schema as culture-specific world knowledge. To comprehend a text, appropriate cultural schemata and scripts are considered to be necessary.

Moreover, according to Bernhardt (1991), culture-specific knowledge or schema includes "ritualistic knowledge as well as culture-historic knowledge" (p. 97). Bernhardt states that rituals include events such as weddings, funerals, and national holidays, as well as invited dinner parties and how one lines up at a bus stop. Members of specific cultures implicitly know what will occur in these events. To use Oller's (1979) terms, they have an "anticipatory grammar" (p. 165) for them. Yet, critically, this grammar per se is not written down – with the obvious exception of advice columns or books such as "Miss Manners." It consists, fundamentally, of knowledge transmitted from generation to generation. Bernhardt adds that culture-specific knowledge also includes that information defined by the culture as having aesthetic values, intellectual development, or the best of what that culture as a culture has to offer.

Cultural Schema and Reading Comprehension

The seminal study that examined the impact of cultural schema on the reading comprehension process is Steffenson, Joag – Dev, and Anderson's (1979) study of subjects from Indian and American backgrounds who were asked to read and recall two texts describing an Indian and an American wedding, respectively. The texts were presented in the form of letters, a common genre familiar to students, and were familiar in terms of structural complexity – length and syntax. It was predicted that subjects would recall more of the native than the foreign text, produce more expansions as a result of "remembering" items which were not mentioned in the text but were culturally appropriate and consistent with it, and make more distortions of the foreign text.

All protocols were analyzed for amount recalled and error types. As predicted, subjects actually recalled more of the native passage and less of the foreign. The types of errors made by the subjects with the foreign text confirmed the researchers' three predictions. Errors were broken into three groups. The first group consisted of culturally appropriate elaborations. As expected, each group elaborated their native text. For example, ithe Indian text read

> Prema's parents were very sad when she left. They were saying that now they know that everything that has been said over thousands of years about the sadness of giving a daughter away is true.

This was recalled by an Indian subject as "Her parents started weeping, along with her, but elders advised her parents that one day or the other she should go."

The information that the bride and her parents cried at the time of the departure was recalled by another subject as well, but this was not explicitly mentioned in the text. Such expressions of grief are a fairly common occurrences at Indian weddings. Differences in the connotative values of terms appeared to have a profound effect on recall. In the passage describing the dowry arrangements, there was a reference to the groom's parents which read, "Prema's in laws seem to be nice enough people." Most Americans would consider this a very nice mild endorsement, but as the following protocols show, Indian subjects recalled it as very favorable

> Her in-laws were really nice for they didn't make any fuss although he was their only son. Her in-laws seem to be very nice people, though he is their

only son, they didn't give much trouble.

No such interpretation appeared in the American protocols. Such variation can probably be attributed to the much more negative value that the concept "in-laws" has for Indians than Americans.

Similar elaboration of the American text occurred in American protocols. For example, the passage reading "They were talking about the exciting life that Pam will be leading as the wife of a man who does so much international traveling" was recalled by an American subject as "Everyone is excited for Pam in marrying a man with such a promising future and with the chance for so much international travel." The information about "a promising future" was inferred by the subject on the basis of her knowledge of American culture and expectations associated with foreign travel. For many Americans, this subject's recall would be considered an accurate paraphrase. However, Indian subjects' protocols show that expectations regarding a bright future intruded from cultural information and are not contained in these words.

A second set of errors were distortions that could be related to gaps in the subjects' knowledge about the foreign wedding customs or intrusions of native customs and beliefs into the foreign text. An Indian subject recalled the passage about the American groom's traveling quoted above in a much more somber vein: "They were anxious as their daughter was going to get married and wondered at the fact that her husband would be an international traveler." This is a clear case of the subject's distorting the foreign text in the direction of the native event. The fact that anxiety is a typical response of Indian families to the marriage of a daughter is supported by considerable evidence. First, other passages in the texts were recalled in ways that reflected an underlying concern. Second, this was expressed in answer to the objective questions used in the study. One subject described the bride's parents as "desperate and worried" about how the bride would adjust to her in-laws' household and another described them as "scared" about the dowry arrangements. Third, in his massive study of Indian society, Mandelbaum (1970) gives a detailed description of marriage as a test of family status and refers to the tensions mentioned.

In the Indian text, reference to the two events which follow the Indian wedding – a wedding feast and a reception – was a rich source of errors for American readers. They collapsed these two events into one on the pattern of the American wedding reception. The passage involved read as follows:

> There must have been about five hundred people at the wedding feast. Since only fifty people could be seated at one time, it went on for a long time. The first batch with the groom and important in-laws started at noon. Since we were the bride's party, and were close friends besides, we ate in the last batch with her parents. We barely had time to get dressed for the reception.

In one protocol, this event was remembered as having taken place *before* the wedding. The process involved seemed to be that, first, the two foreign events were distorted and amalgamated into one event as they were assimilated to the generalized structure underlying the American reception. However, the subject remembered that the writer of the letter and her companions had to hurry to be on time for something. The coherence of the text was reduced as the cause-effect relationship (eating last at feast, rushing to reception) was destroyed but was re-established as events were re-sequenced to provide a new cause-effect relationship (eating last at reception, rushing to wedding). This "successful" establishment of a logical relationship, of course, reflects a profound misunderstanding of the events recounted in the Indian passage.

There was one instance in which a subject was able to reproduce part of the text with some accuracy but indicated that he did not comprehend the message:

> And the husband and the bride and the in-laws ate at first and we ate last since we're such good friends of them (whaaat?).

This suggests this reader was not able to call upon the relevant schema, that he was monitoring his comprehension, and that he understood that he did not understand. It should be mentioned that he included the bride in the first batch with the groom. This is not necessarily the case and reflects incorrect cultural pre-conceptions, not what was present in the text.

A third set of errors was not obviously related to cultural backgrounds, such as recalling the color of the bridesmaids' dresses incorrectly. Some of these might also have been culturally based, but that would simply increase the strength of the results. Finally, subjects were able to read the passage based on their culture more rapidly than the passage based on the foreign culture. There was also a significant main effect for nationality. American subjects read faster than Indian subjects. This was expected since Indian subjects were reading in a foreign language, English. Stefferson and Joag-Dev (1984) conclude that cross-cultural experimentation demonstrates that reading comprehension is a function of cultural background knowledge. If readers

possess the schemata assumed by the writer, they understand what is stated and effortlessly make the inferences intended. If they do not, they distort meaning as they attempt to accommodate even explicitly stated propositions to their own pre-existing knowledge structure.

Since Stefferson, Joag-Dev, and Anderson's (1979) study on the impact of cultural schema on the reading comprehension process, a number of studies have generated similar findings. Johnson (1981) and Campbell (1981), examining adults and children respectively, found that direct cultural experiences was a greater predictor of comprehension than linguistic proficiency. In parallel, Parry's (1979) study found evidence for the constructivist model of L2 text comprehension. Parry found that individual vocabulary words, out of context, were misinterpreted when an understanding of a text was askew. Connor (1984) and Perkins and Angels (1985) investigated the impact of language background on two comprehension skills: recall of propositional type and concept formation, respectively. Neither study indicated a difference on the basis of language background. On the other hand, a subsequent study by Johnson (1982) showed that cultural familiarity (i.e., knowledge about Halloween) was a more reliable predictor of recall performance than text-specific vocabulary knowledge among advanced ESL learners.

In another study into effects of cultural content schemata on reading comprehension, Bian and Wang (1988) gave an obvious reason why a particular content schema is culturally specific. In this study, the sophomores of a Chinese foreign studies institute scored much higher in the post-reading comprehension test of a vegetable pickling text than they did for a coffee making text which was syntactically and rhetorically similar to the former. The reason is that home vegetable pickling is so common and popular in that area that almost every family keeps a few jars of pickled vegetables for daily consumption.

In more recent studies, attention has focused on the precise ways culture-specific knowledge facilitates text-meaning construction. Kang (1992), for instance, asked Korean graduate students to think aloud when reading a culturally-unfamiliar story in English. The resulting protocols demonstrated that Korean ESL readers, when inferring about unfamiliar words and expressions, relied heavily on their L1 cultural schema, causing Kang to suggest that L2 text information is filtered through L1 cultural knowledge for semantic interpretations.

In another recent study, Stefferson, Goetz, and Cheng (1999) compared the quality and quantity of text-induced imagery and emotional reactions among Mandarin-speaking learners of English in a Chinese university. They listed and ranked their mental pictures and affective responses after reading either a Chinese text describing a trip in China or an English text describing a similar trip in the United States. Their data suggested that although the participants' perceptions of the vividness of their mental images and the strength of their emotional reactions did not differ between the groups, a good deal more imagery and stronger emotional responses were reported by the group reading the Chinese (L1) text.

These findings seem to lead to two tentative conclusions. First, mental images emerging from L2 texts are less vivacious than those emerging from L1 texts. Second, restricted imagery and affect, however restricted, can be formed in the absence of that understanding. It is not clear whether the limited imagery induced by the L2 text can be entirely attributed to insufficient cultural sophistication. Stefferson, Goetz, and Cheng concluded that insufficient linguistic knowledge, or a combination of insufficient linguistic knowledge and cultural unfamiliarity, account for restricted imagery generation during L2 text processing. They recommended that future studies should elucidate the relative contributions to situation-model building of L2 linguistic and cultural knowledge.

In a more recent study, Yoon, Park, and Commeyeras (2002) investigated the interplay of cultural knowledge, symbolic language, and interpretative reading comprehension, focusing on the role of culture in symbolic understanding of text. Eight graduate students from different cultural communities, Koreans and Americans, read and discussed a Korean folk tale. Data were collected in the form of initial written responses to and discussion of transcripts. Thematic interpretive quantitative analyses were reported on initial reading sentences, symbolic understandings, and efforts to identify the moral of the tale. Overall, the analyses showed that Korean readers focused mostly on discerning the morality being communicated symbolically through the story. The findings indicated that there will be diversity in symbolic reading comprehension both across and within cultural groups. The researchers proposed that when readers from several cultures come together in classrooms to talk about symbolic texts, it is important for them to reflect on how they use their cultural reference points to form similar and dissimilar understanding and interpretations.

They concluded that this heightened awareness of diversity within cultural knowledge provides exciting and beneficial experience to readers in today's multicultural classrooms.

Apart from these studies, other researchers have analyzed the impact of cultural-specific schema on reading comprehension. Fries (1945, 1963), for instance, was the first American linguist to incorporate cultural background information into a description of meaning. In his analysis, there are three levels of meaning: lexical, grammatical, and socio-cultural. Comprehension of the meaning of the sentence is filtered into "a social framework of organized information" (p. 246). Fries (1945) illustrates the importance of the socio-cultural level with a passage from Washington Irving. The response to Rip Van Winkle's "archaic" use of the term "Tory" after an absence of twenty years can be attributed to the fact that its cultural meaning had changed from "good citizen" to "enemy of the new government." In this context, Fries argues that readers would miss the meaning of the story if they didn't understand the reaction of the group to Rip's use of the word "Tory." For mastery of foreign language, Fries argues that "one must find some substitute for the kind of background knowledge he has for his own language" (p. 100).

Carrell and Eisterhold (1983) explain that the role of background knowledge in reading comprehension has been formalized as "schema theory" (p. 76). They argue that no text by itself carries meaning. Rather, according to schema theory, a text only provides directions for readers as to how they should retrieve or construct meaning from the text with the help of their previously acquired knowledge. This previously acquired knowledge is called the reader's background knowledge, and the previously acquired structures are called schema. According to schema theory, comprehending a text is an interactive process between the reader's background knowledge and the text.

Grabe and Stoller (2002) describe how the reading process works. They argue that the reading process includes two processes: lower-level processes and higher-lever processes. The lower-level processes represent the more automatic linguistic processes and are typically viewed as more skills-oriented. The higher-level processes, on the other hand, generally represent comprehension processes that make much more use of the reader's background knowledge and inferring. In this context, Goodman (1996) defines the reading process as "a psycholinguistic process in that it

starts with a linguistic surface representation encoded by a writer and ends with meaning which the reader constructs" (p. 12). Goodman suggests that any reader's proficiency is variable dependent on the semantic background brought by the reader to any reading comprehension task. Speaking about the scope of background knowledge, Anderson (1999) claims that "a reader's background knowledge can influence reading comprehension skills" (p. 11). According to Anderson, background knowledge includes all experiences that a reader brings to a text: life experiences, educational experiences, knowledge of how texts can be organized rhetorically, knowledge of how one's own first language works, knowledge of how the second language works, and cultural background and knowledge, to name a few areas.

Paulstron and Bruder's (1976) work exemplifies the position which anticipates greater interference from cultural knowledge. Following Kenneth Goodman's thesis that the proficient reader must draw on his or her experiential conceptual background in order to supply a semantic component to the message, they conclude that learning to read is easier "when the cultural background is familiar and students can draw on cultural information in the decoding process" (p. 160). In parallel to Goodman's thesis, Robinett (1976) also anticipates greater interference from cultural knowledge. Robinett states,

> Many things enter into comprehension: the students' grasp of the subject matter of the reading, their understanding of the cultural content implicitly or explicitly expressed, and their ability to cope with the grammatical structures in the passage. (p. 255)

Koda (2005) argues that L2 situation model building may become progressively more difficult as the quantity of culture-specific information in a text increases. He adds that there are two ways that comprehension can be impaired when considerable culture-specific knowledge is incorporated in a text. First, because widely shared cultural information typically is not elucidated, if the reader does not possess the presumed knowledge, conceptual gaps are likely to occur. These gaps will leave text segments semantically disconnected, and fragmented situation models may result.

According to Koda, another possible impediment is that L2 readers will draw on their L1 cultural knowledge to interpret unfamiliar elements they encounter in the text. Although this is a logical option for conceptually sophisticated L2 learners,

conceptual adaptation could easily lead to misinterpretation, particularly when the two cultures have little in common. At the same time, however, L2 learners' culturally-conceptual knowledge can have a strong, facilitative impact in particular text genres, such as highly specialized texts requiring substantial domain knowledge.

In other recent research, Hirsh (2003) analyzed the impact of domain knowledge on reading comprehension. He argues that fluency is increased by domain knowledge, which allows the reader to make rapid connections between new and previously learned content. This both eases and deepens comprehension. He adds that an expert in a subject can read a text about that subject much more fluently than he or she can read a text on an unfamiliar topic. Prior knowledge about the topic speeds up basic comprehension and leaves working memory free to make connections between the new material and previously learned information, to draw inferences, and to ponder implications. A big difference between an expert and a novice reader – indeed between an expert and a novice in any field – is the ability to take in basic features very fast, thereby leaving the mind free to concentrate on important features. Experts are able to perform remarkable feats of comprehension and memory with real-world situations such as remembering the meanings and even spellings of actual sentences and paragraphs.

Cultural Schema and the Teaching of Reading Comprehension

Research on cultural schema and reading comprehension has come up with many pedagogical implications. Rivers (1968), for instance, describes methods of teaching both reading and culture within an audio-lingual framework. She identifies differences in values and attitudes, often expressed at the lexical level, as one of the main sources of problems in a foreign language and one area in which significant progress can be made in understanding a foreign culture. For example, she points out that a word such as "mother" will have varying affective values depending on the cultural context in which it is used. She makes the important point that any authentic use of literature will introduce cultural concomitants into the classroom, a point supported by cross-cultural research. However, she objects to "civilization" courses which teach features of social life, such as marriage customs, leisure time activities, and festivals, because she feels that they do not throw much light on basic attitudes. In other research, Rivers and Temperley (1978) emphasize providing background

information explaining high-frequency culturally-located terms and supporting reading selections with illustrations as ways of adding new meaning to simple texts. However, socio-cultural meaning is still described as an affective dimension, and a great deal of reading performance is attributed to knowledge of vocabulary.

Another perspective focuses on literature as a means of teaching culture. Marquardt (1967, 1969) views literature as a vehicle for creating cross-cultural empathy and appears to assume that at a certain point in their development students will possess the reading skills necessary for processing a passage, regardless of its content. Marquardt (1969) made a number of general statements which are questionable in light of empirical research, such as the following: 'The surest way to teach empathy or culturally different problems is through literature. Literature vivifies and highlights the ways people of a particular culture live. But more important, it enables the reader to experience how they feel" (p. 133). In this context, many practitioners use foreign literature or simplified reading materials based on the target culture in their classroom with this sort of expectation.

Like Marquardt, Allen (1956) is interested in using literature to teach culture. His goal is in supplying substitute experiences in the target culture because "language derives its meaning from the situations, or the contexts, in which it is used" (p. 1). He is therefore interested in literature as a means of furthering foreign students' acquisition of English. He presents an exhaustive checklist for American culture which he developed for use in anthropological fieldwork. This list is to be used to analyze short stories and novels, which Allen considers the easiest forms of literature for the foreign learner. Once the cultural features that occur in the text have been identified, the lesson may be planned.

Two applied studies have been directed to the effect of cultural knowledge and values on reading comprehension. In his applied study, Yousef (1968) evaluated an attempt to teach culture in a course specifically designed for that purpose after an attempt to use literature to accomplish that purpose was judged ineffective. The subjects of the study were Middle Eastern males who had been working between four and twenty years for an America business organization. All were participants in a training program that was intended to instill in the students an understanding of the American people with whom they were working. Even though the subjects could speak, read, and write English well, they did not seem to understand the literature they

were studying. As the teachers observed their students' responses, it became clear they "would never be able to reach an understanding of the people and the culture of the United States by studying American literature. Instead, the study of American literature actually seems to have increased misunderstanding and confusion" (p. 228). Teachers felt that cultural orientation was necessary before literature could be taught in a meaningful way, and two trimesters were devoted to a cultural orientation course. The values and patterns of behavior were discussed, explained, and contrasted with the students' cultural patterns. The meaning of behavioral patterns and social relations in different contexts was especially stressed.

During the course, quiz questions were of two types: those that involved a general and rather abstract understanding of American culture and those that directly reflected the everyday interaction of the American and Middle Eastern employees of the company. It was found that the students were able to correctly answer the former, which were deliberately impersonal, but that in the case of the latter they continued to follow the dictates of their own cultural patterns. Their unconscious emotional reaction against certain aspects of American culture was so strong that it was only with intensive direct instruction that they were able to respond in ways that were more appropriate from an American point of view. The unstated but implied conclusion was that it is futile to expect students to absorb culture unconsciously from literature.

Gatbonton and Tucker (1971) conducted an experiment to determine whether cultural instruction would improve reading performance. The results of tests after the experimental manipulation suggest that even a brief treatment such as that provided to the experimental group will result in a change in reading performance. An American control group, a Filipino control group, and a Filipino experimental group read two stories and responded to items constructed to tap cultural differences. It was found that the two Filipino groups responded similarly and that both performed significantly differently from the American group. During the second phase of the study, the experimental group's teacher focused the subjects' attention on contrasting aspects of American culture which had been revealed by an analysis of the two texts. The Filipino control group discussed the two stories, but without a cultural orientation. Both groups were then tested again. In the final phase of the study, all subjects read two new stories to ascertain whether the experimental treatment had generalized. The results of tests after the experimental manipulation suggest that even brief treatment

such as that provided to the experimental group will result in a change in reading performance. Post-test responses of the Filipino experimental group differed from their pre-test in the direction of those of American subjects, while post-test responses of the Filipino control group remained unchanged. Furthermore, on the basis of the experimental group's responses to new stories, there was some indication that the cultural orientation instruction resulted in a different approach to literature and a new awareness of certain signals in the texts.

Positive Aspects of Cultural Schema

Prior-knowledge Activation

Another area that reading research has focused on is prior-knowledge activation. Indeed, a significant amount of research has been conducted by second language reading researchers indicating that reading comprehension and reading skills are enhanced when prior knowledge is activated. Adequate data suggest that "inducing appropriate schemata through suitable pre-reading activities is likely to be extremely beneficial" (Murtagh, 1989, p. 102). In this context, Carrell and Eisterhold (1983) point out that "a reader's failure to activate an appropriate schema ... during reading results in various degrees of non-comprehension" (p. 560).

Moreover, Anderson (1999) states that some readers may not have prior-knowledge to activate. For example, readers may not have previous experience of playing certain sports. If you have no knowledge of how the sport is played or the vocabulary involved in it, you have no background knowledge to activate prior to reading about it. In such a case, it will be necessary for the reading teacher to establish background knowledge prior to asking the students to read so that they have sufficient information to understand the text. Anderson adds that an interesting concept related to the role of background knowledge is the negative influence it may have. He argues,

> Some readers… may have some misconceptions about how AIDS is contracted. Some may believe that you can get AIDS by kissing, swimming in a pool, shaking hands, or donating blood. If students have these beliefs, their background knowledge may interfere with reading. The teacher may have to correct the background knowledge through a pre-reading activity before reading comprehension can be achieved. (p. 12)

Pre-reading

A significant amount of research has also provided reading comprehension teachers with insightful information about pre-reading, in general. According to Chastain (1988), for instance, the purpose of pre-reading activities is to motivate the students to want to read the assignment and to prepare them to be able to read it. The major emphasis in the past has been on the product rather than process. The teacher assumes that meaning resides in the reading itself. Too often, pre-reading preparation has consisted of little more than the following: "Tomorrow's reading is really interesting! Read the whole text, pages 32 to 38, and write in complete sentences the answer to the questions on page 39" (p. 125). A quick analysis of this assignment reveals that it is based on certain assumptions that the reading experts are currently questioning. First, the teacher is assuming that students know the vocabulary and grammar and that they are already prepared to read the text. In such an approach to reading, the ultimate pre-reading activities may include word definitions, to clarify the meaning of difficult words, and/or some syntactic explanation to help the students to understand complex structures in the text.

According to Chia (2001), some students report that they have no problem with understanding both words and sentence structure of the paragraph, but they cannot reach satisfactory interpretation of the text. In fact, most students rely too much on bottom-up processing for the overall view of the text. This may result from the lack of appropriate instruction and practice in applying reading strategies. That is why it is claimed that providing students with traditional reading activities such as word definitions and structures explanation seems to be questionable.

Ringler and Weber (1984) call pre-reading activities enabling activities because they provide a reader with necessary background to organize activities and to comprehend the material. These activities involve understanding the purpose(s) for reading and building a knowledge base necessary for dealing with the content and the structure of the material. Ringler and Weber add that pre-reading activities elicit prior knowledge, build background, and focus attention.

Pre-reading Activities

A significant amount of research has been conducted by second language

reading researchers indicating that reading comprehension and reading skills are enhanced when prior-knowledge is activated. Adequate data suggest that "inducing appropriate schemata through suitable pre-reading activities is likely to be extremely beneficial" (Murtagh, 1989, p. 102).

Pre-reading Discussion on the Topic of the Reading

Pre-reading discussions on the topic of the reading provide an opportunity for readers to see what they know about a topic and what others may know. These discussions can best be directed by the teacher asking about the topic. An idea for managing a pre-reading discussion is suggested by Dubin and Bicyna (1991). They recommend the use of what they call "anticipated guides," which contain a "series of statements, often provocative in nature, which are intended to challenge students' knowledge and beliefs about the content of the passage" (p. 202). This is a particularly useful classroom activity because sometimes students may not realize that they have prior knowledge on a particular subject, but as they listen to other students share information, they come to realize that they indeed know something about the reading topic.

Pre-reading Discussion on the Type of Text Structure and What Expectations a Reader May Have on the Organization of the Material

Anderson (1999) argues that this activity is very valuable for ESL readers. This could include a discussion of the kind of transition or linking words that the reader can expect to find. In addition, Koda (2005) argues that prior knowledge must be "activated to resolve relational gaps through inferences" (p. 131). According to Koda, background knowledge is an essential factor for inference generation by "influencing thematic status decisions" (p. 131). In this context, Nassaji (2003) conducted a study to examine the use of strategies and knowledge sources in L2 lexical inferences. Data consisted of introspective and think-aloud protocols of twenty-one intermediate ESL learners who attempted to infer new word meanings from context. Analysis revealed that (a) overall, the rate of success was lower even when learners used the strategies and knowledge they had at their disposal, (b) different strategies contributed to inferencing success, and (c) success was revealed more to the quantity rather than to the quality of the strategies used,. Nassaji's

findings suggest some pedagogical as well as theoretical implications for an integrated model of lexical inferring.

Language Experience Approach

The Language Experience Approach (LEA) is an approach to reading instruction based on activities and stories developed from personal experiences of the learners. The stories about personal experiences are written down by a teacher and read together until the learner associates the written form of the word with the spoken. LEA allows all members of the class to experience an activity together. That activity then becomes the basis for language and content instruction. Anderson (1999) argues that this is an excellent way to integrate the teaching of language and content. Also LEA allows for a natural context to integrate the teaching of reading and writing. As for its benefits, LEA brings together writing, reading, art, and language. It also extends the learners' creativity in story telling through writing and helps learners understand that what they think and say can be written. Moreover, LEA is learner-centered and demonstrates that the learners' thoughts and language are valued. Finally, LEA provides reading material that is predictable and readable because it uses the learner's natural language.

Semantic Mapping

One of the activities that activate students' appropriate background knowledge of a given topic is semantic mapping (Freedman & Reynolds, 1980; Heinlich & Pitterman, 1986; Anderson, 1999). Semantic mapping is similar to brainstorming. It is "an organized arrangement of vocabulary concepts which reveals what students already know about the topic and provides them with a base upon which they can construct the new information learned from the text" (Chia, 2001, p. 63). The teacher begins by telling the students the topic they are going to read about and then asks them to make free associations with it. That is, students write down whatever words they think of when they hear the topic. Then the teacher asks the students to group their associated words into categories and helps them label the categories. After reading the selection, the students may wish to revise the original map. The resulting map is the integration of students' pre-existing knowledge and their knowledge acquired from the text.

Questioning

Another type of top-down processing activity is questioning. Questions may be generated by the teacher or by the students and should be done before the reading, rather than after it. Reutzel (1985) has proposed the Reconciled Reading Lesson (RRL) to help teachers create effective pre-reading questions. According to Chia (2001), teachers who adopt the Reconciled Reading Lesson would be able to reverse the textbook sequence by forming pre-reading questions from the comprehension questions that appear in the textbook after the reading selection or in the teacher's manual.

How do students generate text-related questions even before they read the passage? Williams (1987) gives an interesting three-phase (pre-reading, while-reading, and post-reading) approach to reading, with particular attention to the pre-reading phase. The approach begins by introducing the topic of the passage that students are going to read. Once the topic is presented, students are asked to work in groups and write a list in two columns. The first column lists things about that they are sure of, and the second lists things that they are not sure of or don't know. See, for example, of what a list about whales might look like:

Sure	Not Sure/Don't Know
1. Whales are not fish.	1. How many kinds?
2. The largest are about 40 meters long.	2. How long do they live?
3. There are different kinds.	3. What do they eat?
4. They are used to make soap.	4. How fast can they swim?
	5. How heavy are they?

Williams suggests that each member of the group in turn volunteer a fact or question, so that no group member is neglected. Afterwards, the teacher asks a representative from each group to write one or two items from their lists on the board so that some interesting items, which other groups may not have thought of, can be included.

Speaking about the importance of questioning, Durkin (1978) argues that "No comprehension activity has a longer or more pervasive tradition than asking students questions about their reading whether this occurs before, during, or after the reading" (p. 103). In this context, Duke and Pearson (2002) add that practitioners know much about the effect of asking different types of questions on students' understanding and

recall of text, with the overall finding that students' understanding and recall can be readily shaped by the types of questions to which they become accustomed. Thus, if students receive a steady diet of factual detail questions, they tend, in future encounters with text, to focus their efforts on factual details. Moreover, Hansen (1981) argues that if teachers desire recall of details, this is a clear pathway to shaping that behavior. If, by contrast, more general or more inferential understanding is desired, teachers should emphasize questions that provide that focus. When students often experience questions that require them to connect information in the text to their knowledge base, they will tend to focus on this more integrative behavior in the future.

Although the impact of questions on comprehension is important, the more interesting questions are whether students can learn to generate their questions about text and what impact this more generative behavior might have on subsequent comprehension. The research on engaging students in the process of generating questions about the texts they read, although not definitive, is generally positive and encouraging. Raphael and McKinney (1983), Raphael and Pearson (1985), and Raphael and Wannacott, (1985) carried out perhaps the most elaborate line of work on question generation in the mid-1980s. Using a technique called QARs – Question-Answer-Relationship- Raphael and her colleagues modeled and engaged students in the process of differentiating the types of questions they could ask about the text. Students learned to distinguish among three types of questions: *Right There* QARs were those in which the question and the answer were explicitly stated in the text, *Think and Search* QARs had questions and answers in the text, but some searching and inferential text connections were required to make the link, and *0n My Own* QARs were those in which the question was motivated by some text element or item of information from the students' prior knowledge. Through a model of giving students ever-increasing responsibility for the question generation, Raphael and her colleagues were able to help students develop a sense of efficacy and confidence in their ability to differentiate strategies in both responding to and generating their own questions for text.

Later research by Yopp (1988) indicated that when students learn to generate questions for text, their overall comprehension improves. In a variation that wedded the logic of QARs with the work on story schemas, Yopp studied three different

groups that varied in terms of who was taking the responsibility for question generation. In the first group, the teacher asked the questions; in the second, the students generated their own; in the third, the students generated their own and were provided a metacognitive routine for answering their own questions. The second and third groups performed better on post tests given after instruction had ended, suggesting that student control of the questioning process is a desirable instructional goal. Furthermore, although it did not translate into higher performance on the comprehension assessment, the third group, those who received the additional metacognitive routine, were better at explaining the processes they used to answer questions.

Previewing

Previewing is a process that is important for clarifying the cognitive structures of students before reading. Previewing has been found to be effective in improving reading comprehension (Schank & Abelson, 1977). In the previewing stage, students first skim key sections of the material for the purpose of selecting strategies appropriate to the depth of and duration of study needed. For example, when previewing a technical chapter or a report, students are taught to examine and think about the title and subtitles, the author's name, the copyright, the introduction, the headings and subheadings, the graphs, charts, maps, tables, and pictures, the summary, and the questions, to name a few.

Previewing reduces uncertainty about reading as the assignment allows students to gain confidence, read in a more organized manner, gain interest, and improve their attitude towards the material. In addition, previewing strategies enable students to decide how much of the material is in their own background of experience. As a result of a previewing strategy, learners are clearer about what they know and about what they need to know. In effect, they set a purpose for reading before they begin reading.

When providing previewing instruction, the teacher assists the students in deciding what they already know about the material and what they need to learn. The reader turns those things that are now known into questions, which provide a purpose for reading. Students reading fiction need to preview the title, illustrations, and introduction in order to make hypotheses about the outcome of the story. This preview

heightens suspense and aids in maintaining interest. Most important, predicting of study structure gives the reader a purpose for reading, namely, to find out whether the predictions are correct. Whether students are reading fiction or expository information material, a very important reason for previewing is that it forces them to do the sophisticated kind of thinking required for drawing inferences and developing interpretations. In this context, Richards and Renanaya (2003) argue that students generally will not preview on their own unless teachers model and provide practice in this skill.

The aim of previewing is to help readers predict or make some educated guesses about what is in the text and thus activate effective top-down processing for reading comprehension. Several stimuli in the text, such as the title, photographs, illustrations, or subtitles, are usually closely connected to the author's ideas and content. So, based on any of them, students can make predictions about the content of the text.

Reading to Support or Reject Hypotheses

If readers will make predictions about what they think the text content will be, they can read to support or reject their hypotheses. This particular activation activity would need to be tied into activities that are used during later phases of the reading lesson, particularly an activity to verify whatever predictions that were made prior to reading were actually realized in the reading passage.

Inferential Strategy

The Inferential Strategy (Hansen, 1981) facilitates students' ability to connect new information with their personal knowledge. According to Hansen, "Inferential Strategy seeks to connect a reader's prior-knowledge and experiences with the comprehension of a text" (p. 665). This strategy rests on the constructivist theory that learners build knowledge constructs when they interpret new information in light of past experiences and rethink past knowledge in light of new information. Hansen adds, that "Unlike many reading strategies, the inferential strategy does not encourage breaking up a text-stopping throughout the narrative to comment on or evaluate a point. Rather this strategy poses poignant questions prior to reading and encourages discussion after reading" (p. 666).

Concerning the steps to the Inferential Strategy, Hansen suggests six major ones. First, the teacher analyzes a reading selection carefully before presenting it to students. The teacher should identify three to four main ideas in the passage prior to assigning the reading selection to the class. Second, the teacher creates a series of pre-reading questions for a planned reading assignment, specifically, two questions for each main idea in the text. The first question should elicit previous knowledge of the topic. The second should point beyond past knowledge and encourage students to imagine, speculate, and predict. Then, the teacher has students write their predictions and speculations prior to reading the selection. Again, before reading, the teacher encourages students to share both their prior knowledge of the topic and their predictions about the reading selection. Next, the teacher asks class members to read the selection carefully, and makes sure the students read the passage as a whole without interruption. Finally, after reading, the teacher has the students review their written predictions about the passage. The teacher should ask each student how the new information changed or reshaped his or her prior knowledge.

Techniques that Help to Focus Attention on Students' Appropriate Background Knowledge

Think Sheets

The Think Sheets technique was suggested by Dole and Smith (1987). This technique requires students to list the ideas and questions that they have about the main topic or concept in the material to be read. As they locate pertinent information related to their pre-reading responses, they write it down next to their original statement. The post reading discussion should focus on the match between the textual information and the students'.

Anticipation Guide

The Anticipation Guide was developed by Readence (1986), and it is normally used with small groups or individual reaction with students in grades 2 to 12. Anticipation Guide is a detailed activity that uses prediction in order to make a connection to comprehension. It is a variation of the study guide and is designed to enhance comprehension by encouraging students to make predictions about concepts to be covered in the text. It can be used in any subject area when students have some background and preconceived notions relating to the concepts to be presented.

Statements are created which support and contrast the author's ideas with students' belief systems.

The Anticipation Guide is normally used prior to reading a passage. It can be used with expository and narrative texts. After the students fill out the choices, they discuss the possible correction of misconceptions, prejudices, or simple errors. The Anticipation Guide also taps into students' preconceived notions by having them agree or disagree with teacher created statements designed to challenge or confirm students' opinions. The Anticipation Guide can also be used to introduce any reading assignment as well as a film, a field trip, or a guest speaker. It attempts to enhance reading comprehension by presenting a number of statements about the subject, thus stimulating prior knowledge. The goal of this strategy is to encourage in-depth discussions revolving around these statements, thus motivating the students to get involved in the assigned reading.

Any Anticipatory Guide should be well designed and systematic. Tierney, Readance, and Dishner (1995) suggest the following procedures while applying Anticipation Guides:

1. Carefully peruse the text to be read, and identify the major concepts to be learnt by the students.
2. Be sure to determine the students' prior knowledge of these concepts.
3. Create three to five statements. It is important that students have some knowledge prior to the reading, but not enough so that reading the passage would be redundant.
4. Decide the best order of the statements to be presented and prepare thguide.

Discussion before and after the reading of the selection highlights inconsistent and inaccurate information. In his paper, Yin (1990), for instance, focuses on the role of world and communicative knowledge in reading comprehension. By world knowledge is meant the conventional knowledge that people have in general of things, events, and actions: that is the frame of reference against which interpretation takes place. It includes both domain and culture-specific knowledge. The term communicative knowledge is used to refer to the knowledge learners have about language and verbal communication other than that covered in linguistic competence. Yin postulates that understanding is related to the reader's prior knowledge.

The insight gained in Yin's research emphasizes two broad general principles in reading instruction. First, the reader must take into account the enabling knowledge underlying any written text. Secondly, the objective of the teacher should be to develop in the student a problem-solving, creative, and interpretive strategy, exploring whatever knowledge or resources – linguistic, communicative, schematic knowledge, etc. they may have. The pedagogical focus should not be so much on the product as on the process. In short, students must be made conscious of what is involved in successful reading, that they must activate their resources in the recreation of meaning from the text rather than focus on futile and pernicious word-for-word deciphering, which characterizes much EL reading today. The crucial difference in outcome is understanding one text and developing interpretations students can apply to any text.

There has been a great deal of research on appropriate ways of activating prior knowledge. Chia (2001), for instance, provides three activities that activate the students' prior knowledge for effective top-down processing in order to facilitate reading comprehension, namely by semantic mapping, questioning, and previewing. The semantic map is "an organized arrangement of vocabulary concepts which reveals what students already know about the topic and provides them with a base upon which they can construct the new information learned from the text" (p. 22).

Regarding questioning, Chia suggests that teachers who adopt a technique known as Reutzel's Reconciled Lesson (as described earlier), for instance, would be able to reverse the textbook sequence by forming pre-reading questions from the comprehension questions that appear in the textbook after the reading selection or in the teacher's manual. Finally, previewing is to help readers predict or to make some educated guesses about what is in the text and thus activate effective top-down processing for reading comprehension. Several stimuli in a text, such as the title, photographs, illustrations, or subtitles, are usually closely connected with the author's ideas and content. So, based on any of them, students can make predictions about the content of the text.

Summarizing

Teaching students to summarize what they read is another way to improve their overall comprehension of text. Dole, Duffy, Roehler, and Pearson (1991)

describe summarizing as follows:

> Often confused with determining importance, summarizing is a broader, more synthetic activity for which determining importance is a necessary, but not sufficient, condition. The ability to summarize information requires readers to shift through large units of text, differentiate important from unimportant ideas, and then synthesize those ideas and create a new coherent text that stands for, by substantive criteria, the original. This sounds difficult, and the research demonstrates that, in fact, it is. (p. 244)

There are at least two major approaches to the teaching of summarization. In rule-governed approaches, students are taught to follow a set of step-by-step procedures to develop summaries. For example, McNeil and Donant (1982) teach the following rules, which draw from the work of Brown, Campione, and Day (1981) and Van Dijk (1979):

Rule 1: Delete unnecessary material.

Rule 2: Delete redundant material.

Rule 3: Compose a word to replace a list of words.

Rule 4: Compose a word to replace individual parts of an action.

Rule 5: Select a topic sentence.

Rule 6: Invent a topic sentence if one is not available.

Through teacher modeling, group practice, and individual practice, students learn to apply these rules to create brief summaries of text.

Other approaches to summarizing text are more holistic. One that has been the subject of research is the GIST procedure (Cunningham, 1982). In GIST, students create summaries of 15 or fewer words for increasingly large amounts of text, beginning with single sentences and working incrementally to an entire paragraph. As Cunningham describes it, GIST is conducted first as a whole class, then in small groups, and finally on an individual basis.

Working with sixth-grade students, Bean and Steenwyk (1984) studied the effectiveness of McNeil and Donant's (1982) set of rules procedure and Cunningham's (1982) GIST procedure. They found that versions of both approaches were effective not only in improving students' written summaries of text, but also in improving their comprehension of text as measured by a standardized test. Despite being markedly different, the two approaches were roughly equal in their

effectiveness, and both were superior to a control technique that involved only practice in writing summaries based on the main ideas in a text.

Perhaps one of the reasons why both McNeil and Donant's and Cunningham's summary procedures are effective is that they are both consistent with an overall model of text processing that itself has stood the test of validation: Kintsch and Van Dijk's model of text comprehension posits that text is understood through a series of identifiable mental operations. These operations are necessary for understanding both the local and the more global meaning of text within the constraints of working memory, the reader's goals, and the structure of the text. Although a thorough description of these operations is beyond the scope of this chapter, they essentially involve a series of deletions, inferences, and generalizations, much like those required by the summarizing procedures later used by McNeil and Donant.

Other Factors Contributing to Reading Comprehension

The Reading Rate

In their study on the role of schemas in reading text, Smith and Swinney (1992) were concerned with how people process text in the presence or absence of a relevant schema. In particular, they focused on the effect of schema availability and concept repetition on both on-line integration and memory of text. Subjects were required to read "vague" texts, Bransford and Johnson's (1973), well-known "washing clothes" story and their reading for each sentence was recorded. Half the texts were preceded by a title that activated a relative schema, whereas the other half were presented without schemas. Smith and Swinney concluded, "Overall, reading time per sentence was substantially longer when reading without a schema than with one" (p. 137). They added that the amount of extra time needed to read a sentence when no schema was available was the same at all points of the story.

To explain the impact of the reading rate on the reading process, Hook and Jones (2002) claim that the reading process involves two separate but highly interrelated areas: word identification and comprehension. Difficulties in automatic word recognition significantly affect the reader's ability to actively comprehend what they are reading (Lyon, 1995). Frith (1994) establishes a strong link between automatic reading and orthographic representations. Automatic reading involves the

development of strong orthographic representations, which allows fast and accurate identification of whole words made up of specific letter patterns.

Nuttal (1996) suggests that by increasing the reading rate, readers can get into "the virtuous circle of the good reader" (p. 253). The readers are encouraged to read more, and with more reading, comprehension improves. Stanovitch (1986) claims that readers who are reading well and who have good vocabularies will read more and learn more meanings, and hence read better. Readers with inadequate vocabularies who read slowly and without enjoyment read less. As a result, their development of vocabulary knowledge is slower, which in turn inhibits further growth in reading ability. Thus, the more exposure a student has to language through reading, the greater the possibility that overall language proficiency will increase.

Klaeser (1977) presents three benefits of gaining a faster reading rate. The first one is the amount of time the readers save when they are able to double their reading speed. With an increase in speed, the readers will be able to cover more materials than a slower speed. The second advantage is that the readers are able to concentrate better, which leads to greater comprehension. Finally, the readers will enjoy the act of reading more, which prompts greater extensive reading, an added area for increased reading speed and comprehension. With increased reading rate and motivation for extended reading, the readers will encounter frequent and repeated vocabulary, which will transcend into other areas of language skills development.

De Lopez (1993) reveals four more advantages of automaticity. Automaticity helps the students to break their habit of translating word for word and reaching for the dictionary every time they come across a new term. It also increases the readers' confidence by demonstrating that they can comprehend a great deal from a text without understanding every word. Another advantage of automaticity is that it encourages the students to change their reading strategies to utilize previous knowledge more efficiently and to depend less on the printed text. A further benefit of automaticity is that it encourages the students to change their reading strategies to utilize previous knowledge more efficiently and to depend less on the printed text. A further benefit of autumaticity is that it helps the students to increase concentration, since their minds will be more actively processing and integrating the information. Moreover, automaticity promotes reading for ideas and concepts rather than deciphering letters and words.

Carver (1990) and Walter (2003) also emphasize the role of automaticity in reading comprehension. The former states that automaticity theory has forced a focus upon the role of repetition as a primary factor that causes improvement in the reading rate. Practice in decoding known words supposedly should result in their being read more rapidly and with little attention because they will be perceived more rapidly while attention is being directed toward understanding the complete thought represented by all the words in the sentence. Walter, on the other hand, argues that reading calls for fast, automatic word decoding and access to the mental lexicon. This means working on building speed and fluency and on learning to recognize the maximum number of words. Learners can build speed and fluency by learning vocabulary systematically and by doing lots of easy extensive reading.

According to Anderson (1999), automaticity plays a critical role in the development of strong reading skills. When the reading rate becomes more automatic, the readers will be able to use their cognitive skills for comprehending what they are reading. They will be able to spend thinking time analyzing and synthesizing what they are reading and not moving through a passage one word at a time. Pedagogically speaking, the theory of automaticity is applied to the classroom. While teaching reading comprehension, many teachers task their students with reading speed-enhancing activities, such as rate-building reading, repeated reading, classroom-paced reading, and self-paced reading. The purpose of the rate-buildup activities is to reread old material quickly in order to glide it into the new material. As their eyes move quickly over the old material, the students actually learn how to process the material more quickly. As the students participate in this activity, they can increase their reading rates. Regarding the repeated reading activities, as learners do repeated exercises, they come to realize how this activity can improve their reading comprehension. They understand more when they read more than once. This activity empowers the students. As for the self-paced reading activities, they allow the students to determine their own reading goals and the amount of material they need to read in sixty seconds to meet their set reading rates. Students can then determine if they are keeping up with their individual reading rate goals. Classroom-paced reading activities, on the other hand, encourage and support the learners as they work together at improving their reading rates.

Metacognition

Metacognition also contributes to reading comprehension. In general, the term metacognition refers to the knowledge and control people have over their own thinking and learning activities in relation to these strategies (Flavell &Wellman, 1977). It deals with "the individual's knowledge about the task, the possible strategies that might be applied to the task, and the individual's awareness of their own abilities in relation to these strategies" (Taylor, 1983, p. 270). When related to reading comprehension, metacognition refers to what a reader knows about his or her cognitive process, conscious awareness, and the ability to control these processes by planning, choosing, and monitoring. Brown (1980) identifies reading strategies as instances of metacognition and describes meta-comprehension as "any deliberate planful control of activities that give birth to comprehension" (p. 456). Metacognition involves several elements: the ability to recognize errors or contradictions in texts, the understanding of different strategies to use with different kinds of texts, and the ability to distinguish important ideas from unimportant ones (Nist & Mealey, 1991). Effective readers constantly check to see if what they are reading makes sense. This strategy is called comprehension monitoring.

Students Monitoring of their Use of Background Knowledge

Teachers can have their students monitor their use of background activation strategies as they read outside of structured classroom activities. Teachers can conduct class discussions on a regular basis and ask the students what kind of things they do to activate their background knowledge when they are reading any material that has not been assigned for school work. It would also be helpful for the teacher to share with the students what the teacher does to prepare to read. In this context, Casnave (1988) states that comprehension monitoring "includes any behaviors that allow readers to judge whether comprehension is taking place and that helps them decide whether and how to take compensatory action when necessary" (p. 288).

Comprehension monitoring involves the use of specific, related strategies that keep the readers constantly abreast of how well they understand the text. These strategies help the readers recognize minor comprehension breakdowns before they escalade into major ones. To monitor their understanding, effective readers employ the strategic behaviors of revising predictions, self-questioning, making associations,

restating, and clarifying (Collins & Smith, 1980). Proficient readers seem to have internalized monitoring and continually formulate and seek answers to questions throughout their reading. Comprehension monitoring enables the readers to maintain an ongoing, meaningful interaction with the text. Less effective readers, however, often lack specific direction and tend not to question themselves as they read.

As for the techniques that teachers can apply to monitor their students' monitoring of background knowledge, research has come up with many suggestions. Casnave (1988), for instance, suggests that one technique that can introduce comprehension monitoring to students is to insert a set of questions between paragraphs of a text. When these questions are discussed in class, the teacher can see how much is comprehended by the readers and can help them to improve reading strategies. This will help them to raise their awareness of comprehension monitoring and how to talk about metalanguage, for instance.

Knowledge of How the World, Language, Stories, and Books Work

Another important implication is that teachers should always remember that most fundamental aspects of learning to read are not about skills; they are about learning to behave like a reader (Harrison, 1992). In this context, Whitehead (1975) argues that readers have to give more of themselves to a book they are reading than is the case if they are watching television or a film, and that this extra engagement is repaid in their becoming more absorbed, and, ultimately, in their getting closer to the characters about whom they are reading.

Furthermore, teachers should take into consideration the fact that beginning readers, quite properly, want to feel that they are doing the things that children do when they are successful readers. For this to happen, however, they need to have certain experiences, and they need to know certain things. They need to have at least four kinds of knowledge: the knowledge of how the world works, the knowledge of how language works, the knowledge of how stories work, and the knowledge of how books work. The knowledge of how the world works enables the readers to generate hypotheses about what is happening in a text because they know things about it, and how things happen in it. A story which begins "It was the day before Francis's little sister Gloria's birthday" (Hoban, 1968, p. 59), can only be understood if the readers know a good deal about families and how birthdays tend to be celebrated in the

western cultures, for instance. This may seem obvious, but of course children from different cultures celebrate birthdays in very different ways. So the cultural knowledge and the knowledge of social conventions are necessary to understand Hoban's sentence, and to understand the events which happen, such as writing cards and singing "Happy Birthday."

The second knowledge needed by the reader is of how language works. A child, for example, needs not only vocabulary but also an understanding of how the language fits together, and the familiarity with many different syntactic structures. Throughout my experience as a teacher, I have noticed that learners, in general, are always stuck to the natural word order – subject, verb, and complement. They easily get confused whenever they read a sentence that begins with a complement instead of a subject. Indeed, it wouldn't be easy for sixth, seventh, or even eighth graders to understand a sentence like this: "In order to get a good mark in the English exam, Hamad studied very hard." It would even be puzzling if the learners were to answer the following reading comprehension question: "Why did Hamad study hard?" To allow learners to overcome such confusion, teachers need to familiarize learners with various language forms that authors may use.

The knowledge of how stories work is also very important in early reading. Half the fun for children comes from their being able to anticipate what might happen, and from finding that their guesses are confirmed, or better still, finding that what follows is a surprise, albeit an unexpected but satisfying one. This can only happen if the author and the reader have a common grammar or structure, in which certain events are predictable. Moreover, children's understanding of the narrative structure can be very sophisticated (Harrison, 1992). It is one type of knowledge that the reader needs, and which nearly all children bring to the classroom when they start school, even if their familiarity with books is low, and upon which the teacher can draw.

Finally, the knowledge of how books work, or rather the conventions of print, allows children to begin to read (Harrison, 1992). Marie Clay's "Concepts of the Print Test" (Clay, 1979, p. 78) covers many of these conventions, running from understanding how a book is held and which way up illustrations should be, to much more complex things such as being able to point to speech marks, words, and capital letters. One important point should be made here. The knowledge of the concept of print is quite a good correlate of early reading comprehension, but teachers should

beware of the causal fallacy. Children who are already familiar with books, do well at Clay's test. It would be inappropriate for teachers why to teach these concepts of print. It is important for beginner readers to these four types of knowledge, but teachers should not wait for a child to acquire them before embarking upon developing that child's literacy. Children gain and develop all four types of knowledge in many social situations, from watching television to going to shop, but teachers can also develop this knowledge systematically. Moreover, as teachers, one of our most important goals is to help children to become skilled readers, and developing their book-related knowledge is an important part of this. However, unless we also have the goal of helping children to become enthusiastic and self-motivated readers, we find our efforts ineffectual. Being more aware of the components of knowledge that make us more effective teachers, so long as we are aware of the dangers of a utilitarian approach (Harrison, 1992), we can work to avoid teaching the components in fragmented and incoherent way.

Reading without Schemas

Understanding without schema clearly is a frequent occurrence in casual conversation where topic switches are common and often unannounced. A similar situation can arise in reading text, and this situation provides the focus of this section. Given a situation where no schema is available, how can one interrelate propositions and determine the reference of vague terms? In trying to generate potential answers to this question, Smith and Swinney (1992) state that there are two basic approaches to text understanding: the top-down approach in which the reader starts with a pre-existent structure like a schema and tries to fit the text proposition into it, and the bottom-up approach in which the reader starts with the text propositions and tries to create a new structure for them.

According to the top-down approach, when no schema is explicitly given and the reader needs to determine referents and inter-relate propositions, he or she uses whatever information has been garnered from the text to generate or guess a schema. The reader may try to guess a schema at the same level of detail as that of "washing clothes." Alternatively, the reader may use some abstract default schema to relate propositions such as person…performs…action…on …object. Smith and Swinney refer to these two instances of top-down approach as the "guessing" and "default"

strategies, respectively. With regard to the bottom-up approach to text understanding, when the reader needs to determine referents or inter-relate propositions, presumably he or she does this by using concepts that have been repeated within and between propositions. Kintsch and van Dijk (1978) call this strategy "the concept repetition" strategy (p. 369). In this context, Smith and Swinney (1992) provide a detailed account of these three strategies.

Concerning the "guessing strategy," Smith and Swinney refer to the *washing clothes* "vague vignette" of Bransford and Johnson (1973). The procedure is actually quite simple. First you arrange things into different groups. Of course one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to a lack of facilities, that is the next step. Smith and Swinney argue that presumably, a reader using the "guessing strategy" would try to apply a schema at the same level of detail as that of *washing clothes*. Smith and Swinney refer to such detailed schemas as "basic level" schemas because the objects and actions specified in the schema are generally at the basic level. Once a basic level schema has been guessed, its default will be used to instantiate vague terms in the text, such as "procedure" and "groups." However, Smith and Swinney argue that "any particular basic-level guess is very likely to be wrong, in as much as one can think of dozens of basic-level schemas consistent with the first line of [Bransford and Johnson's] sample vignette" (p. 306). According to Smith and Swinney, if upon reading, the procedure is quite simple, the reader guesses the schema for *driving a car*, upon reading the second sentence he will he to surrender his original hypothesis and guess another basic-level schema. This switch in guesses will cause extra computation. Specifically, the reader must undo the instantiations made, as well as retrieve the newly guessed schema. If this new guess fails, the reader has to make still another guess, undo more instantiations, and retrieve the propositions underlying the first couple of sentences

There is evidence that these extra computations place an additional load on working memory. Protocols obtained from readers who are forced to switch schemas reveal that they engage in conscious deliberations to change one instantiation to another (Collins, Brown, & Larkin, 1978). Therefore, according to Smith and Swinney,

> The guessing strategy is …very likely to incur in a working-memory load that increases as the reader moves through a continuously vague story

> particularly in the first part of the story, where the reader is motivated to guess and the probability of a correct guess is very low. (p. 98)

Smith and Swinney conclude that because reading times increase with the size of the working memory load, reading times should be longer without a schema than with one, and should increase as one moves through the story relative to any increase found when a schema is operative.

Regarding the default schema strategy, Smith and Swinney argue that this strategy assumes that rather than guessing a schema at a basic level, the reader guesses a more superordinate-level schema. Such a schema might include general slots like *actor*, *manipulative action*, and *object*, along with general defaults like *adult person*, *move implement*, and *machine*. Hence, according to Smith and Swinney, "This schema is very likely to be compatible with [Bransford and Johnson's] sample story. Although it may be of some help in reading propositions, the strategy is of little use in determining the referents of vague terms" (p. 306).

With regard to predicted effects of this strategy, Rosch, Mervis, Gray, Johnson, and Boyes Braehm (1976) argue, "There is reason to believe that reading times should be longer when guided by a super-ordinate-level schema than by a basic-level one" (p. 390). Specifically, analogous to the findings with object schemas where people are faster at categorizing at a basic level than at an abstract one, Smith and Swinney (1992) found out that "people are faster at instantiating story information at a basic level schema like *washing clothes* than at super-ordinate-level schema *like doing a routine procedure*" (p. 306). Such an effect should arise because the defaults of *doing a routine procedure* denote more super-ordinate objects, and instantiating a default with story information amounts to categorizing that information. There is, however, no reason to expect the relative disadvantage of using a default schema to increase as the reader goes further into the story, for instance.

Regarding the concept repetition strategy, once again, Smith and Swinney (1992) use the Kintsch and van Dijk's (1978) vague vignette of *the washing machine* in the context of understanding the sample story. The procedure is quite simple. First you arrange things into different groups. Of course one pile may be sufficient depending on how much there is to do. In processing the last sentence, Smith and Swinney argue that the reader might note that "piles" refers to the same concept as "groups" does in the previous sentence, and use this repeated concept to link the

propositions underlying the two sentences. By repeatedly applying this strategy to successive lines of a story, a reader can often interrelate the propositions without ever considering large units of meaning. Also, the reader can occasionally determine the referent of a vague term if linguistic cues indicate that the term refers to the same concept as does a more specific term, such as "The person entered the room…the doctor had never seen such a mess." According to Smith and Swinney (1992), this strategy led to the conclusion that "it should take less time to read a story line that shares more concepts with previous lines" (p. 307). There is a bit of support for this conclusion in the work of Kintsch, Kozminsky, Streby, MacKoon, and Keenan (1975), who found that people took less time to read a paragraph that contained a few often-repeated concepts than one that contained numerous rarely repeated concepts.

Moreover, Smith and Swinney (1992) assume that concept repetition differs qualitatively from the other strategies, namely, the guessing strategy and the default schema strategy, including whatever strategy one uses when a strategy is available. Smith and Swinney add that concept repetition operates at the level of individual concepts, not propositional or larger meaning units. Furthermore, concept repetition does not even require that the reader uses the contents of a concept; all that is required of the reader is a decision that two concepts are the same. For these reasons, Smith and Swinney (1992) conclude, "Concept repetition seems semantically barren compared to schema-based strategies, and is less a competitor to schema-based strategies than a possible auxiliary to them" (p. 307).

Limitations of Schema Theory

In spite of schema's contribution to the enhancement of reading comprehension achievement, a lot of research has also highlighted its limitations. Urquhart and Weir (1998), for instance, argue that there are huge problems attached to the notion of schemata. They quote Bartlett (1932) as saying, "I strongly disliked the term 'schema.' It is at once too definite and too sketchy" (p. 466). Urquhart and Weir provide some reasons for believing that schemata are not very useful in reading research, or possibly, by the ease with which they can be involved in any number of situations, too useful. According to them, the need for schemata to be structured in advance, yet adaptable to text-driven alterations, has been a problem for schema theorists from the beginning. Another reason is that it has been argued that the term

"schema," as commonly used, is virtually synonymous with "background knowledge" and hence is useless.

Related to the above reason is the odd fact that, at least in the L2 research literature, although schemata are frequently appealed to, they are seldom described in any detail. Compare the more rigorous experimental investigations of prototype theory, particularly the work on the cognitive representations of semantic categories by psycholinguists such as Rosch (1975) and Rosch, Mervis, Gray, Johnson, and Boyes-Braehm (1976). Thus experimental researchers invoke experimental subjects' possession, or lack of possession, of schemata related to weddings, Christmas, etc., without ever giving a description of what is contained in such schemata. Given that schemata are simultaneously described as "structures," which is, according to Rosch et al., very odd. They add that it is not always the case that such description is missing. They argue that in the theoretical literature, we find some illuminating descriptions of hierarchical structures, either of single vocabulary items, e.g., for the item "canary" in Collins and Quillian (1972), or for an event such as a "ship christening" in Anderson and Pearson (1984). But such fairly detailed structures, while admirable and capable of being tested, raise suspicions immediately. For example, the "canary" schema has, attached to the 'bird' node, the fact that a bird "has wings," "can fly," and "has feathers," but not that it has a beak or builds nests. The "ship christening" schema, which is a very loose "structure," and basically in fact is just as a set of unordered components, contains the information that the christening takes place "in dry dock." But how many readers are likely to know this?

In addition to such lack of explicit description, Urquhart and Weir (1998) argue that L2 researchers entertain remarkably loose notions of the whole concept, so schemata can be "activated" or even "acquired" at the drop, so to speak, of a short passage of introductory reading. Urquhart and Weir add that if the term is to have any use at all, then surely it must describe mental constructs of some stability, developed over some time by a sizeable portion of a population.

Koda (2005), on the other hand, argues that because the characteristics of L2 readers include a reasonably solid conceptual base and limited L2 knowledge, top-down, conceptually-driven processes presumably dominate L2 text processing, at least until adequate L2 knowledge develops. If valid, this supposition has two important implications. Adult L2 readers may be more susceptible than beginning L2

readers to misunderstanding and misinterpreting, simply because they rely more heavily on background knowledge than text information. Regarding familiar texts, Koda states that, as a general rule, although L1 conceptual maturity can outweigh restricted L2 linguistic sophistication, when dealing with conceptually familiar texts, reliance on compensatory use of knowledge can have negative consequences. If readers engage in cursory top-down conceptually-driven processing without sufficient attention to test information, their skills to extract and integrate linguistic – lexical and syntactic – information are not likely to improve. Moreover, when readers rely too heavily on prior-knowledge, the resulting conceptions, reflecting what already is known, may not be what is intended in the text. And even more critically, if readers cannot detect such conceptual discrepancies, they may never acquire new insights from texts.

Moreover, Carrell, Devine, and Eskey (1998) argue that because what individuals know, and how well they know it, varies widely, background knowledge can be a major factor explaining both quantitative and qualitative differences in comprehension outcomes. However, they add that caution is necessary in determining causal directions because "the relationship between knowledge and comprehension is likely to be unilateral" (p. 51). In other words, it is difficult to determine whether those who know more read better, or those who read better know more. Another limitation of schema is revealed by Wallace (1992), who argues that it is likely that "there will never be total coincidence of schemas between writer and reader" (p. 82). Wallace adds that difference between writer intentions and reader comprehension is most obvious when readers have had different life experiences than the writer's model reader. Readers sometimes also feel that they comprehend a text but have a different interpretation than the author intended. Wallace points out that humor is particularly vulnerable to misinterpretation, as was discovered when a text entitled "It's a Mugger's Game in Manhattan" was assigned to advanced ESL Japanese readers. Although the text appeared humorous to their North American native-English speaking teacher, it was found "scary [and] shocking" (pp. 197-198) by the Japanese students.

Research on the limitations of schema has also revealed certain limitations of schema-activation classroom activities. Mandria (2003), for example, conducted a study of the "meaning-inferred" method and the "meaning-given" method (p. 473).

The most important findings were that, first, the meaning-inferred method led to a similar level of retention as the meaning-given method, but the former was considerably more time-consuming and therefore less efficient. The second finding was that each separate stage of the meaning-inferred method led to retention, but the learning effect of memorization was the greatest. The learning effect of verifying, however, was about the same as that of inferring.

Research has also investigated the limitations of some techniques applied by reading comprehension teachers. Chia (2001), for example, argues that questioning and previewing have limitations. Regarding questioning, a problem in class is that not all questions originally designated as post-reading exercises can be appropriately converted to pre-reading exercises. For instance, a question like "What is the main idea of the second paragraph?" does not provide learners with any clues to the content of the passage and fails to stimulate their schema. The successful application of previewing, on the other hand, depends on the presence of certain conventional features of English writing, namely, topic sentences and paragraphs of introduction and conclusion. However, not all kinds of texts have rhetorical features.

Although a great deal of research has focused on the advantages of schema theory when applied to reading comprehension classrooms, only recently has research started reviewing the influence of schema theory on reading comprehension. My study, therefore, will involve a review of the impact of schema theory on reading comprehension. This review will provide reading comprehension teachers with insights about the effectiveness and insufficiency of schema theory when applied to reading comprehension.

Drawbacks of the Over Use of Schema

Paulstron and Bruder's (1976) work exemplifies the position which anticipates greater interference from cultural knowledge. Following Kenneth Goodman's thesis that the proficient reader must draw on his or her experiential conceptual background in order to supply a semantic component to the message, they conclude that learning to read is easier "when the cultural background is familiar and students can draw on cultural information in the decoding process" (p. 160). In parallel to Goodman's thesis, Robinett (1976) also anticipates greater interference from cultural knowledge. Robinett states,

> Many things enter into comprehension: the students' grasp of the subject matter of the reading, their understanding of the cultural content implicitly or explicitly expressed, and their ability to cope with the grammatical structures in the passage. (p. 255)

Koda (2005) argues that L2 situation model building may become progressively more difficult as the quantity of culture-specific information in a text increases. He adds that there are two ways that comprehension can be impaired when considerable culture-specific knowledge is incorporated in a text. First, because widely shared cultural information typically is not elucidated, if the reader does not possess the presumed knowledge, conceptual gaps are likely to occur. These gaps will leave text segments semantically disconnected, and fragmented situation models may result. According to Koda, another possible impediment is that L2 readers will draw on their L1 cultural knowledge to interpret unfamiliar elements they encounter in the text. Although this is a logical option for conceptually sophisticated L2 learners, conceptual adaptation could easily lead to misinterpretation, particularly when the two cultures have little in common.

CHAPTER 3
THE STUDY

Since reading is an interactive process that is dynamic and constantly changing, each new task or assignment will alter the learning process. Through my teaching experience as an EFL teacher, I have noticed that many EFL students face many challenges whenever the reading comprehension process is altered by any unfamiliar reading task or assignment. I have also noticed that many EFL students need to be encouraged to take an active role in the process of learning to read. Likewise, instruction plays an important role in preparing students for the task and can help them become more aware of the characteristics of reading that are important to the task. Teaching students how to apply skills or strategies allows them to become active readers.

Research Questions

I hypothesize that readers with sufficient and proper cultural background knowledge perform better on reading comprehension tasks than those who have insufficient and inappropriate background knowledge. To test this hypothesis, my study compared the reading comprehension achievement of three groups of beginner subjects: thirty Emirati female subjects (Control Group C), thirty Iranian female subjects who had been pre-taught the features and vocabulary of a traditional Emirati wedding (Experimental Group B), and thirty Iranian female subjects who had not been given any pre-teaching about traditional Emirati weddings (Experimental Group A). The ninety participants were dentistry students at Ajman University, Fujairah branch. To test the above hypothesis, the study was guided by the following four specific research questions:

1. Do the Emirati Control Group C students have better comprehension when they read an English text describing a traditional Emirati wedding than the Iranian students in both groups?
2. To what extent does pre-teaching enhance Iranian pre-taught Experimental Group B students' reading comprehension?
3. Does the absence of cultural schema hinder the reading comprehension of the Iranian Experimental Group A students?

4. Are there other variables that affect the reading comprehension of the students in the three groups?

To answer these four research questions, three between-subjects ANOVA and post hoc Tukey HSD and Bonferroni tests were conducted on the three groups' scores: one on the scores for an immediate written recall protocol, one on the scores for ten reading comprehension MCQs, and one on the scores for a content-knowledge questionnaire.

Subjects

The study was conducted with three groups of dentistry students enrolled in the first year in the Dentistry Department at Ajman University, Fujairah branch. According to the Oxford Quick Placement Test, the students' English proficiency level was beginners. Group 1 (Control Group C) consisted of 30 Emirati female students, all of whom lived in the eastern region of the UAE – Fujairah, Kalba, Khorfakkan, and Dibba Al Hisn. Group 2 (Experimental Group A) consisted of 30 Iranian female students who had been in the UAE for only two months at the time. Group 3 (Experimental Group B) also consisted of 30 Iranian female students who had been in the UAE for only two months at the time. They had been pre-taught the features and vocabulary of Emirati weddings (see Appendix A).

The Reading Comprehension Test

Text

The reading comprehension text (see Appendix B) was an adapted article about traditional Emirati weddings retrieved from http://www.zawaj.com/weddingways/uae. html ("Weddings in the UAE," n.d.). The text was adapted by an English native speaker specializing in the field of testing. The text was adapted for the purpose of this research. The text included 543 words and its readability level was 8.7 on the Flesh-Kincaid Reading Level index. The Flesh-Kincaid (FK) index tells how easy something is to read. It does this by counting the number of words in every sentence. Then some math is done. The number which results is a school grade level. For example, a sentence with a score of 8.0 means that someone who reads at the 8th grade level could understand.Normal writing is usually

between 7 and 8.

The topic of the reading comprehension text was the bride's preparation for a traditional Emirati wedding. The text consisted of nine paragraphs. The first paragraph dealt with a comparison between the groom's and the bride's preparation for an Emirati traditional wedding. The second paragraph revealed the major make-up stages the Emirati bride goes through before the wedding night. Paragraph three was mainly about the elaboration of the bride's trousseau. The fourth paragraph spoke about the pre-wedding night festivities. Paragraph five described the "henna night." *Henna* is a reddish-brown substance used to die people's hair, hands, and feet. In the sixth paragraph, a description of *henna* and its usages was provided. Paragraph number seven dealt with the "Arabian *kohl*" tradition. *Kohl* is a black powder used, especially in eastern countries, around the eyes to make them more attractive. The eighth paragraph was about the preparation of *Kohl*. The last paragraph began with the final wedding preparation and ended with a quick description of the wedding ceremony.

The topic of the text was selected on the basis that culture-specific knowledge includes ritualistic knowledge as well as culture-historic knowledge (Bernhardt, 1991). Weddings constitute one of the events included among rituals. Members of specific cultures implicitly "know" what will occur in these events. To use Oller's (1979) terms, they have an "anticipatory grammar" (p. 206) for them. This anticipatory grammar, fundamentally, consists of knowledge transmitted from generation to generation.

Multiple Choice Questions

The reading comprehension questions were based on the assumption that there are specific questions that can measure bottom-up processes and others that can measure top-down processes (see Appendix C). This assumption was based on a particular taxonomy of the questions related to reading comprehension. This taxonomy was designed by De Lopez, Giarcarla Marchi, and Arreaza-Coyley (1997). There were ten multiple-choice questions (MCQs) (see Appendix D). They consisted of seven questions measuring bottom-up and three questions measuring top-down processes. The questions measuring the bottom-up processes included three factual questions, two vocabulary-in-context questions, and two paraphrasing specific

information questions. All the questions, especially the factual ones, could not be answered correctly without having read and understood the relevant part of the text. However, each question required the subject to combine the factual information with the appropriate inferences. As for the questions measuring top-down processes, they included two drawing-conclusion-questions and one question asking students to choose an appropriate title. The questions included four answer options each.

Content-Knowledge Questionnaire

To measure self-reported degree of content-knowledge, a 5-point Likert scale that ranged from "None" to "A lot" was utilized. The 5-point scale was used to encourage more precision in rating. The participants answered the content-knowledge questionnaire after completing all comprehension assessment tasks. There were two versions of the content-knowledge questionnaire, one written in Arabic and another in Persian. They consisted of fifteen questions (see Appendix E). The first thirteen questions measured the subjects' content knowledge of the main ideas in the text. The last two questions assessed the subjects' interest in the topic of the English text read. The participants were asked to rate their knowledge of each idea on a scale from 0 (none) to 5 (a lot).

Topic-Familiarity Questionnaire

The purpose of the topic familiarity questionnaire was to choose the thirty Iranian subjects who constituted Experimental Group A and who reported that they were unfamiliar with Emirati weddings. The questionnaire was based on a 3-point Likert scale that ranged from "None" to "A lot." The questionnaire included 9 questions divided into three sets of three questions each (see Appendix F). The first set was about the Iranian students' familiarity with sports, the second about marriages in the Emirates, and the third about jobs in the Emirates. A mixture of three topics was meant to avoid giving any hints to the reading comprehension text prior to the reading comprehension test session. The participants were asked to rate their knowledge of each topic.

The Oxford Quick Placement Test

The Oxford Quick Placement Test (OQPT) assesses reading, vocabulary, and grammar using a typical multiple-choice question (stem with either a three or four response option) format (see Appendix G). The pencil and paper test consists of two parts. Part 1 (questions 1-40) is taken by all students and is aimed at those who are intermediate or below. Part 2 (questions 41-60) is taken by those students who attain more than thirty-five out of forty questions on part 1. The second-tier questions are aimed at those students with higher ability levels in English. According to the test developer, the reason for dividing the test into parts is to minimize the effects of guessing and thus improve test accuracy.

The items themselves are typical of those produced by University of Cambridge Local Syndicate (UCLES). The first five questions on part 1 of the test relate to signs and where they would most likely be found. Questions 6-20 are multiple-choice questions based on cloze passages. These questions assess reading. Questions 21-40 are fill-in-the-blank MCQs with a one-sentence context. A variety of language points are tested in this section. Generally speaking, this section is taken by all students who and is aimed at those who are Intermediate or below. The second part (questions 41-60) is only taken by students who score more than 35 out of 40 on the first part and can be used for higher ability students. The test is quickly marked out of 40 or 60 using a simple overlay. The reason for dividing the test into two parts is to try to minimize guessing and thus improve the accuracy of the test.

Table 1 (see Appendix H) shows how to interpret the results in terms of the ALTE levels from 0 to 5. Table 2 (see Appendix I) is then used to see how the ALTE Levels correspond to the Council of Europe Levels and the Cambridge Examinations. You will notice that Table 1 has two columns for interpreting scores. Column 2 shows the band scores for students taking part 1, and therefore reports scores up to a maximum score of 40, covering ALTE Levels 0 to 3. Column 3 shows the band scores for students taking both parts of the paper and pen test, and therefore reports scores to a maximum of 60, covering the range of ALTE Levels from 0 to 5.

The error margin for the 60-item test is +/- 4 points, and for the 40 item test it is +/- 3 points. This means that 68% of the time (or about 7 times out of 10) a student's score will be within plus or minus 3 or 4 points of his or her "true score." If a student's score is at the very top or very bottom of an ALTE Level, the margin of

error means that they could in fact fall just within the level immediately above or below. The test developer recommends in all instances the OQPT be used alongside other forms of assessment, such as speaking and writing tests. Concerning its validity, an important advantage of the OQPT is that it reports test results as a band on the ALTE 5-level scale. This makes the result potentially much more useful to end users.

Immediate Written Recall Protocols

The immediate written recall protocol is a measure which requires readers, without looking at the passage, to recall and write down as much as they can of what they have just read. Bernhardt (1991) asserts that generating a recall does not influence a reader's understanding of the text. Compared to multiple choice or open-ended questions, Bernhardet claims, "A free recall measure provides a purer measure of comprehension, uncomplicated by linguistic performance and tester interference" (p. 200). Cohen (1998) comments that the immediate recall protocol requires the reader to comprehend the passage well enough to be able to recall in a coherent and logical manner.

The focus on quantity of correct information recalled with the written task has been used widely (e.g., Bernhardt, 1987; Carrell, 1983; Lee, 1986a, 1986b), and therefore was utilized in the present study. In this study the written instructions on the recall page told the learner to try to recall main ideas, as well as detail, and it also indicated that the emphasis was the quantity of ideas recalled. The written recall measure was administered before the multiple choice questions so that students were not able to gain any passage-related information from the multiple choice questions. Students were instructed not to look back at any previous passage while reading and completing all tasks.

The immediate recall protocol was used as a measure for several reasons. It has been favored by both Johnston (1983) and Bernhardt (1983) as being a valid means of assessing foreign language reading comprehension, and according to Johnston (1983), it is "the most straight forward assessment of the result between text-reader interaction" (p. 79). Second, the immediate recall protocol allows readers to manifest what they remember from the text without the prompt of questions (Bernhardt, 1987). Third, and most important, is that the recall protocol has construct validity firmly grounded in a reader-based, constructivist approach that has continued

to evolve. Bernhardt (1985, 1990) describes an L2 reading comprehension model that is based in part on a psycholinguistic model developed by Coady (1979) and relies to a great extent on analyses of recall protocol data. This interactive model attempts to capture the complex comprehension processes that take place during the reader/text interaction.

Bernhardt (1990) describes the various components of the model as being either text-based or extra-text based. The text-based components include word recognition or, in other words, the attachment of a semantic value and phonemic and graphemic decoding. Phonemic decoding is the recognition of words based on sound or visual match. The text-based components also include the syntactic feature recognition or, in other words, the relationship between words. The extra-text based components of the model, on the other hand, consist of intratextual perception - the reconciliation of each part of the text with that which precedes and succeeds, prior knowledge - whether or not the discourse is sensible according to the reader's knowledge of the world, and metacognition- the extent to which the reader thinks about what he or she is reading. Using the model, Bernhardt (1985, 1990, 1991) was able to reconstruct the process and mental models developed by individual readers during comprehension. She found that "discovering the mental model can be done using the recall protocol procedure and thereby working from the students' reconstructions in order to make students actively attend to their process of model building" (Bernhardt, 1991, p. 41).

Based on an extensive synthesis of recall protocol data, Bernhardt (1991) further extended her model to account for the fact that "problems or inaccuracies in L2 text processing may be differentially linked to L2 literacy development" (p. 168). The theoretical model she posited attempted to explain the development of L2 reading proficiency based on the following assumptions: text processing abilities develop over time, readers demonstrate the use of different facets of the features of the model over time, errors in understanding can reveal development in literacy, the model assumes communality in L2 text processing and among literate learners and languages, and, finally, no L2 reader would ever be one hundred percent proficient with a zero percent error rate, nor would an L1 reader be zero percent proficient with a hundred percent error rate. Thus, based on recall protocol evidence, Bernhardt delineated a construct whereby exhibited learner errors in the use of the L2 reading comprehension factors

and their interrelationship vary as proficiency increases. This model also recognizes that metacognition occurs at all levels of proficiency and must still be included in L2 comprehension theory, but acknowledges it as a characteristic that varies and is highly dependent on the individual.

It is precisely the need to further our understanding of the multi-faceted and complex processes involved in the development of L2 reading comprehension ability and the realization that much is yet unexplained or unexplored that necessitates the drive to enhance the effectiveness and efficiency of the recall protocol procedure as a part of a multiple-measure approach. Alderson (2000) correctly notes that "how researchers operationalize their constructs crucially determines the results they will gather and thus the conclusions they can draw and the theories they develop" (p. 356).

Procedures and Analysis

Procedures

Subjects were tested over a period of two successive weeks in the month of February 2006 in their regular classes. In the first week, they had the Oxford Quick Placement Test. Due to the fact that the subjects belonged to different sections and had different time-tables, the Oxford Quick Placement Test (OQPT) was delivered on three successive days with an average of thirty subjects a day. As for the recall procedure, which was conducted during the second week, the students were asked to read the text and immediately write what they recalled from this text. Prior to reading the text, the students were prompted in writing by the researcher orally as follows:

> Read the following text. When you finish, turn the passage over and write everything you remember so that a friend would be able to understand what you just read. Iranian students may write in Persian, and Emirati students in Arabic. Take your time when you read since there isn't a time limit, and remember, you will be writing about what you are able to recall from the text when you finish reading. Once you turn the text over, you will not be able to look at it again. If you have a question, please raise your hand so that I can assist you. While I can't help you with the reading text, I will be able to clarify the procedure for you.

The prompt was read aloud first in Arabic by the researcher and then in Persian by the

researcher's assistant who was a Persian native speaker.

Data Analysis

Data in the study consisted of the various analyses performed on the written recall protocols, the answers to the multiple-choice reading comprehension bottom-up and top-down questions (see Appendix D), and the variables from the content-knowledge questionnaire (see Appendix E). It should be mentioned that before analyzing and scoring the recall protocols, two fluent native readers of English specializing in the field of testing and assessment had read the adapted text individually and marked all the places in the text where they naturally paused or stopped while reading. This was done to establish "pausal units" so that the text could be divided into comprehensible chunks of language based upon the main ideas and supporting details of the text (see Appendix L). These pausal units were analyzed for inter-rater reliability between the two English readers. Agreement was reached on one hundred percent of the text. After the text was divided, each pausal unit was scored from 1 to 4 (see Appendix M). Units scored as 1 were considered the least important in comprehending the main ideas of the text, and those scored as 4 were considered very important in understanding the main ideas. Once more, the two fluent readers of English established an acceptable inter-rater reliability (100%) of the scores after discussing the differences.

Regarding the analysis and scoring of the recall protocols, they were first translated into English. The protocols written in Arabic were translated by a male Arabic native speaker teacher who specialized in translation (Arabic/English). The protocols written in Persian were translated by a male Persian native speaker teacher who specialized in EFL/ESL teaching. Both teachers teach at Ajman Unversity, Fujairah branch. They have been in the UAE for many years. The translation of the recall protocols was meant to help the analyzers and scorers of the protocols to compare the translated protocols to the adapted text analyzed in "pausal units" by the two English native speakers. After that, the same two teachers and two other married TEFL teachers (a female Arabic native speaker and a female Persian native speaker) of Ajman University, Fujairah branch, who have been in the UAE for a long time, analyzed and scored the recalls. The teacher who translated the protocols from Arabic into English as well as the female Arabic-native speaker TEFL teacher analyzed and

scored the protocols that were translated from Arabic into English. On the other hand, the teacher who translated the protocols from Persian into English and the other female Persian native speaker EFL teacher analyzed and scored the protocols that were translated from Persian into English. It should be mentioned that two Emirati married students (a male and a female) helped the two teachers in analyzing the protocols translated from Arabic into English. They provided them with the necessary detailed culture-related information about traditional Emirati weddings they needed to decide the types of errors reported in the recall protocols. The recall protocols (see Appendix J) were analyzed for the *quantity* of idea units, or gist, recalled from the original text and the *quality* or value of the idea units - that is, whether the ideas recalled were top-level ideas representing the central ideas; high-level, or *main ideas,* within each central idea; mid-level, ideas, or *subtopic*; or low-level ideas, or *details.*

In addition, the recall protocols were scored for reading and recalling time. This was done as follows. Just before the subjects started reading the text, the researcher asked the 90 subjects to write the starting time on the same page on which they were going to write their recalls. Later, whenever a subject finished reading, she called the research who would write the finishing time of reading as well as the beginning of the recall time. Finally, whenever a subject finished her recall, the researcher wrote the ending time of the recall on the same recall page. All recalls were also scored for elaboration and distortions, as well as omissions and other overt errors of recall. Elaborations are culturally appropriate extensions of the text, produced when someone knowledgeable about the culture provides additional culturally correct information not found in the text or lexically inappropriate modifications of the text, often outright intrusions from another culture, in which unfamiliar ideas are interpreted, remembered, and recalled in terms of another cultural schema. Rehability between the two teachers in scoring each type of recall was r = .94. Conflicting scores on the ideas recalled and on elaborations and distortions were resolved by discussion among these two teachers. This analysis technique was a replication of Steffenson and Joag-Dev's (1979) method of measuring their subjects' mean performance in a study investigating the impact of cultural prior-knowledge on reading comprehension (see Appendix K).

In general, the data of the study were analyzed using a number of statistical procedures. Statistical procedures were conducted to determine measures of central

tendency. The first part of the Oxford Quick Placement Test (OQPT) was administered to students in a paper-pencil format and was hand marked by the researcher and also marked by an independent test specialist. The marks were then calculated. The minimum score on the OQPT was 9 and the maximum was 14. This mean score corresponds to beginner's level on the ALTE scale. The 10 item MCQ reading comprehension test was also administered in a paper-pencil format. The MCQ test was marked by the researcher. Scores were verified by an independent testing specialist. Scores received by students on the instrument ranged from 0 to 10. The recall protocol instrument was administered in a regularly-scheduled class. Scores on the recall protocol ranged from 10 to 34. The mean score of the recall protocol was 21. The Content Familiarity Questionnaire (CFQ), a 15-item five point Likert scale, was administered in paper-pencil format and hand tabulated by the researcher. As a checks and balance, marks on the questionnaire were verified by an independent source. The CFQ scores were reported by question in percentage form.

CHAPTER 4
FINDINGS

The findings presented here are the result of analysis of data collected in the study through the means outlined in the previous chapter. I will present the findings in the categories of descriptive statistics on recall protocols, results of the multiple comparison post hoc Tukey and Benferroni test, as well as subjects' mean scores on recall protocols, MCQs test, and content familiarity questionnaire. A qualitative analysis of subjects' recall protocols, reading comprehension MCQs, and responses to the content-knowledge questionnaire will be included as well.

Descriptive Statistics on Recall Protocols

Responses on the recall protocols were analyzed in a number of ways. First of all, a score was reported for the total number of gist or meaning units for the three experimental groups. A second statistic was generated for the sum of the values of propositions recalled on the recall protocols (see Appendix M). From these values, a score was generated for the total number of high value (i.e., value 4 on the recall protocols) propositions. Propositions recalled that were not amongst those in the text were classified into four categories: elaborations, distortions, omissions, and overt errors. Elaborations were propositions that were correct but not included in the text. Distortions were similar to elaborations in that they were propositions not included in the text. However, they differed in that they were incorrect in terms of the content. Omissions were propositions not recalled. Finally, overt errors were propositions classified as inaccurate information. For students' mean scores on the different recall protocol variables, see Table 1.

Table 1. Students' mean scores on the recall protocol variables

Variable	Experimental Group A Mean Score	Experimental Group B Mean Score	Control Group C Mean Score
Reading time (seconds)	1035	506	575
Recall time (seconds)	911	385	456
Gist units recalled (n= 88)	13.5	22.8	26.7
Sum of gist values (total= 214)	48.8	70.3	78.0
4 value units recalled (total= 13)	3.4	6.2	6.0
Elaborations	0.1	3.0	7.5
Distortions	7.6	2.3	4.0
Omissions	56.1	50.2	42.3
Other overt errors	10.7	9.6	7.6

Gist Units

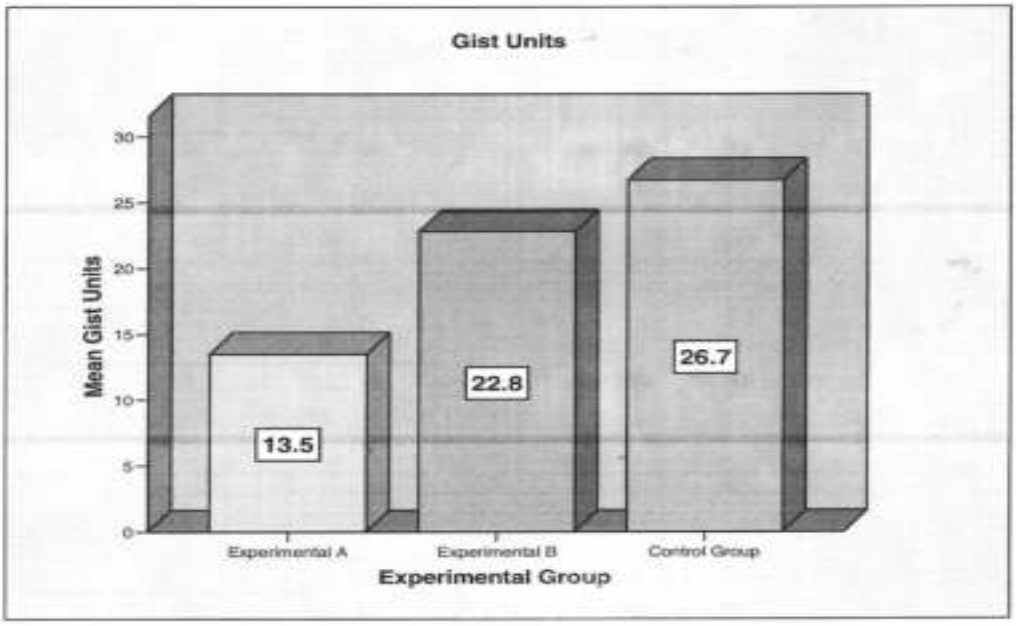
Out of a total number of 88 propositions, Experimental Group A students scored a mean of 13.5 total propositions. Experimental Group B and Control Group C students scored 22.8 and 26.7 respectively. More specifically, Experimental Group A students who had no cultural background knowledge about Emirati traditional weddings were able to identify 15% of the propositions. Those Experimental Group B and Control Group C students with cultural background knowledge about Emirati traditional weddings were able to recall more propositional content, with Experimental Group B identifying 26% of the content and Control Group C students ascertaining 30% of the total propositional content. The above percentages were obtained by dividing the total number of propositions recalled by the thirty subjects in each group by the possible score of propositions recalled, then multiplied by 100. Despite this difference no statistical significance was found to exist on the one-way ANOVA Omnibus test. A subsequent post hoc Tukey HSD test revealed significance at the $p < .05$ level on differences between Experimental Group A and the other two groups. A Bonferroni post hoc test revealed similar levels of significance between the three groups. For the one-way ANOVA Omnibus Test analysis of variance for recall protocols as well as graphic representation of students' mean scores on gist units

recalled, see Table 2 and Figure 1.

Table 2. One-way ANOVA Omnibus Test analysis of variance for recall protocols

Source	df	F	P
	Between groups		
Gist units	2	128.80	.00
Gist values	2	113.29	.00
Value 4 prepositions recalled	2	84.30	.00
Elaborations	2	206.65	.00
Distortions	2	210.68	.00
Omissions	2	96.78	.00
Other overt errors	2	25.24	.00

Figure 1. Students' mean scores on gist units recalled

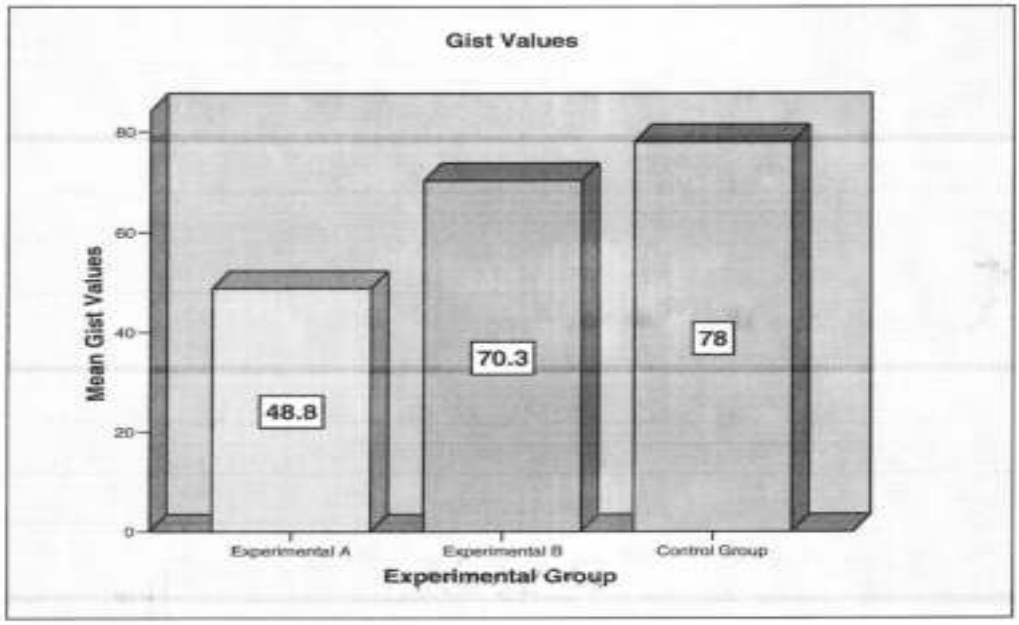


Gist Values

To determine the quality of propositions recalled, scores on propositional values were computed. As expected, those Experimental Group A students with no cultural background knowledge on Emirati traditional weddings scored a mean of

only 48.8 out of a possible score of 214 on the value of total propositions recalled. Pre-taught Experimental Group B and Emirati Control Group C students reported mean scores of 70.3 and 78.0 out of a possible score of 214 respectively. The graph representing the students' scores on gist values is in Figure 2.

Figure 2. Students' mean scores on the three groups' sums of gist values

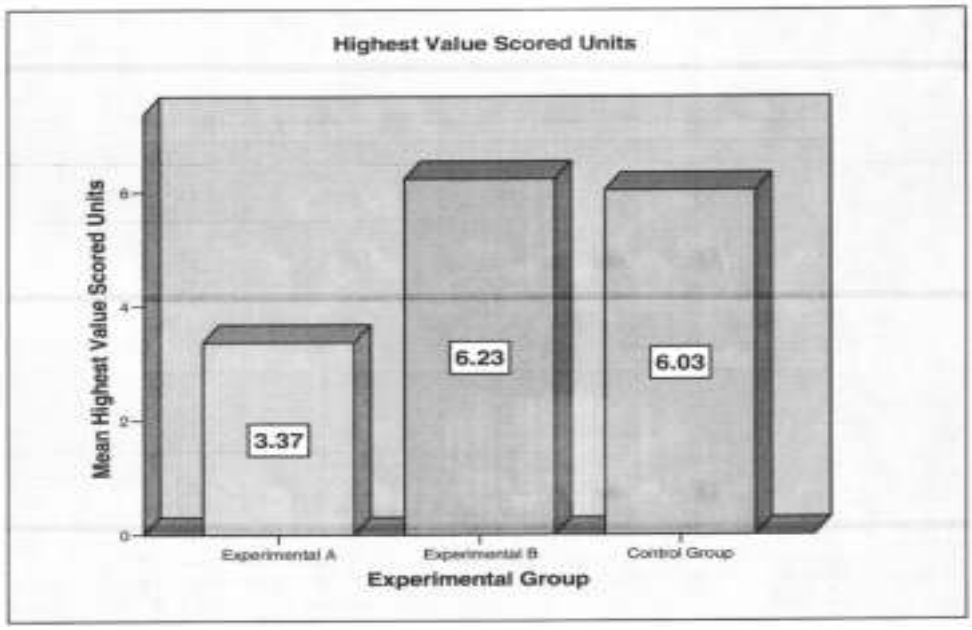


Highest Value-Scored Units

To further determine the quality of propositions recalled, scores on highest value-scored units were computed. Once again, as expected, Experimented Group A students who had no cultural background knowledge on traditional Emirati weddings and no pre-teaching scored the lowest. Experimental Group A scored a mean of 3.4 out of a possible score of 13 on propositional content of value 4. Surprisingly, pre-taught Experimental Group B students scored slightly higher than Control Group C students on value 4 propositions. Experimental Group B scored a mean of 6.2 out of a possible score of 13, while Control Group C scored a mean of only 6.0 out of a possible score of 13. Although not significant in statistical terms, it was a surprising finding nonetheless. Post hoc Tukey and Bonferroni tests to locate differences in mean comparisons were conducted. Both tests found significant differences ($p < .05$) between Experimental Group A and Experimental Group B and between

Experimental Group A and Control Group C. No significance was found to exist between Experimental Group B and Control Group C. The graph representing the students' scores on highest value propositions recalled is in Figure 3.

Figure 3. Students' mean scores on value 4 propositions recalled



Other Propositions Recalled

The highest levels of significance were found to exist in the categories of propositions that were recalled but were not included in the text. As expected, students with no background knowledge or those who had no pre-teaching, Experimental Group A, made minimal elaborations (0.1), as well as the highest number of distortions, omissions, and overt errors. Iranian students who had been pre-taught, Experimental Group B, and Emirati Control Group C students performed as expected in many of the categories. As far as elaborations are concerned, Experimental Group B had a mean score of 3.0 elaborations compared to the Control Group C score of 7.5 elaborations. It should be noted that all the elaborations made by Control Group C students are directly attributed to cultural background knowledge. Not surprisingly, Control Group students made fewer content omissions (mean of 42.3) as compared to Experimental Group B (mean 50.2). In similar fashion, Control Group C students made fewer overt errors (mean of 7.6) as compared to a mean of 9.6 made by Experimental Group B students. Unexpectedly, in the distortions category,

Control Group B students made more distortions (mean of 4.0) than pre-taught Experimental Group B students (mean of 2.3). It is worth mentioning that significance was found to exist at the $p < .05$ level between all three groups (Experimental Group A, Experimental Group B, and Control Group C) and all categories of incorrectly recalled propositions (elaborations, distortions, omissions, and other overt errors). For graphic interpretations, see Figures 4, 5, 6, and 7. Results of the multiple comparison post hoc Tukey and Benferroni tests are shown in Table 3.

Figure 4. Students' mean scores on elaborations

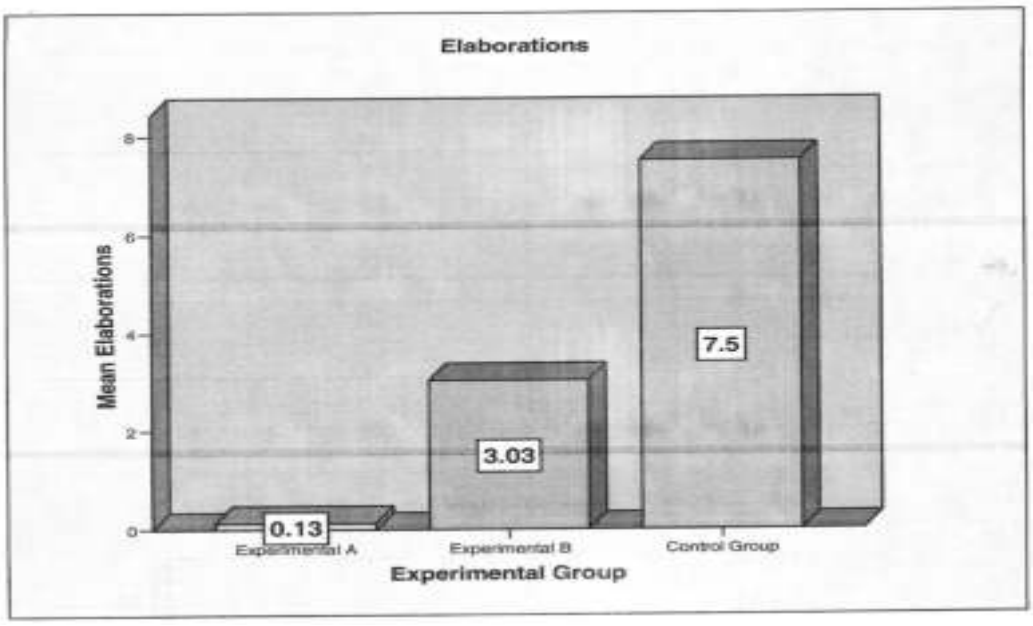


Figure 5. Students' mean scores on distortions

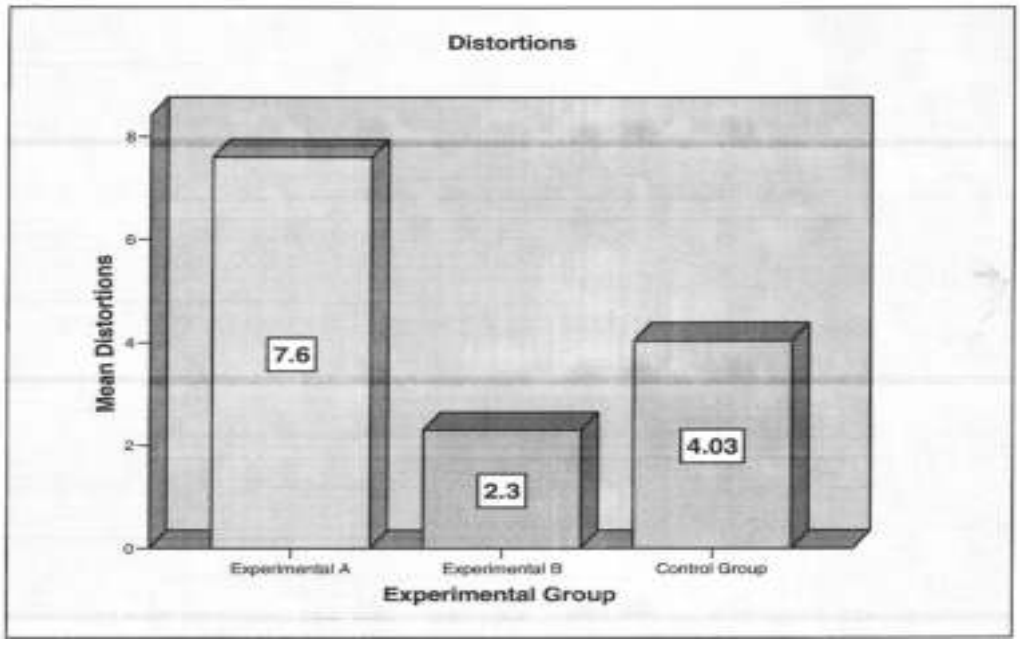


Figure 6. Students' mean scores on omissions

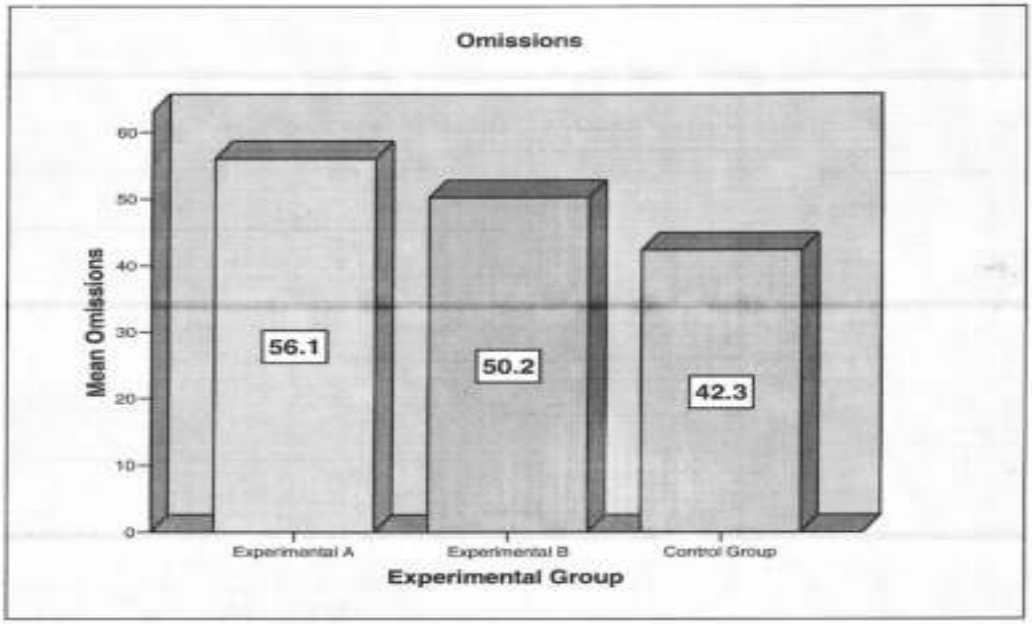


Figure 7. Students' mean scores on other overt errors

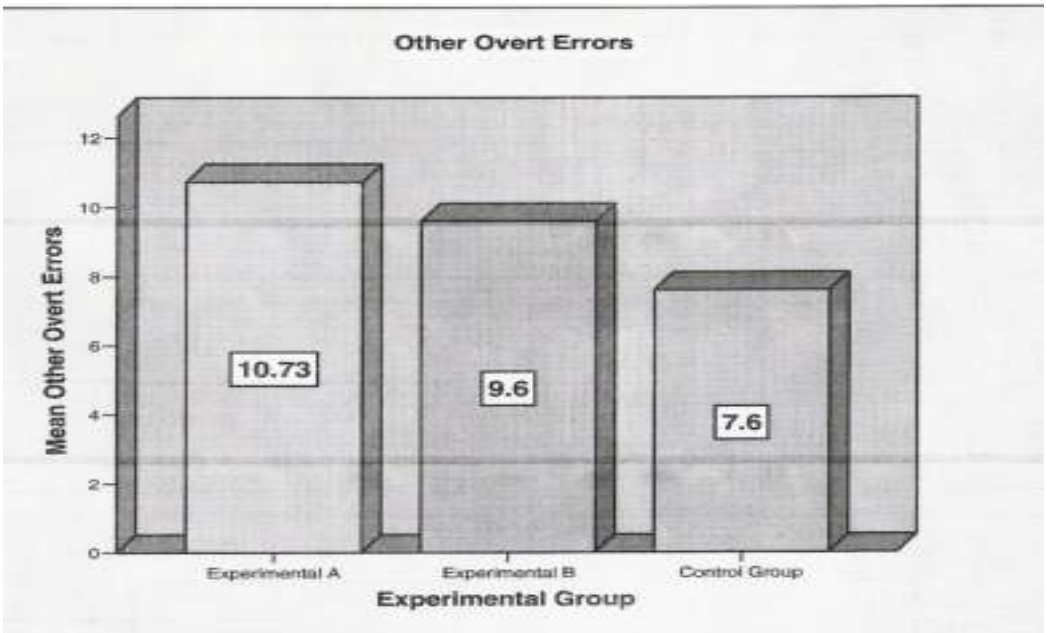


Table 3. Results of One-way ANOVA Analysis Test and Multiple Comparisons, post hoc Tukey and Bonferroni Tests

Descriptives

		N	Mean	SD	Mini.	Maxi.
Gist Units	Experimental A	30	13.50	3.472	10	20
	Experimental B	30	22.80	2.413	17	28
	Control Group C	30	26.70	3.843	18	34
	Total	90	21.00	6.453	10	34
Gist Values	Experimental A	30	48.77	5.386	2	5
	Experimental B	30	70.28	10.379	5	7
	Control Group C	30	77.97	6.724	4	8
	Total	90	65.67	14.618	2	8
Highest Value Scored Units	Experimental A	30	3.37	1.129	0	5
	Experimental B	30	6.23	.728	2	7
	Control Group C	30	6.03	.964	4	8
	Total	90	5.21	1.618	0	8
Elaborations	Experimental A	30	.13	.434	0	9
	Experimental B	30	3.03	.765	2	4
	Control Group C	30	7.50	2.286	4	6
	Total	90	3.56	3.352	0	9

Distortions	Experimental A Experimental B Control Group C Total	30 30 30 90	7.60 2.30 4.03 4.64	1.102 .952 .999 2.347	6 0 0 0	9 4 6 9
Omissions	Experimental A Experimental B Control Group C Total	30 30 30 90	56.07 50.20 42.30 49.52	3.393 2.987 4.893 6.829	51 42 30 30	60 56 53 60
Other Overt Errors	Experimental A Experimental B Control Group C Total	30 30 30 90	10.73 9.60 7.60 9.31	.980 2.634 1.037 2.150	9 5 5 5	13 17 10 17

ANOVA Omnibus Tests

		df	F	Sig.
Gist Units	Between Groups (Combined)	2	126.805	.000
Gist Vales	Between Groups (Combined)	2	113.295	.000
Highest Value	Between Groups (Combined)	2	84.306	.000
Elaborations	Between Groups (Combined)	2	206.651	.000
Distortions	Between Groups (Combined)	2	210.683	.000
Omissions	Between Groups (Combined)	2	96.78	.000
Other Overt Errors	Between Groups (Combined)	2	25.241	.000

Post Hoc Test

Multiple Comparisons

Dependent Variables		(I) Experiment Group	(J) Experimental Group	Mean Difference	Sig.
Gist Units	Tukey HSD	Experiment A	Experimental B	-9.300*	.000
			Control Group	-13.200*	.000
		Experimental B	Experimental A	-9.300*	.000
			Control Group	-3.900*	.000
		Control Group	Experimental A	13.200*	.000
			Experimental B	3.800*	.000
	Bonferroni	Experimental A	Experimental B	-9.300*	.000
			Control Group	-13.200*	.000
		Experimental B	Experimental A	9.300*	.000
			Control Group	-3.900*	.000
		Control Group	Experimental A	13.200*	.000
			Experimental B	3.900*	.000

Gist values	Tukey HSD	Experimental A	Experimental B	-21.500*	.000
			Control Group	-29.200*	.000
		Experimental B	Experimental A	21.500	.000
			Control Group	-7.700*	.001
		Control Group	Experimental A	29.200*	.000
			Experimental B	7.700*	.001
	Bonferroni	Experimental A	Experimental B	-21.500*	.000
			Control Group	-29.200*	.000
		Experimental B	Experimental A	21.500*	.000
			Control Group	-7.700*	.001
		Control Group	Experimental A	29.200*	.000
			Experimental B	7.700*	.001
Highest value scored units	Tukey HSD	Experiment A	Experimental B	-2.867*	.000
			Control Group	-2.667*	.000
		Experimental B	Experimental A	2.867*	.000
			Control Group	.200	.001
		Control Group	Experimental A	2.667*	.000
			Experimental B	.200	.001
	Bonferroni	Experimental A	Experimental B	-2.867*	.000
			Control Group	-2.667*	.000
		Experimental B	Experimental A	2.867*	.000
			Control Group	.200	1.00
		Control Group	Experimental A	-2.900*	0
			Experimental B	-7.367*	.000
					.000
Elaborations	Tukey HSD	Experimental A	Experimental B	-2.900*	.000
			Control Group	-7.367*	.000
		Experimental B	Experimental A	2.900*	.000
			Control Group	-4.467*	.000
		Control group	Experimental A	7.367*	.000
			Experimental B	4.467*	.000
	Benferroni	Experimental A	Experimental B	-2.900*	.000
			Control Group	-7.367*	.000
		Experimental B	Experimental A	2,900*	.000
			Control Group	-4.467*	.000
		Control Group	Experimental A	7.367*	.000
			Experimental B	4.467*	.000
Distortions	Tukey HSD	Experimental A	Experimental B	5.300*	.000
			Control Group	3.567*	.000
		Experimental B	Experimental A	-5.300*	.000
			Control Group	-1.700*	.000
		Control Group	Experimental A	-3.567*	.000
			Experimental B	1.733*	.000

	Benforroni	Experimental A	Experimental B	5.300*	.000
			Control Group	3.567*	.000
		Experimental B	Experimental A	-5.300*	.000
			Control Group	-1.733*	.000
		Control Group	Experimental A	-3.567*	.000
			Experimental B	1.733*	
Omissions	Tukey HSD	Experimental A	Experimental B	-5.867*	.000
			Control Group	13.767*	.000
		Experimental B	Experimental A	-5.867*	.000
			Control Group	7.900*	.000
		Control Group	Experimental A	-13.767*	.000
			Experimental B	-7.900*	.000
	Bonferroni	Experimental A	Experimental B	5.867*	.000
			Control Group	13.767*	.000
		Experimental B	Experimental A	-5.867*	.000
			Control Group	7.900*	.000
		Control Group	Experimental A	-13.767*	.000
			Experimental B	-7.900*	.000
Other overt errors	Tukey HSD	Experimental A	Experimental B	1.133*	.034
			Control group	3.133*	.000
		Experimental B	Experimental A	-1.133*	.034
			Control Group	2.000*	.000
		Control Group	Experimental A	-3.133*	.000
			Experimental B	-2.000*	.000
	Bonferroni	Experimental A	Experimental B	1.133*	.039
			Control group	3.133*	.000
		Experimental B	Experimental A	-1.33*	.039
			Control Group	2.000*	.000
		Control Group	Experimental A	-3.133*	.000
			Experimental B	-2.000*	.000

*The mean difference is significant at the .05 level.

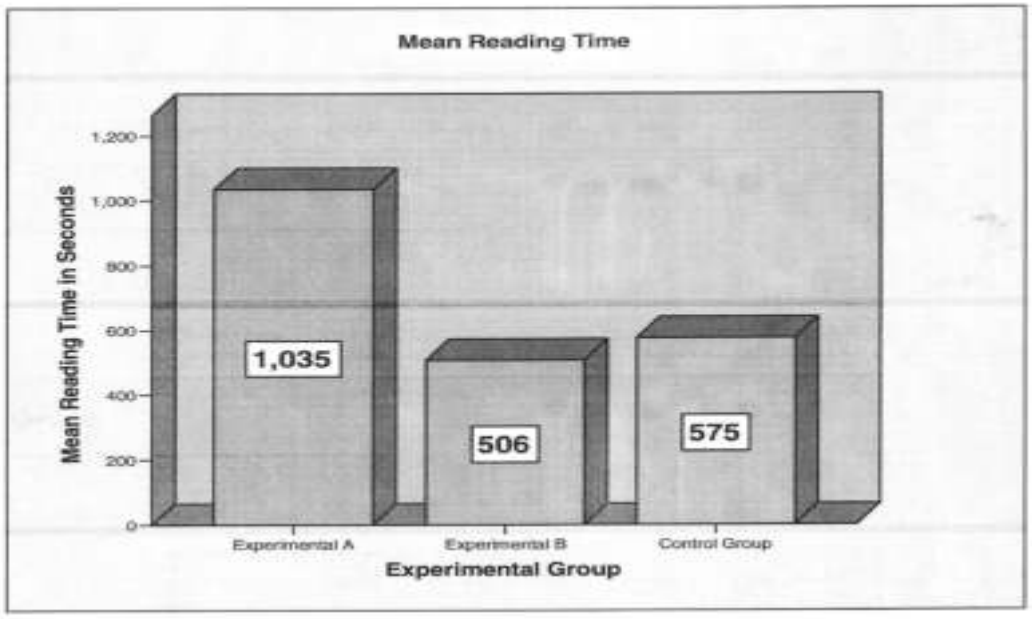
Reading and Recall Time Statistical Analysis

In order to determine if time was a variable in the study, reading and recalling times were collected from all subjects. Reading time was determined by having students note down the time at the start of the reading exercise. Reading end time was noted by the researcher when subjects raised their hands signifying they had finished. Recall time was determined in a similar fashion. Both reading and recalling times are classified in Table 1 and Figures 8 and 9 respectively by the number of seconds as per Johnson's (1976) study. For interpretational purposes, seconds have been converted into minutes in this text. Not surprisingly, Experimental Group A took the longest time to both read and recall the text with mean times of 17.25 minutes (1,035 seconds) and 15.16 minutes (911 seconds) respectively. Control Group C took 9.58

minutes (575 seconds) to read the text and 7.6 minutes (456 seconds) to complete the recall activity. Experimental Group B took the least amount of time to both read the text (8.43 minutes / 506 seconds) and recall it (6.41 minutes / 385 seconds).

As far as reading the text was concerned, Experimental Group A students differed a lot from both Experimental Group B and the Control Group C students. Experimental Group A students spent a total mean reading time of 17.41 minutes (1,035 seconds), whereas Experimental Group B and Control Group C students' total mean reading times were 8.43 minutes (506 seconds) and 9.58 minutes (575 seconds) respectively. Significant differences at the $p < .05$ level were found to exist. For graphic representations on students' mean scores on the reading time, see Figure 8.

Figure 8. Students' mean scores on reading time



Mean recall time for the recall protocol activity for the three groups was 9.73 minutes (584 seconds) with a minimum recall time of 3 minutes (180 seconds) and a maximum recall time of 18.40 minutes (1,104 seconds). Significant differences at the ($p < .05$) level were found to exist. Experimental Group A students' mean recall time was 15.18 minutes (911 seconds). Surprisingly, Experimental Group B students' mean recall time was lower than that of Control Group A students'. Experimental Group B students' mean recall time was 6.41 minutes (385 seconds), while Control Group C's was 7.6 minutes (456 seconds). For graphic representation on students'

mean recall time, see Figure 9. Results of ANOVA omnibus tests and post hoc follow-up tesst on students' mean reading and recall times are shown in Table 4.

Figure 9. Students' mean scores on recall time

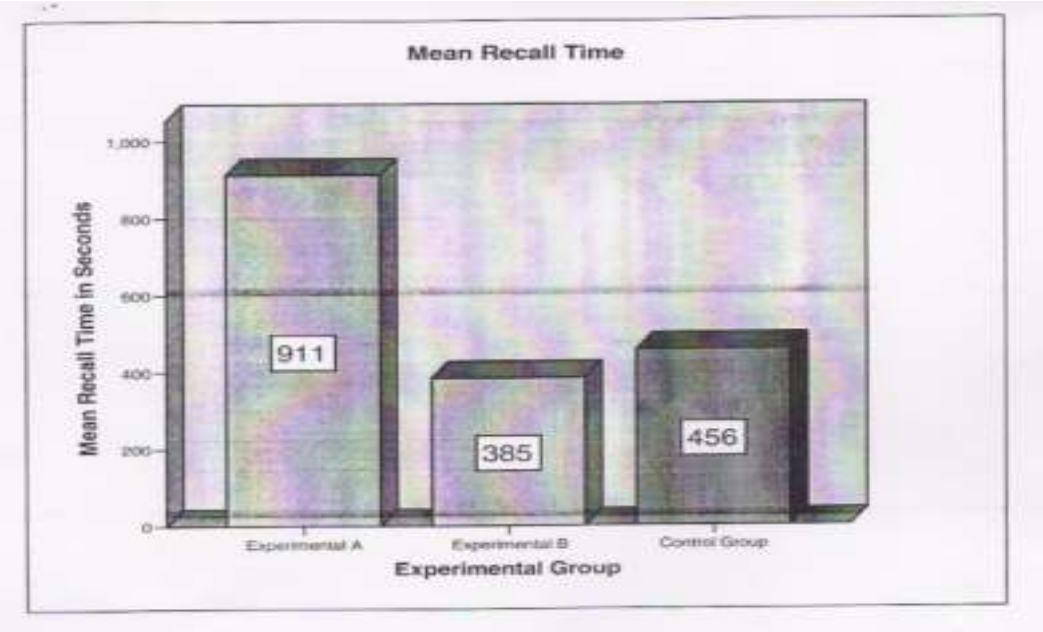


Table 4. Post hoc follow-up test and table on students' reading **and recall time**

Descriptives

		N	Mean	Std.	Mini.	Maxi.
Reading time (seconds)	Experimental A	30	1035.03	78.028	900	1200
	Experimental B	30	506.17	208.625	302	1400
	Control Group	30	575.10	136.334	300	792
	Total	90	705.43	279.198	300	1408
Recall time (seconds)	Experimental A	30	910.83	96.478	600	1104
	Experimental B	30	384.87	110.092	230	607
	Control Group	30	456.13	113.475	180	660
	Total	90	583.94	257.026	180	1104

ANOVA Omnibus Tests

		df	F	Sig.
Reading time (seconds)	Between (Combined) groups	2	109.089	.000
Recall time (seconds)	Between (Combined) groups	2	213.586	.000

Post Hoc Tests

Dependent variables		(I) Experimental	(J) Experimental	Mean Difference (I-J)	Sin.
Reading time (seconds)	Tukey HSD	Experimental A	Experimental B	528.867*	.000
			Control Group	459.933*	.000
		Experimental B	Experimental A	-528.867*	.000
			Control group	-68.933*	.185
		Control Group	Experimental A	-459.933*	.000
			Experimental B	68.933*	.185
	Bonferroni	Experimental A	Experimental B	528.867*	.000
			Control Group	459.933*	.000
		Experimental B	Experimental A	-528.867*	.000
			Control Group	-68.933*	.240
		Control Group	Experimental A	-459.933*	.000
			Experimental B	68.933*	.240
Recall Time (seconds)	Tukey HSD	Experimental A	Experimental B	525.967*	.000
			Control Group	454.700*	.000
		Experimental B	Experimental A	-525.967*	.000
			Control Group	-71.267*	.031
		Control Group	Experimental A	-454.700*	.000
			Experimental B	71.267*	.031
	Bonferroni	Experimental A	Experimental B	525.967*	.000
			Control Group	454.700*	.000
		Experimental B	Experimental A	-525.967*	.000
			Control Group	-71.267*	.035
		Control Group	Experimental A	-454.700*	.000
			Experimental B	71.267*	.035

* The mean difference is significant at the .05 level.

Qualitative Analysis of the Recall Protocols

As mentioned earlier in the previous sections of this chapter, all recall protocols were analyzed for their errors, namely elaborations, distortions, other overt errors, and omissions. This section provides a detailed qualitative analysis of these errors.

Elaborations

Analysis of the elaboration errors made by all the subjects partially answered my first three research questions. As expected, Control Group C subjects gave the highest number of elaborations. For example, one passage read "Although the groom

goes through a number of preparations, the bride's preparations are naturally more involved and time consuming." This was recalled by one Control Group C subject as "The preparation of the bride lasts longer than the groom's although the groom's family helps a lot." The information that the bride is ready for her wedding after her eyes are lined, her hair is perfumed, and her hands and feet are decorated with *henna* was recalled by the same subject as "After being lined with *kohl*, decorated with *henna*, and perfumed with fine perfumes such as jasmine and incense, the bride can be shown to the public."

The information that traditional creams and oils are rubbed into the bride's body was recalled by another Control Group C subject as follows: "The bride starts rubbing her body with oil and traditional perfumes to add more glamour and relaxation to herself." The same subject recalled the idea that the back-to-back feasts and celebrations involve both men and women who usually celebrate separately as on the second night, wedding night, when both men and women celebrate the wedding separately, but within the same area. The same information was recalled by a third Comtrol Group C subject as follows:

> Among the bride's preparations, the bride's body is rubbed with creams and natural herbs that are prepared by the bride's mother or her best fiends many days before the festivities start.

The same subject recalled that the bride's family gives food to the neighbors, friends, and all the relatives who missed the wedding festivities. Such information is not revealed in the text.

Regarding the wedding ceremony, although the text doesn't give any details about the bride, another subject inferred that the "bride's head is covered with gold and that the bride is given to the groom at midnight." The text read, "Nowadays, most weddings are celebrated in less than one week." This information was recalled by a fourth Control Group C subject as "Nowadays, wedding ceremonies last three days or less." A fifth Control group C subject inferred that during the "*Henna* night, the bride's hair is died with *henna*." Another Control Group C subject recalled that the bride chooses the wedding date while the groom is involved in the wedding ceremony preparations. This information is not mentioned in the text.

Inferring about the reasons behind the bride's staying at home for forty days before the wedding night, a seventh Control Group C subject recalled that the bride's

family want to surprise the guests with the bride's new look. Another Control Group C subject inferred that during the wedding festivities the bride and groom's families receive congratulations from their relatives. Regarding the bride's trousseau, the text read,

> Beautiful jewelry, perfumes, silk materials, and other necessary items are presented to her by the groom. It is with these gifts which she creates her elaborate trousseau called Addahbia.

This was recalled by a ninth Control Group subject as "The groom endows his bride with her requirements to elaborate her trousseau - Addahbia." Commenting on the importance of the *kohl* tradition, a Control Group C subject inferred that this is one of the bride's major preparations for the wedding in the Emirates. Commenting on the importance of the *kohl* tradition, the same subject inferred that this tradition is one of the bride's major preparations for her wedding. To describe the "wedding night" ceremonies, a tenth Control Group C subject inferred that people "listen and dance to the beautiful traditional music and songs," which is an addition to the original text.

Pre-taught Experimental Group B subjects' recalls also included some elaborations. For example, one subject wrote that on the "*henna* night" women "wear jewelry on their hands and feet," but this was not explicitly mentioned in the text. Two other Experimental Group B subjects inferred that "Emirati women use *kohl* to line their eyes because they believe it adds to their beauty." Describing the wedding festivities before the wedding night ceremony, one of the same subjects recalled that men and women celebrate separately in the bride and groom's house, but this information was not explicitly revealed in the original text. A fourth Experimental Group B subject commented that the bride's body is rubbed with beautifully-smelling creams and oils to "nourish her skin," but this was only an inference.

Speaking about the preparation of the bride's trousseau, the text read, "Beautiful jewelry, perfumes, silk materials and other necessary items are presented to her by the groom. It is with these gifts she creates her elaborate trousseau called Addahbia." This was recalled by another Experimental Group B subject as "She [the bride] creates her trousseau with the items that the groom buys her and those that she herself buys." Another Experimental Group B subject inferred that not only does the bride stay at home for forty days to rest and eat the best of food but also to "take care of herself," which was not explicitly mentioned in the passage. To insist on the great

care that the bride's family members, relatives, and best girlfriends devote to the bride's make-up, another Experimental Group B subject inferred that "they make up the bride many times in the forty days" that preceed the wedding night ceremony. The same subject also inferred that the bride is given "massages." Speaking about the best *kohl* used by Emirati brides, an Experimental Group B subject recalled that the best *kohl* was from Saudi Arabia, but this was not explicitly mentioned in the passage.

A surprising finding of the study was that some of the Iranian subjects from Experimental Group A came up with some elaborations, too. For instance, one passage read, "Another tradition of the UAE wedding customs is the Arabian kohl or eyeliner." This was recalled by an Iranian subject as "One of the most important points seen in the tradition wedding is the use of *kohl*." Another Iranian subject recalled that that there is a "specific program and ceremony" during the wedding night in spite of the fact that there was no hint to such an idea in the passage. To describe the bride's dress worn on the wedding night, a third Experimental Group A subject recalled that the bride "wears silk clothes, and beautiful jewelry" but this was not explicitly mentioned in the passage.

Distortions

Another major error made by both Iranian Experimental Group A and Experimental Group B subjects was distortions. That could have been related to the cultural gaps in the subjects' knowledge, especially those Experimental Group A subjects who had not been pre-taught about the traditional Emirati wedding customs or intrusions of native customs and beliefs. As expected, Experimental Group A subjects who had not been pre-taught made the highest number of distortions in their recalls. For instance, the text included the following passage: "As a tradition in the UAE, the place of the wedding is the beginning of the bride's preparations for her wedding." An Experimental Group A subject recalled the above passage as follows: "According to a tradition in the Emirates, the first thing that a bride does is to choose a place for the wedding and decide on the number of the guests. The priority is with the intimate friends and close relatives of both sides." This is a clear case of a subject's distorting a foreign text in the direction of a native event. A similar distortion was made by another Experimental Group A subject when describing the wedding night ceremony. The passage involved read, "After her [the bride's] eyes are

lined, her hair is perfumed and her hands are decorated with henna, the bride is ready for the wedding night. The back-to-back feasts and celebrations involve both men and women who usually celebrate separately." The student's recall read, "They [the bride's relatives and girlfriends] scatter money and chocolate on the bride's head."

Another error of distortion was made by the majority of Experimental Group A students who had not been pre-taught. This error occurred when they described the *henna* preparation process. The passage read, "Henna is a dark brown paste made from the henna plant. When you leave henna on the skin for some time, the henna leaves a dark red stain." A subject, mistakenly, recalled from this passage that *henna* is made from "a stone which is first heated until it disintegrates." Another student recalled the same passage in the following way: "People get henna from a stone from which they extract a substance. It is reddish black."

As for the *kohl* preparation process, the Experimental Group A students who had not been pre-taught made a variety of distortions. The passage involved read,

> Kohl comes from a black stone called al-athmed. This stone is brought from Saudi Arabia. Kohl is prepared through different stages. First, the stone is heated until it disintegrates. Then, it is processed in water and Arabian coffee or sometimes henna leaves. After that, it is left for forty days to process. Finally, it is ground into a fine powder and it is ready to be used as eyeliner.

A student recalled, "They make kohl from a stone found in Saudi Arabia. They grind this stone and then place it in water, and even sea water. After forty days, a block of liquid called Arabian kohl is produced." Another subject recalled, "Kohl is made from a stone found in Saudi Arabia, and they heat this stone and then put it in water. After that, they can get some coffee from it. Then, they put certain powder and use it for lining the eyes." A third subject recalled, "First, they heat the stone and place it in water and then they use it to line their eyes after forty days." Speaking about the use of *kohl* during the wedding festivities, a fourth subject recalled, "There is still another ceremony during which they make the bride up. They call it Al-Athmad night during which they line the bride's eyes." In the same context, the same subject added, "It is a tradition that the bride must have big black eyes."

Apart from the recalls on the "*henna* night" and the *kohl* tradition, other Experimental Group A subjects made other errors of distortions. For instance, a

subject recalled that "during the henna night" it is not only the bride and her girlfriends that use *henna*, but also "the groom." This is another clear case of distorting the passage in the direction of the subject's native event. Indeed, in some southern parts of Iran, the groom may have his fingers decorated with henna, an uncommon event in Emirati traditional weddings. To speak about the clothes that the bride wears during the wedding preparations, another Experimental Group A subject recalled that "the bride wears the clothes and jewelry that the groom has provided her with." This is also a clear distortion of the passage, for the Emirati bride always keeps all the groom's gifts to elaborate her trousseau. Describing the way the bride, her family members, and girlfriends decorate their hands with *henna*, a third Experimental Group A subject recalled, "The bride's relatives get together and decorate the bride, her family members, and girlfriends' palms with henna." Again, this is a clear distortion of the fact that, in the Emirati traditional wedding, the bride, her female family members, and girlfriends decorate their entire hands rather than only their palms.

The findings of the study also showed that the pre-taught Experimental Group B subjects made some distortions, too. These distortions were far fewer in number than the ones made by Experimental Group B subjects, and even less than those made by the Emirati Control Group C subjects.. For instance, a passage read, "The-back-to-back feasts and celebrations involve both men and women who usually celebrate separately." Although the passage does not show how separated men and women celebrate the wedding night, an Experimental Group B subject recalled that "[in the past] they celebrated the wedding in the bride and the groom's houses, but now they celebrate it in one room divided into two parts with a piece of cloth or anything else." A similar distortion was made by another Experimental Group B subject. Her recall read, "[The bride] enters a room where there is a curtain between the bride and the groom."

Regarding the Emirati Control Group C subjects, it was very surprising that they also made more distortions than the pre-taught Experimental Group B subjects, in spite of the fact that the topic was very familiar to the Emirati Experimental Group C subjects who came from the same area in the Emirates, namely the eastern coast. It is worth mentioning, however, that these distortions were basically domain knowledge rather than culture-related ones. For instance, speaking about how henna is

prepared, a subject recalled that "henna is extracted from a tree called henna tree," whereas the passage states that henna is extracted from "the henna plant." Another subject distorted the process of preparing *kohl*. A passage in the subject's recall read, "[Kohl] is a black stone called Al Athmad brought from Saudi Arabia. It is mixed with water, coffee and leaves of henna. Then, it is ready for use." The passage in the original text, however, described the *kohl* preparation as follows:

> First, the stone is heated until it disintegrates. Then, it is processed in water and Arabian coffee or sometimes henna leaves. After that, it is left forty days to process. Finally, it is ground into a fine powder and it is ready to be used as eyeliner.

In another protocol, *kohl* was remembered as having been extracted from a "plant in Saudi Arabia." This was a clear distortion of the information that *kohl* is extracted from a stone.

Other Overt Errors

Apart form elaboration and distortion, all subjects in the three groups made other types of mistakes. They were mainly errors of inaccuracy and overgeneralization. It is worth mentioning that, as expected, Experimental Group A made the highest number of these errors, next came Experimental Group B, and third Control Group C, who made the least number of these mistakes. To start with, the majority of the errors made by Experimental Group A subjects were errors of inaccuracy. For instance, ten subjects were unable to recall the word "traditional" when recalling the passage that read, "To get ready for her wedding, traditional creams and oils are rubbed into her [the bride's] body." Three subjects substituted the word "special" for "traditional," whereas another substituted "softening." These omissions and substitutions made the custom of rubbing traditional creams and oils into the bride's body void of its traditional culture-specific aspect.

Another error of inaccuracy was that none of the thirty Experimental Group A subjects managed to recall the name of the black stone – *Al Athmed* – from which *kohl* is extracted. A further error of inaccuracy was that four Experimental Group A subjects recalled that the color of *henna* decorations was "brown," whereas it was really "dark red" in the passage. Another error of inaccuracy was that the six Experimental Group A subjects who mentioned the custom of lining the bride's eyes

with *kohl* did not manage to recall the process of making *kohl* properly. They either recalled the steps in the wrong order or gave an incomplete description, as the following recall shows: "Kohl is made from a stone found in Saudi Arabia. They heat the stone and then put it in water. They can get some coffee from it. Then they put in a certain powder. After that, it is used for lining the eyes." The original passage, however, read,

> First, the stone is heated until it disintegrates. Then it is processed in water and Arabian coffee or sometimes henna leaves. After that, it is left for forty days to process. Finally, it is ground into a powder and it is ready to be used as eyeliner.

Apart from errors of inaccuracy, the Experimental Group A subjects made some errors of inappropriate additions. For example, one of the recalls read, "Generally, the wedding ceremony in the UAE is different from that in Iran and many other countries." Another recall included that "wedding ceremonies are different from one place to another all over the world and every country has different traditions."

A major characteristic of the inappropriate additions made by Experimental Group A subjects is that they were mostly due to over-generalizations, most of which were related to the passage that read, "Famous for their large beautiful, black eyes, Emirati women have used Arabian kohl for many years." For instance, one of the subjects' recalls read, "For Emiratis, it is a tradition to use kohl. This is what the Arabs do." Instead of focusing on the Emirati brides, the subject went beyond the passage to speak about Arabs, in general. A similar error was made by another Experimental A subject who recalled, "An Arab girl is famous for her big black eyes," whereas the passage described the Emirati bride's eyes in particular.

Regarding the pre-taught Experimental Group B subjects, two major aspects characterized their errors of inaccuracy. These subjects made almost the same number of errors as that made by Experimental Group A subjects. Most of the errors occurred while recalling the *kohl* preparation process. For instance, one of the recalls read, "[Kohl] comes from Saudi Arabia. It is made from a stone called Al Athmad." They heat the stone, mix it with water, and add other materials to it." The subject was content with recalling the major steps of the *kohl* preparations without focusing on other details such as the processing of the heated stone in water and "Arabian coffee or sometimes henna," or the fact that the process of the kohl preparation lasts "forty

days." It was also noticed that some Experimental Group B subjects did not manage to recall the exact name of the stone from which *kohl* is extracted. It was recalled as "Al Athmadi," "Al Athmah," or "Al Ahmad."

It was surprising that Emirati Control Group C made errors of inaccuracy, too. More surprisingly, most of these errors occurred while describing the process of making *kohl*. Even though they were Emirati, none of these 30 subjects could recall the name of the stone from which *kohl* is extracted. Nine other subjects failed to recall the different steps of *kohl* preparation, whereas one subject was content to summarize these steps as follows: "Arabian kohl is extracted from a stone called Al Athmed. This stone is brought from Saudi Arabia. The stone goes through a forty-day process before it is turned into kohl." Another subject could not manage to recall the time needed to process *kohl*. Six other subjects failed to recall the color of the stone from which *kohl* is processed. Five more subjects failed to recall the fact that *kohl* is extracted from a stone. Instead, both of them recalled that *kohl* was extracted from either "a plant" or "a tree."

Omissions

Apart from, elaborations, distortions, and other overt errors, subjects in the three groups omitted different idea units while recalling the text. As expected, Experimental Group A subjects who had not had any pre-teaching made the highest number of omissions, 55 units out of a possible score of 88, with a total value of 140. Experimental Group B subjects who had been pre-taught made 48 omissions with a total value of 120. As for Control Group C subjects, they made 35 omissions with a total value of 91. Most of the omissions made by Experimental Group A were of values 3 and 4. Twenty-seven subjects could not recall the following information: "Nowadays, most of the weddings are celebrated in less than one week, and weddings are just as elaborate and traditional." Also Experimental Group A subjects failed to recall the idea that "Arabian kohl or eyeliner is another tradition of the UAE wedding customs." Eight subjects omitted the idea that "The bride's preparations are time consuming" and that "When you leave henna on the skin for some time, the henna leaves a dark red stain." Fourteen subjects failed to recall that "although the groom goes through a number of preparations, the bride's preparations are naturally more involved" and that "the bride likes to line her eyes on almost every occasion."

Twelve subjects omitted the idea which states that "the bride's hands and feet are decorated with henna" and that "the bride's hair is perfumed." Also ten subjects could not manage to recall that during the wedding preparation week, "traditional music, singing, and dancing take place," there are "back-to-back feasts and celebrations," and that "*henna* night" is a few days before the wedding night." Six subjects were unable to recall the idea that apart from "beautiful jewelry, perfumes, silk, and other necessary items are presented" to the bride by the groom." Finally, three subjects failed to mention that most of the traditional Emirati wedding ceremonies "are still practiced today."

As for the omissions made by those pre-taught Experimental Group B subjects, they were mainly of values 3 and 4. For example, none could recall the idea that nowadays most weddings "are just as elaborate and traditional" as they used to be in the past. Eight subjects omitted the information that "kohl is another tradition in the Emirati weddings." Five subjects were unable to recall that "after" the bride's "eyes are lined, her hair is perfumed." Four subjects could not recall that "the bride is ready for her wedding night" after her eyes are lined, her hair is perfumed, and "her hands and feet are decorated." Moreover, three subjects failed to mention that "the bride likes to line her eyes." Finally, two subjects failed to recall the idea that the beginning of the Emirati traditional wedding is "the bride's preparations for the wedding."

Regarding the omissions made by the Emirati Control Group A subjects, they were mainly of values 2 and 3. For instance, nine subjects failed to recall that "Nowadays most weddings [in the Emirates] are celebrated in less than one week." Eight subjects omitted the idea that Arabian *kohl*, or eyeliner is "another tradition of the UAE wedding customs." Seven subjects failed to recall that "the bride likes to line her eyes on almost every occasion," and that her "hair is perfumed" before the wedding preparations. Also four subjects omitted the information that the wedding night ceremony starts when the bride is ready. Finally, two subjects were unable to recall the idea that, generally, most wedding traditions "are still practiced today."

Recall and Reading Time

Contrary to what had been expected, Control Group C subjects spent the most time recalling the text. The whole group needed a total of 91.0 minutes (5,460 seconds) to finish the task. Maybe that was due to the fact that those subjects had the

most to say since they were familiar with Emirati traditional wedding customs, or maybe they were most interested. Next came Experimental Group A subjects. They spent 85 minutes (5,100 seconds). Experimental Group B subjects spent only 83.3 minutes (5,000 seconds). Regarding the reading time, however, and as expected, Emirati Control Group C subjects spent the least time reading the text before starting to recall it. They needed 100.6 minutes (6,040 seconds) to finish the task. Experimental Group B subjects spent 117.0 minutes (7,020 seconds), whereas Experimental Group A subjects spent 146.6 minutes (8,800 seconds).

MCQ Comprehension Test

Types of Information Recalled

The MCQ comprehension test assessed subjects' reading knowledge in identifying the main idea, factual knowledge, paraphrasing ability, vocabulary in context, and ability to draw conclusions. One-way ANOVA and post hoc Tukey HSD and Bonferroni tests were conducted to investigate the differences in mean scores and report descriptive statistics. Results of these analyses will be reported in terms of bottom-up reading skills (assessed by factual, paraphrasing, and vocabulary in context questions) and top-down reading skills (assessed by main idea or title and drawing conclusions questions). For the One-way ANOVA Omnibus Test of variance for the sums of reading comprehension MCQs as well as well as students' mean scores on global bottom-up and top-down questions, see Tables 5 and 6 respectively.

Table 5. One-way ANOVA Omnibus Test analysis of variance for the sum of reading comprehension MCQs

Variable	df	F	P
	Between groups		
Sum of bottom-up questions	2	34.14	.00
Sum of top-down questions	2	14.46	.00
Sum of factual questions	2	18.12	.00
Sum of paraphrasing questions	2	14.75	.00
Sum of vocabulary meaning-in-context questions	2	.24	.78
Sum of drawing conclusions	2	10.49	.00
Main idea- title	2	1.22	.00

Table 6. Students' mean scores on reading comprehension combined bottom-up and combined top-down questions

Variable	Experimental Group A Mean Score	Experimental Group B Mean Score	Control Group C Mean Score
Bottom-up questions (n=7)	1.9	3.8	3.3
Top-down questions (n=3)	0.9	1.9	1.7

In all three bottom-up question types, Experimental Group A students scored the lowest. When combining all bottom-up questions, Experimental Group A students had a mean score of 1.9 out of a possible score of 7. Experimental Group B and Control Group C students reported mean scores of 3.8 and 3.3 respectively. In the two top-down question types, once again, Experimental Group A students scored the lowest. When combining all top-down questions, Experimental Group A students had a mean score of 0.9 out of a possible score of 3. Experimental Group and Control Group C students reported mean scores of 1.9 and 1.7 out of a possible score of 3 respectively. For students' mean scores on combined bottom-up and combined

top-down questions, see Table 5.

A post hoc Tukey and Benferroni test found significance between the three groups on bottom-up question processes at the .05 level. In all three factual questions, Experimental Group A students scored the lowest. When combining the three factual questions, Experimental Group A had a mean score of 1.2 out of a possible score of 3. Experimental Group B and Control Group C students reported mean scores of 2.1 and 2.2 respectively. For students' mean scores on the three factual questions combined, see Table 6. In the two paraphrasing questions, once again, Experimental Group A students scored the lowest. When combining the two paraphrasing questions, Experimental Group A had a mean score of 0.3 out of a possible score of 2. Experimental Group B and Control Group C students reported mean scores of 1.1 and 0.6 respectively. For students' mean scores on the two paraphrasing questions, see Table 6. Surprisingly, amongst the three categories of bottom-up questions, vocabulary-in-context questions were found to be the most difficult. Very little difference was found amongst the three groups. Combining the two vocabulary-in-context questions, Experimental Group A had a mean score of 0.3 out of a possible score of 2. Experimental Group B and Control Group C students scored identically (0.4). For students' mean scores on the two vocabulary-in-context questions combined, see Table 6.

As for the top-down questions, in both categories of questions, Experimental Group A students scored the lowest. When combining the two drawing conclusions questions, Experimental Group A students had a mean score of 0.7 out of a possible score of 2, whereas Experimental Group B and Control Group C students reported mean scores of 1.5 and 1.3 respectively. However, in the main idea or title question category, Experimental Group A's scores were only marginally different from the two other groups. Experimental Group A students had a score of 0.2 out of a possible score of 1. Experimental Group B and Control Group C students scored identically (0.4). When looking at top-down questions combined, Experimental Group A students who had no cultural background knowledge scored the lowest while Experimental Group B who had been pre-taught the requisite cultural background knowledge scored the highest. Significant differences were found to exist between Experimental Group A and Experimental Group B/Control Group C on top-down questions processes. For students' mean scores on drawing conclusions and main idea or title questions, see

Table 7.

Table 7. Students' mean scores on combined factual, combined paraphrasing, combined vocabulary-in-context, combined drawing conclusions, and main idea or title question

Variable	Experimental Group A Mean Score	Experimental Group B Mean Score	Control Group C Mean Score
	Between group		
Factual questions (n= 3)	1.2	2.1	2.2
Paraphrasing questions (n= 2)	.3	1.1	.6
Vocabulary-in-context questions (n= 2)	.3	.4	.4
Drawing conclusions question (n= 2)	.7	1.5	1.3
Main idea- title question question (n= 1)	.2	.4	.4

As far as question difficulty is concerned, students in all groups combined scored the highest on questions dealing with drawing conclusions. They managed to have score of 56 out of a possible score of 90 on the first question and 53 out of a possible score of 90 on the second question. As was previously mentioned, subjects had the most difficulty with vocabulary-in-context. They had a score of only 17 out of a possible score of 90 on the first question and a score of only 21 out of a possible score of 90. It should be mentioned that, on subsequent study, it was found that the two words "elaborate" and "ingredients" were classified by Tom Cobb's Vocabulary Profiler as off list words. Simply put, these words are not part of the 1000, 2000 or Academic World List. Students' mean scores and One-way ANOVA Omnibus test analysis for MCQ reading comprehension by question are shown in Tables 8 and 9 respectively. Descriptives and statistics for the MCQ comprehension test by question as well as post hoc Tukey and Bonferroni tests are found in Tables 10 and 11 respectively.

Table 8. Students' mean scores on MCQs reading comprehension by questions

Variables	Experimental Group A Mean Score	Experimental Group B Mean Score	Control Group C Mean Score
Factual question 1	.4	.6	.6
Factual question 2	.4	.8	.6
Factual question 3	.4	.8	.9
Paraphrasing question 1	.2	.7	.3
Paraphrasing question 2	.1	.4	.3
Vocabulary-in-context question 1	.1	.2	.2
Vocabulary-in-context question 2	.2	.2	.2
Drawing conclusions question 1	.4	.8	.6
Drawing conclusions question 2	.3	.7	.7
Main idea-title question	.2	.4	.4

Table 9. One-way ANOVA Omnibus Test analysis for reading comprehension MCQs by questions

Source	df	F	p
	Between groups		
Factual question 1	2	1.97	.14
Factual question 2	2	6.91	.00
Factual question 3	2	8.49	.00
Paraphrasing question 1	2	10.50	.00
Paraphrasing question 2	2	4.20	.01
Vocabulary meaning-in-context question 1	2	.07	.93
Vocabulary meaning-in-context question 2	2	.18	.83
Drawing conclusions question 1	2	5.80	.00
Drawing conclusions question 2	2	6.82	.00
Main idea-title question	2	1.22	.29

Table 10. Descriptives and statistics for reading comprehension MCQs by questions

		N	Mean	Std. Deviation
Factual question 1	Experimental A	30	.43	.504
	Experimental B	30	.63	.490
	Control Group C	30	.67	.479
	Total	90	.58	.497
Factual question 2	Experimental A	30	.40	.498
	Experimental B	30	.83	.379
	Control Group C	30	.67	.479
	Total	90	.63	.485
Factual question 3	Experimental A	30	.43	.604
	Experimental B	30	.67	.479
	Control Group C	30	.90	.305
	Total	90	.67	.474
Paraphrasing question 1	Experimental A	30	.20	.407
	Experimental B	30	.70	.466
	Control Group C	30	.30	.466
	Total	90	.40	.493
Paraphrasing question 2	Experimental A	30	.13	.348
	Experimental B	30	.47	.507
	Control Group C	30	.30	.466
	Total	90	.30	.461
Vocabulary meaning in context question 1	Experimental A	30	.17	.379
	Experimental B	30	.20	.407
	Control Group C	30	.20	.407
	Total	30	.19	.394
Vocabulary meaning in context question 2	Experimental A	30	.20	.407
	Experimental B	30	.23	.430
	Control Group C	30	.27	.450
	Total	90	.23	.425
Drawing conclusions question 1	Experimental A	30	.40	.498
	Experimental B	30	.80	.407
	Control Group C	30	.67	.479
	Total	90	.62	.483
Drawing conclusions question 2	Experimental A	30	.33	.479
	Experimental B	30	.73	.450
	Control Group C	30	.70	.466
	Total	90	59	.495
Main idea (title)	Experimental A	30	.23	.430
	Experimental B	30	.40	.498
	Control Group C	30	.40	.498
	Total	90	.34	.478

Bottom-up	Experimental A	30	1.97	.890
	Experimental B	30	3.87	1.074
	Control Group C	30	3.30	.750
	Total	90	3.04	1.208
Top-down	Experimental A	30	.97	.718
	Experimental B	30	1.93	.583
	Control Group C	30	1.77	.898
	Total	90	1.56	.849

Table 11. Post hoc Tukey and Bonferroni Tests on reading comprehension MCQs by questions.

			df	F	Sig.
Factual question 1	Between Groups	(Combined)	2	1.979	.144
Factual question 1	Between Groups	(Combined)	2	6.915	.002
Factual question 2	Between	(Combined)	2	8.492	.000
Paraphrasing question 1	Between Groups	(Combined)	2	10.500	.000
Paraphrasing question 2	Between	(Combined)	2	4.207	.018
Vocabulary Meaning in context question 1	Between Groups	(Combined)	2	.070	.932
Vocabulary meaning in context question 1	Between Groups	(Combined)	2	.181	.835
Drawing conclusions question 1	Between Groups	(Combined)	2	5.800	.004
Drawing conclusions question 2	Between Groups	(Combined)	2	6.827	.002
Main idea (Title)	Between Groups	(Combined)	2	1.223	.299
Bottom-up	Between	(Combined)	2	34.143	.000
Top-down	Between Groups	(Combined)	2	14.460	.000

Post Hoc Tests

Multiple Comparisons

Dependent variable		(I) Experimental Group	(J) Experimental Group	Mean Difference (I-J)	Sig.
Factual Question 1	Tukey HSD	Experimental A	Experimental B	-200	.261
			Control Group C	-233	.163
		Experimental B	Experimental A	.200	.261
			Control Group C	-033	.963
		Control Group C	Experimental A	.233	.163
			Experimental B	.033	.963
	Bonferroni	Experimental A	Experimental B	-200	.356
			Control Group C	-233	.206
		Experimental B	Experimental A	.200	.356
			Control Group C	-033	1.000
		Control Group C	Experimental A	.233	.206
			Experimental B	.033	1.000
Factual question 2	Tukey HSD	Experimental A	Experimental B	-433*	.001
			Control Group C	-267*	.066
		Experimental B	Experimental A	.433*.	.001
			Control Group C	.167	.336
		Control Group C	Experimental A	.267	.066
			Experimental B	-167	.336
	Bonferroni	Experimental A	Experimental B	-.433*	.001
			Control Group C	-.267	.077
		Experimental B	Experimental A	.433*	.001
			Control Group C	.167	.479
		Control Group C	Experimental A	.267	.077
			Experimental B	-.167	.479
Factual question 3	Tukey HSD	Experimental A	Experimental B	-.233	.104
			Control Group C	-.467*	.000
		Experimental B	Experimental A	.233	.104
			Control Group C	-.233	.104
		Control Group C	Experimental A	.467*	.000
			Experimental B	.233	.104
	Bonferroni	Experimental A	Experimental B	-.233	.127
			Control Group C	-.467*	.000
		Experimental B	Experimental A	.233	.127
			Control Group C	-.233	.127
		Control Group C	Experimental A	.467*	.000
			Experimental B	.233	.127

Paraphrasing question 1	Tukey HSD	Experimental A	Experimental B	-.500*	.000
			Control Group C	-.100	.663
		Experimental B	Experimental A	.500*	.000
			Control Group C	.400*	.002
		Control Group C	Experimental A	.100	.663
			Experimental B	.400*	.002
	Bonferroni	Experimental A	Experimental B	-.500*	.000
			Control Group C	-.100	1.000
		Experimental B	Experimental A	.500*	.000
			Control Group C	.400*	.002
		Control Group C	Experimental A	.100	1.000
			Experimental B	-.400*	.002
Paraphrasing question 2	Tukey HSD	Experimental A	Experimental B	-.333*	.013
			Control Group C	-.167	.32-
		Experimental B	Experimental A	.333*	.013
			Control Group C	.167	.320
		Control Group C	Experimental A	.167	.320
			Experimental B	.167	.320
	Bonferroni	Experimental A	Experimental B	-.333*	.014
			Control Group C	-.167	.452
		Experimental B	Experimental A	.333*	.014
			Control Group C	.167	452
		Control Group C	Experimental A	.167	.452
			Experimental B	.167	.452
Vocabulary meaning in context question 1	Tukey HSD	Experimental A	Experimental B	-.033	.944
			Control Group C	-.033	.944
		Experimental B	Experimental A	.033	.944
			Control Group C	.000	1.000
		Control Group C	Experimental A	.033	.944
			Experimental B	.000	1.000
	Bonferroni	Experimental A	Experimental B	-.033	1.000
			Control Group C	-.033	1.000
		Experimental B	Experimental A	.033	1.000
			Control Group C	.000	1.000
		Control Group C	Experimental A	.033	1.000
			Experimental B	.000	1.000
Vocabulary meaning in context question 2	Tukey HSD	Experimental A	Experimental B	-.033	.951
			Control Group C	-.067	.820
		Experimental B	Experimental A	.033	.951
			Control Group C	.033	.951
		Control Group C	Experimental A	.067	.850
			Experimental B	.033	.951

	Bonferroni	Experimental A	Experimental B	-.033	1.000
			Control Group C	-.067	1.000
		Experimental B	Experimental A	.033	1.000
			Control Group C	-.033	1.000
		Control Group C	Experimental A	.067	1.000
			Experimental B	.033	1.000
Drawing conclusions question 1	Tukey HSD	Experimental A	Experimental B	-.400*	.003
			Control Group C	-.267	.072
		Experimental B	Experimental A	.400	.002
			Control Group C	.133	.506
		Control Group C	Experimental A	.267	.072
			Experimental B	-.133	.508
	Bonferroni	Experimental A	Experimental B	-.400*	.004
			Control Group C	-.267	.085
		Experimental B	Experimental A	.400*	.004
			Control Group C	.133	.804
		Control Group C	Experimental A	.267	.085
			Experimental B	-.133	.804
Drawing conclusion question 2	Tukey HSD	Experimental A	Experimental B	-.400*	.004
			Control Group C	-.367*	.006
		Experimental B	Experimental A	.400*	.004
			Control Group C	.033	.958
		Control Group C	Experimental A	.367*	.008
			Experimental B	-.033	.958
	Bonferroni	Experimental A	Experimental B	-.400*	.004
			Control Group C	-.367*	.009
		Experimental B	Experimental A	.400	.004
			Control Group C	.033	1.000
		Control Group C	Experimental A	.367*	.009
			Experimental B	-.033	1.000
Main idea (title)	Tukey HSD	Experimental A	Experimental B	-.167	.369
			Control Group C	-.167	.369
		Experimental B	Experimental A	.167	.369
			Control Group C	.000	1.000
		Control Group C	Experimental A	.167	.369
			Experimental B	.000	1.000
	Bonferroni	Experimental A	Experimental B	-.167	.538
			Control Group C	-.167	.538
		Experimental B	Experimental A	-.167	.538
			Control Group C	.000	1.000
		Control Group C	Experimental A	.167	.538
			Experimental B	.000	1.000

Bottom-up	Tukey HSD	Experimental A	Experimental B	-1.900*	.000
			Control Group C	-1.333*	.000
		Experimental B	Experimental A	1.900*	.000
			Control Group C	.567*	.048
		Control Group C	Experimental A	1.333*	.000
			Experimental B	-.567*	.048
	Bonferroni	Experimental A	Experimental B	-1.900*	.000
			Control Group C	-1.333*	.000
		Experimental B	Experimental A	1.900*	.000
			Control Group C	.567	.056
		Control Group C	Experimental A	1.333*	.000
			Experimental B	.567	.056
Top-down	Tukey HSD	Experimental A	Experimental B	-867*	.000
			Control Group C	-967*	.000
		Experimental B	Experimental A	.867*	.000
			Control Group C	.100	.838
		Control Group C	Experimental A	.967	.000
			Experimental B	.567	.056
	Bonferroni	Experimental A	Experimental B	-1.900*	.000
			Control Group C	-1.333*	.000
		Experimental B	Experimental A	1.900	.000
			Control Group C	.567	.056
		Control Group C	Experimental A	1.333	.000
			Experimental B	.567	.056
Sum of Factual questions	Tukey HSD	Experimental A	Experimental B	-.867*	.000
			Control Group C	-.967*	.000
		Experimental B	Experimental A	.867*	.000
			Control Group C	.100	.838
		Control Group C	Experimental A	.967	.000
			Experimental B	.100	.838
	Bonferroni	Experimental A	Experimental B	-.867*	.000
			Control Group C	-.967*	.000
		Experimental B	Experimental A	.867*	1.000
			Control Group C	-.100	1.000
		Control Group C	Experimental A	.967*	.000
			Experimental B	.100	1.000
Sum of paraphrasing questions	Tukey HSD	Experimental A	Experimental B	-.833*	.000
			Control Group C	-.267	.210
		Experimental B	Experimental A	.833*	.000
			Control Group C	.567*	.001
		Control Group C	Experimental A	.267*	.210
			Experimental B	-.567*	.001

	Bonferroni	Experimental A	Experimental B	-.833*	.000
			Control Group C	-.267	.277
		Experimental B	Experimental A	.833*	.000
			Control Group C	.567*	.001
		Control Group C	Experimental A	.267	.277
			Experimental B	-.567*	.001
Sum of vocabulary meaning in context questions	Tukey HSD	Experimental A	Experimental B	-.067	.892
			Control Group C	-.100	.773
		Experimental B	Experimental A	.067	.892
			Control Group C	-.033	.972
		Control Group C	Experimental A	.100	.773
			Experimental B	.000	.972
	Bonferroni	Experimental A	Experimental B	-.067	1.000
			Control Group C	-.100	1.000
		Experimental B	Experimental A	.067	1.000
			Control Group C	-.035	1.000
		Control Group C	Experimental A	.100	1.000
			Experimental B	.033	1.000
Sum of drawing conclusions questions	Tukey HSD	Experimental A	Experimental B	-.800*	.000
			Control Group C	-.633*	.003
		Experimental B	Experimental A	.800*	.000
			Control Group C	.167	.639
		Control Group C	Experimental A	.633*	.003
			Experimental B	-.167	.630
	Bonferroni	Experimental A	Experimental B	-.800*	.000
			Control Group C	-.633*	.003
		Experimental B	Experimental A	.800*	.000
			Control Group C	.167	1.000
		Control Group C	Experimental A	.633*	.003
			Experimental B	-.167	1.000

*The mean difference is significant at the .05 level.

Content Knowledge Questionnaire (CKQ)

A fifteen item Likert scale content familiarity questionnaire CKQ was administered to subjects to determine the level of knowledge and interest about Emirati wedding traditions, customs, and practices. There were 13 knowledge questions and two interest questions (see Appendix E). Experimental Group A reported knowledge on areas pertaining to bridal preparations, traditional wedding festivities and customs, and wedding time issues. All of the subjects reported either "quite a lot" or "a lot" of knowledge about the general atmosphere about the wedding festivities. By contrast, Experimental Group A reported a lot of interest in the topic of Emirati weddings. Experimental Group B, or those Iranian students who had been

pre-taught information about Emirati weddings, reported a lot of content knowledge and information in virtually every aspect of the Emirati wedding. The sole exception was item 13 which asked about historical perspective of wedding customs and traditions. Subjects were almost evenly split amongst the categories of "some," "a lot," and "quite a lot." 100% of the subjects in this group expressed a lot of interest in the topic, and a lot of interest to read more about the topic. Results for Control Group C Emirati students were almost identical to those of Experimental Group B. Subjects reported "a lot" of knowledge on all areas associated with Emirati weddings. Like Experimental Group B, there was more of a split on item 13 which asked about historical wedding perspectives. Not surprisingly, this group reported "a lot" of interest in Emirati weddings. As far as the total content and interest in the CKQ are concerned, statistically significant differences were shown to exist between the three groups. One-way ANOVA Omnibus Test analysis for content-knowledge questionnaire results as well as the students' mean content and interests 1 and 2 are found in Tables 12 and 13 respectively. Graphic representations and descriptive statistics on each individual question on the CKQ by experimental group can be found in Appendices N and O, respectively.

Table 12. One-way ANOVA Omnibus Test for content-knowledge questionnaire results

Source	df	F	P
		Between groups	
Content 1	2	65.26	.00
Content 2	2	111.47	.00
Content 3	2	827.48	.00
Content 4	2	95.25	.00
Content 5	2	85.05	.00
Content 6	2	149.19	.00
Content 7	2	229.74	.00
Content 8	2	181.41	.00
Content 9	2	218.40	.00
Content 10	2	180.62	.00
Content 11	2	238.47	.00
Content 12	2	787.64	.00
Content 13	2	227.04	.00
Interest 1	2	19.11	.00
Interest 2	2	19.11	.00

Table 13. Students' mean content, interest 1, and interest 2

Variable	Experimental Group A Mean Score	Experimental Group B Mean Score	Control Group C Mean Score
Content	2.3	4.7	4.9
Interest 1	4.3	5.0	5.0
Interest 2	4.3	5.0	5.0

Discussion

From the results in the above section of this chapter we can answer the research four questions.

Research Question 1

Do Emirati Control Group C students have better comprehension when they read an English text describing a traditional Emirati wedding than Iranian students in both Experimental Group A and Experimental Group B when they read the same text? It was evident from the research findings that cultural schema about Emirati traditional weddings helped Emirati Control Group C students to tackle different reading comprehension tasks, namely the recalling of the text and the reading comprehension multiple choice questions. By comparing the Emirati Control Group C students' mean scores to the scores of those Iranian Experimental Group A students who had no pre-teaching, we can conclude that the former outperformed the latter on all measures. In contrast, Emirati Control Group C students performed better than the pre-taught Iranian Experimental Group B students on certain measures. Indeed, cultural schema allowed Control Group C students to score a mean of 26.7 out of a possible score of 88 on recall gist, whereas Experimental Group B students scored a mean of only 22.8 out of a possible score of 88. The mean of the sum of the values of the gist units recalled by the Emirati Control Group C students was also higher than that of Iranian pre-taught Experimental Group B students. They scored 78.0 and 70.3 out of a possible score of 214 respectively. Also, cultural schema about the traditional Emirati weddings allowed Emirati Control Group C students to omit fewer units in their recall of the text than Iranian pre-taught Experimental B students, 42.3 and 50.2 respectively.

Regarding the reading comprehension multiple choice questions, cultural schema about the traditional Emirati wedding helped the Emirati Control Group C students to reach a mean score of 0.67 out of a possible score of 1 in responding to factual question 1 and a mean score of 0.90 out of a possible score of 1 in responding to factual question 3, whereas Iranian pre-taught Experimental Group B students' mean scores were 0.63 and 0.66 out of a possible score of 1 respectively. Emirati Control Group C students were also able to reach a higher mean score in responding to the reading comprehension vocabulary-in-context question 2 than the Iranian pre-taught Experimental Group B students, who scored 0.26 and 0.23 out of a possible score of 1 respectively. However, in spite of the Emirati Control Group C students' better performance on the above measures than that of the Iranian pre-taught Experimental Group B students, cultural schema about the traditional Emirati

wedding failed to allow the former students to outperform the latter students on many measures related both to the recall protocol and the reading comprehension multiple choice questions.

Research Question 2

To what extent does pre-teaching enhance Iranian Experimental Group B students' performance both on recalling the text and responding to the reading comprehension MCQs? An overall look at the research findings allows us to conclude that pre-teaching the cultural aspects of traditional Emirati weddings as well as the related vocabulary enhanced the Iranian Experimental Group B students' performance on the text recall and responding to the reading comprehension multiple choice questions. Indeed, pre-teaching allowed those students to outperform not only Iranian Experimental Group A students on all measures, but also, on certain measures, to outperform Emirati Control Group C students who were supposedly familiar with the cultural aspects of traditional Emirati weddings. It was, somewhat, surprising, however, that Iranian pre-taught Experimental Group B students spent less time reading the text than Emirati Control Group C students, 8.43 minutes (506 seconds) and 9.58 minutes (575 seconds) respectively. Iranian pre-taught Experimental Group B students also spent less time recalling the text than the Emirati Control Group C students, 6.41 minutes (385 seconds) and 7.60 minutes (456 seconds) respectively. Moreover, pre-teaching allowed Iranian Experimental Group B students to reach a higher mean on the recalled units having the highest value,i.e., 4 than that scored by non-pre-taught Experimental Group A students. Indeed, Experimental Group B students reached a score of 6.2 out of a possible score of 13 on the recalled units having the highest value,i.e, 4, whereas Experimental Group A students recalled a mean score of only 3.3 out of a possible score of 13. Also, pre-teaching helped Iranian Experimental Group B students to make far fewer distortions (2.3) while recalling the text than Emirati Control Group C students who achieved a mean score of 4.3.

Regarding the reading comprehension multiple choice questions, once again, pre-teaching allowed Iranian Experimental Group B students to slightly outperform Emirati Control Group C students on many measures. Indeed, Iranian Experimental Group B students performed better on both bottom-up and top-down processes. They scored a mean of 3.8 out of a possible score of 7 on bottom-up and 1.9 out of a

possible score of 3 on top-down. Emirati Control Group C students, on the other hand, scored a mean of 3.3 out of a possible score of 7 on bottom-up and 1.7 out of a possible score of 3 on top-down. Moreover, although Emirati Control Group C students' overall mean in responding to factual question number 3, which asked the students to find out what "an Emirati lady's future husband presents her with," was higher than that of Iranian Experimental Group B students, the latter students outperformed the former students on responding to factual question number 2 which asked students to find out how long "at present, Emirati weddings usually last." Their mean score was 0.8 out of a possible score of 1, whereas Emirati students' mean score was 0.6 out of a possible score of 1. Another advantage of pre-teaching was that Iranian pre-taught Experimental Group B students were able to perform remarkably well on the paraphrasing questions 1 and 2. They were able to achieve a mean score of 1.1 out of a possible score of 2, whereas Emirati Control Group C students scored a mean of only 0.6 out of a possible score of 2. To give a detailed analysis of the students' mean scores in both groups, Iranian Experimental Group B students scored 0.7 out of a possible score of 1 in responding to the paraphrasing question 1, whereas Emirati Control Group C students had a mean of only 0.3 out of a possible score of 1. Also Iranian pre-taught Experimental Group B students' mean score on responding to paraphrasing question 2 was 0.4 out of a possible score of 1, whereas Emirati Control Group students' mean score was only 0.3 out of a possible score of 1.

Regarding their responses to the top-down reading comprehension questions, Iranian pre-taught Experimental Group B students succeeded in outperforming Emirati Control Group C students. Indeed, pre-teaching allowed Experimental Group B students to reach a high mean score of 0.8 out of a possible score of 2 on responding to the drawing conclusion question number 1 which asked the students to recognize the "beauty preparation" which was "not" considered "a beauty preparation for Emirati weddings." In their response to the same question, Emirati Control Group C students' score was only 0.6 out of a total score of 1. As for the drawing conclusion question 6 which asked the students to recognize the wedding preparation aspect which was "not a use of henna," Iranian pre-taught Experimental Group B and Emirati Control Group C students scored an equal mean of 0.7 out of a possible score of 1. Finally, a further advantage of pre-teaching was that Iranian pre-taught Experimental Group B students managed to come up with a mean score of 0.4 out of a

possible score of 1 in their response to the top-down question which asked them to recognize the main idea or title of the text (question 1), a score that was equal to that of Emirati Control Group C students on the same question.

To conclude this section about the advantages of pre-teaching on Iranian pre-taught Experimental B students' performance, it was evident that pre-teaching was a beneficial warm-up for those students, since it allowed them not only to build cultural prior-knowledge or schema about the Emirati traditional weddings, but also to maintain this schema actively while recalling the text and responding to the majority of the reading comprehension multiple choice questions. This aspect was, somewhat, less evident in the Emirati Control Group C students' performance. As for the performance of those Iranian students who had had no pre-teaching, the above aspect was totally absent.

Research Question 3

Does the absence of pre-teaching hinder Iranian Experimental Group A students who had had no pre-teaching prior to the reading comprehension tasks? It was evident from the research findings that Iranian Experimental Group A students who had experienced no pre-teaching scored the lowest means on recalling the text and responding to the reading comprehension MCQs. On recalling the text, the absence of the cultural schema proved to be a real handicap that hindered Iranian Experimental Group A students who had had no pre-teaching from scoring means equal to or higher than those scored by Emirati Control Group C and pre-taught Experimental Group B students. First of all, it was evident that the absence of cultural schema affected the word recognition rate or speed in that it caused the Iranian Experimental Group A students to achieve a mean score of 17.25 minutes (1,035 seconds) on reading the text, which seems to have led those students to spend the longest mean time recalling the text, 15.18 minutes (911 seconds). The lack of cultural schema about traditional Emirati weddings also affected the recall process of Iranian Experimental Group A students. Indeed, those students had the lowest mean score of the recalled gist units. They scored a mean of only 13.5 out of a possible score of 88. Moreover, they scored the lowest mean in recalling the highest value scored propositions or idea units (3.3 out of a possible score of 52). Also, those students scored the highest means on distortions, omissions of propositions, and other

overt errors. Their scores were 7.6, 56.1, and 10.7 respectively.

The slow reading rate due to the absence of cultural schema about Emirati traditional weddings affected not only the text recall of the Iranian Experimental Group A students, but also their responses to the bottom-up questions in the reading comprehension test. Indeed, once again, the slow word-recognition process caused those students to have the poorest reading comprehension achievement on all measures included in this respect, namely factual questions, paraphrasing questions, and vocabulary-in-context questions. They scored a mean of 1.2 out of a possible score of 2 on combined factual questions. They also scored a mean of only 0.3 out of a possible score of 2 on combined paraphrasing questions, and a mean of only 0.3 out of a possible score of 2 on vocabulary-in-context questions. On the other hand, the absence of cultural schema about the traditional Emirati weddings hindered the Iranian Experimental Group A students from applying the appropriate strategies allowing them to reach high mean scores on the top-down processing questions. In fact, those students achieved the lowest mean scores on the top-down processing questions. They achieved a mean score of only 0.7 out of a possible score of 2 on combined drawing conclusions questions and a mean score of only 0.2 out of a possible score of 1 main idea (title) question.

It was evident that the absence of cultural schema about Emirati traditional weddings was a real obstacle to the Iranian Experimental Group A students in tackling the reading comprehension tasks successfully. Such a conclusion confirms the hypothesis that cultural schema and pre-teaching do actually enhance reading comprehension. However, a detailed analysis of the Control Group A and pre-taught Experimental Group B students' mean scores on certain measures leads to the conclusion that cultural schema as a potential was not sufficient for Emirati students to outperform the Iranian pre-taught students on many measures. Moreover, the building of cultural background knowledge or schema during the pre-teaching was not sufficient enough for Iranian pre-taught students to excel in their performance on the reading comprehension tasks.

Research Question 4

Are there other variables that affect reading comprehension tasks of the students in the three groups apart from cultural schema? To discuss the answer to the

fourth research question, this section sheds light on other factors that affected the students' performance on the text recall and reading comprehension MCQs. These factors include similarities between cultures, cultural gaps, lack of world knowledge, and insufficient language proficiency.

A surprising finding of the study was that some Iranian students from Experimental Group A came up with some elaborations, too. For instance, one passage read, "Another tradition of the UAE wedding customs is the Arabian kohl or eyeliner." This was recalled by an Iranian subject as "One of the most important points seen in the tradition wedding is the use of kohl." Another Iranian Experimental Group A subject recalled that there is a "specific program and ceremony" during the wedding night in spite of the fact that there was no hint to such an idea in the passage. To describe the bride's dress worn on the wedding night, a third Experimental Group A subject recalled that the bride "wears silk clothes, and beautiful jewelry" but this was not explicitly mentioned in the text. This leads us to suggest that there are cultural similarities between traditional Emirati wedding and weddings in Iran. It should be mentioned that Experimental Group A students were not aware of these similarities as the topic-familiarity questionnaire (see Appendix F) shows.

The cultural gaps between the two cultures was another factor that affected the students' reading comprehension, especially that of the Iranian Experimental Group A students. Indeed, as mentioned in the detailed analysis of the recall protocols, those students made the highest number of distortions. The cultural gaps also affected the reading comprehension of those pre-taught Iranian Experimental Group B students. It should be mentioned that most of the distortions made by those students were caused by the lack of details about Emirati weddings dealt with in the warm-up.

Another factor that affected the students' reading comprehension was lack of domain knowledge. Indeed, as mentioned in the detailed analysis of their recall protocols, Control Group A students made more distortions than Experimental Group B students in spite of the fact that the topic was very familiar to them. Lack of world knowledge about the processes of making *henna* and *kohl*, for instance, was a major factor that led Emirati Control Group C students to make distortions. Also lack of domain knowledge caused Emirati Control Group C students to make errors of inaccuracy. Indeed, some failed to recall the color of the stone from which *kohl* is processed. Others were not able to recall that *kohl* is extracted from a "stone" rather

than from a “plant” or “tree” as some recalled.

A further factor that affected the students’ reading comprehension was the insufficiency of their language proficiency. Indeed, although the Flesh-Kincaid Reading Level index of the text was suitable to their level as beginners, the students’ language proficiency hindered their performance on vocabulary-in-context questions, which was their major area of difficulty. Another area of difficulty was the students’ relative inability to tackle the paraphrasing questions. This insufficiency of language proficiency must have affected the students’ bottom-up processing in that they were unable to achieve high scores on vocabulary meaning-in-context questions. This, in turn, must have affected the students’ top-down processing as well, which must have caused the Emirati Control Group C students to overuse their cultural schema about traditional Emirati wedding.

CHAPTER 5
CONCLUSION

Cultural schema has a great impact on reading comprehension tasks. If readers are provided with adequate cultural background, they may encounter fewer difficulties in responding to bottom-up and top-down reading comprehension questions. Cultural schema also enables readers to perform easily on recalling the propositions of the text. Therefore, applying cultural schema to reading comprehension develops in the students a problem-solving, creative, and interpretive strategy. For this reason, reading activities can have an effect on reading comprehension. Pre-reading activities make it possible for teachers to give background knowledge about the text if readers' schemata do not match the writer's schemata, and they can also activate readers' schemata before reading if they share the same background knowledge with the writer. However, as the study implies, the pedagogical focus should not be so much on the process as on the product. Teachers should also cater for their students' linguistic needs, for vocabulary, grammar, rhetoric, and functions, to name a few. This, however, does not affect the fact that cultural schema is a very beneficial means to reading comprehension, as an end.

Pedagogical Implications: Improving The Top-Down Processing

The means scored by Emirati and pre-taught Iranian students both on recall and reading comprehension MCQs proved that cultural schema plays an important role in coming to an L2 text that includes either familiar or unfamiliar cultural features. Indeed, cultural background knowledge is a major contributor to text understanding, as is drawing conclusions and recognizing main idea, for instance. Cultural schema is also a contributor to recalling, as is coming up with the gist units, for example. It is important for the EFL/ESL teacher to recognize that the reader brings something important to a text: Previously acquired cultural schema is the basis for comprehending. The meaning of text is constructed by the reader who makes connections between the text and what is known about the cultural values, beliefs,

native language discourse processes, and consciousness of language. Therefore, in order for students to comprehend texts that include unfamiliar cultural features, they need to be taught how to develop new schemata of alternative cultural practice and values, as well as new schemata of language, text, and interpretation.

As for absence of cultural schema, the means scored by the Iranian students who had not had any pre-teaching show that it is nearly impossible for students to understand materials that they have been given to read if they have little or no personal knowledge of the topic. Comprehension occurs when the information that is being read is connected with that which is already known. If readers do not make the connections, then there is limited comprehension. Two major consequences are the result of the absence of cultural schema: poor comprehension and poor memory. Therefore, it appears that when readers lack the cultural schemata necessary to read, three major instructional interventions need to be considered. First, teach vocabulary. Second, provide experiences. Finally, introduce a conceptual framework that will enable students to build appropriate cultural background.

However, reading problems are not just caused by cultural schema deficiencies, but also by inactive relevant schema. In other words, readers may come to a text with cultural prior knowledge but their schema is not necessarily activated while reading. Indeed, relevant schema must be activated. Many students begin to read a selection without identifying or thinking about the topic before hand. This means that they are probably not aware that what they already know is an essential factor in understanding the material to be read. The cultural background or prior knowledge that students bring to the reading of a selection may be the most important factors affecting how well they comprehend it. Activating knowledge about a topic is particularly important for second language readers whose world knowledge often far exceeds their linguistic skills. Teachers should, therefore, always provide opportunities for all readers to think or discuss what they know about the topic of the reading. Such opportunities can be provided through pre-reading activities. Indeed, pre-reading activities have facilitating effects on comprehension of explicitly inducing content schemata, especially at the beginning and intermediate proficiency levels, as compared two other methods of inducing content schema – through vocabulary activities and read-reread activities. By providing pre-reading activities, schemata production is involved in the short circuit of L2 reading, in that the effectiveness of

extremely induced schemata is greater at lower levels, and that induced schemata can override proficiency as a factor in comprehension.

Pre-reading activities that activate cultural schema orient students to the topic and facilitate comprehension. Once the main idea of the selection has been identified by previewing or surveying, for instance, students need to consider what they know about the topic and what it means to them. Teachers can easily and naturally use a variety of instructional techniques to focus students' attention on their prior-knowledge. In addition, teachers need to focus the students' attention on features of the text that can aid in building a scaffold for what they will read: titles, photographs or illustrations, and if appropriate, the actual structures of the text. It should be mentioned, therefore, that pre-reading activities must accomplish three goals: building new background knowledge, activating existing background knowledge, and correcting misconceptions.

Moreover, some second language readers are not efficient interactive text processors, either because they attempt to process in a totally bottom-up fashion, and may be effortful decoders at that, or because they attempt to process in a totally top-down fashion, and are hence subject to schema failures or schema interference. For example, when second language learners rely too heavily on top-down processing to comprehend a text, they can be misled if their interpretations are based on cultural schema which does not match those the author had in mind. This view was clearly shown by the Iranian students who had not had any pre-teaching. They scored the highest means of culturally-based distortions of the text as well as omissions of propositions. These results show the pervasive influence of cultural schema on reading comprehension and memory. On the other hand, when second language learners rely too heavily on bottom-up processing, they cannot compensate for their poor linguistic proficiency, especially when they are beginner readers as the case with the students in this study. Therefore, teachers should maintain a balance by applying both approaches, bottom-up and top-down. In that, they take useful ideas from the bottom-up perspective and combine them with key ideas from a top-down view. Also it should be mentioned that sometimes cultural schema hinders comprehension. Indeed, some misconceptions about a particular cultural aspect may interfere with reading. The teacher may have to correct the background knowledge through a pre-reading activity before reading comprehension can be activated.

EFL/ESL teachers should always build cultural schema, activate it, or correct cultural misconceptions prior to any reading comprehension task. EFL/ESL teachers should also maintain cultural schema actively in the while and post reading stages. However, as the findings of the study show, cultural schema is not sufficient for students to excel in L2 reading comprehension for there are other factors that contribute to reading comprehension. Such factors are improving the bottom-up processing, enhancing automatic decoding, developing spelling, grammar, and reading, and widening word knowledge for skilled reading.

Pedagogical Implications: Improving The Bottom-Up Processing

Mackay, Barman, and Jordan (1979) state,

> To ask a student to demonstrate a skill may indicate whether or not he has mastered it, but it may teach the student nothing. If our purpose is not to test but to teach, then our materials should provide the students with linguistic information about how a text conveys meaning, so that he can use the information in order to understand not only the text under scrutiny, but any text his studies may require him to cope with. (p. 81)

What, therefore, should linguistic information include?

Enhancing Linguistic Information

According to Mackay, Barman, and Jordan, linguistic information includes the spelling system of English, the grammatical system of English, semantic knowledge, and textual grammar in English. The spelling system of English allows the reader to know which letters can and cannot follow others. The grammatical system of English, on the other hand, enables the reader to know which words can and cannot be placed in certain parts of the sentence. As for semantic knowledge, it helps the reader know which words are or are not appropriate in certain contexts. Finally, textual grammar in English allows the reader to know the linguistic features which tie a series of statements together to form a text. It should be mentioned that recent research would seem to support Mackay, Barman, Jordan, and Stoller (1986), for instance, who cites studies which show that teaching of some bottom-up skills is necessary, especially for

beginning level of students and for students whose native language does not use the Roman alphabet, as was the case of the students in this study. Moreover, when students read a second language, they will compensate for a lack of topic information by relying on word level clues to meaning (Stanovich 1980). The problem is that they may unconsciously and mistakenly rely on language features which function as to meaning in their native language, but not in English (Cziko, 1978).

In order to promote the development of fluent and effective reading, therefore, it is a good idea for students to learn and practice some bottom-up strategies which good readers employ. In this context, research has shown that good native speaker readers unconsciously engage in a great many perceptual processes when they read (Haber & Haber, 1981). These automatic processes include the ability to recognize letters and words on sight; to identify a form or a syntactic structure at a glance; and to recognize and unconsciously apply redundancies in English. With effective instruction and practice in the ways that meaning is conveyed by such linguistic features as spelling, vocabulary, and grammar, EFL/ESL and other limited English proficient students can learn to sample a text more effectively. This would allow more processing time for the application of frameworks such as top-down processing, for instance. In order to enhance the students' perceptual skills, research has specified classroom activities such as identification exercises, perceptual training combined with meaningful text, and automatic decoding. Identification exercises may ask the students to scan each line of the text and circle the word that is different or read the key word and then scan the line in order to circle the key word or phrase every time the students can see it. As for perceptual training combined with meaningful texts, it is based on words taken from text read in class. EFL/ESL teachers would use the words and topics which their own students have discussed in class. Another activity related to perceptual training combined with meaningful texts, is a popular game-like reading activity called the Word Search Puzzle. This activity enhances word visualization and recognition ability. In that, it can reinforce the language learners' perception of letters and words in English, as well as the spelling of words. Word search puzzles can also be used to reinforce spelling and the spelling rules of English. They can also reinforce students' knowledge of semantic categories.

Teachers can devise word search puzzles for reviewing vocabulary or for introducing new words within a category. It should be mentioned that puzzles are very

simple to construct, and students may enjoy devising them for each other. Word search puzzles can be assigned with or without word lists provided. When there is no word list provided, the teacher can tell the students what the category is, and they can try to find a given number of words which fit that category. This can be varied according to the vocabulary knowledge of the students.

Another exercise for training students in word perception in a meaningful context consists of providing the students with a passage in which the lower half of every word is missing. The students are to read the passage and mentally supply the missing halves of the letters. This activity allows the readers to know that, as they read the passage, they can find that they can understand the story, for instance, and answer some related questions such as true-false questions even if only half of each letter is printed. In that case, the brain makes up the other half.

Enhancing Automatic Decoding

Another aspect that improves bottom-up processing is automatic decoding. Decoding, in general, implies recognizing and identifying words. It is one of the processes which good native speaker readers do automatically with large portions of a text (Haber & Haber, 1981). Automatic recognition of certain words makes comprehension of the text easier because it allows the readers to use more of the limited capacity of the eye-brain information processing system for attending to the other aspects of the texts, and for making connections with prior knowledge (Stanovich 1980). Some teachers may, therefore, be tempted to teach theses words directly, perhaps by using flashcards and other drill methods. That might seem like the logical thing to do, but research has shown that such approaches are not as effective as teaching these common words in meaningful contexts. For instance, Fleisher, Jenkins, and Pany (1979) found that lack of automaticity may limit comprehension because too much mental effort is devoted to decoding. However, research has shown that short-term instruction on isolated words is not adequate to affect comprehension and speeded practice needs to focus on words in context instead. One way to help students develop automatic identification is to assign cloze-type exercises in which the outlines of the words are shown, but not the actual letter. Such exercises can be aided (hidden words given in a list) or unaided (hidden words are not given), depending on the need of the students.

Another important way to help students develop automaticity is by increasing the reading rate. Some teachers may be surprised when they hear that they should teach their students to read faster. However, there are both pedagogical and practical reasons for including reading rate in the reading class, even for EFL/ESL students. First, working on increasing their reading rate reinforces the idea that it is possible to understand a passage without necessarily reading every word, one word at a time. That is a very difficult habit to break, and many students balk at skipping words. They often say, "That's not really reading." It is important to remember that reading word by word may be more than just a habit. It often reflects a student's cultural understanding about the nature and purpose of reading.

Secondly, in academic settings which require reading in English, one of the most difficult challenges students face is the sheer magnitude of their reading assignments. EFL/ESL students who do not learn to read faster can respond three to four times longer than their native English-speaking classmates on completing the reading for a course. Then they have little time left over for thinking over and synthesizing their ideas they have learned from their reading. Most importantly, reading rate affects comprehension. Research shows that the short-term memory will not hold information for more than a few seconds. The reader needs to take in enough of the text at one time to allow the brain to make sense of it. The brain cannot do its work effectively unless students learn to read at a rate of about 200 words per minute (Smith, 1986). Therefore, improved comprehension will result from learning to read faster.

It is a good idea to teach reading rate improvement techniques and provide practice in class two or three times a week, and, if possible, to assign additional practice in the reading lab or at home. In class, students should read materials at their English language proficiency level "against the clock" and then answer comprehension check questions. Once they get into the routine, students enjoy seeing their own progress, especially if they use a graph for keeping a record of their rate and comprehension.

Linguistic Knowledge or Spelling, Grammar, and Reading

Although English classes usually deal with spelling, grammar, and word meanings, students may not be aware that knowledge of these linguistic features can

improve their reading skill. This lack of awareness is especially likely if the instruction is rule-based (e.g., rote learning) rather than meaning-based (e.g., contextualized exercises based on an explicit rationale). Therefore, teachers should apply meaning-based practice for developing a greater awareness of some of the lexical and grammatical features which are especially useful for improving reading. The idea is that, the more textual clues to meaning that the reader can take note of, the more rapid and accurate the reading will be. A cloze activity which reinforces reading skills is the C-test, developed by Raetz and Klein-Braley (1984):

> Every second word is deleted. However, in order to ensure that solution is possible at all, we leave the first half of the deleted word standing. If the word has an odd number of letters, we delete exactly half the word plus half a letter. If the word consists only of one letter, then this word is ignored in the counting, and half of one letter is deleted…. Only entirely correct restorations are counted as right. (p. 59)

This exercise develops bottom-up skills because it focuses on the words in the text, and cues the first half of the missing words.

Cloze exercises are effective for making students aware of how specific linguistic knowledge facilitates reading. Deletions of some grammatical categories can highten the learners' awareness of the importance of grammatical knowledge of skilled reading. For example, given a text which has all of the prepositions deleted, the students will learn about the functions of prepositions in understanding a text in English. Sets of directions or recipes work especially well for this kind of exercise. Moreover, in order to call attention to the importance of punctuation as clues to meaning and to develop the language learner's awareness of syntax, a passage with all the punctuation removed is effective (Grellet, 1981). As students work together on such a passage, they predict where sentences are likely to stop, based on the meaning of the passage. Apart from perceptual skills and automatic decoding, there are other areas that, one way or another, contribute to the improvement of bottom-up processing. These areas are word knowledge, topics and main ideas, and patterns of textual organization.

Widening Word Knowledge for Skilled Reading

Word knowledge plays an important role in developing reading

comprehension. For this reason, research has shown the close relationship between vocabulary development and skilled reading, although other researchers question the causal nature of that relationship. Nevertheless, most teachers of reading consider vocabulary development as part of their job. But which words to teach and how to teach them? For enhancing reading comprehension, the key vocabulary items are often not the content words but the function words (Cooper, 1984) which serve as cohesive devices, tying the text together and signaling the relationships between concepts and ideas. These function words, an essential component of vocabulary development for skilled reading, include pronouns, synonyms, hyponyms, summary words, and the lexical items which signal the relationship between ideas in a text (i.e., however, then, also). Of course content words are not unimportant. Consequently, this section has been divided into two parts. Part 1 includes sample exercises which can help students acquire some of the function words mentioned above. Part 2 offers ideas for methods of teaching content words.

Research considers pronouns as the most widely-used of all the cohesive devices. They present a double problem for second language students: "local" meaning within sentences and text-level meaning as signals of connections between parts of a text. Therefore, lessons on the use of pronouns for reading improvement may represent a new way of thinking about pronouns for some teachers, whose usual practice is to teach pronouns from a strictly grammatical point of view. But it can also be effective to tech the pronouns and their functions as devices of textual cohesion within a meaningful context. To teach pronouns to beginning level students, teachers can provide their students with passages including underlined pronouns and ask them to circle the referents. At advanced levels, teachers can provide their students with passages including pronouns, some of which are underlined. As the students read the passage, they draw an arrow from each of these pronouns to its referent. Then they write a list of the pronouns and their referents on a sheet of paper.

Teaching of synonyms and hyponyms, as function words, contributes to reading comprehension development. Regarding synonyms, research shows that students with limited vocabularies may mistakenly infer that two different things are mentioned in a text when, in fact, two words or phrases refer to the same thing. A series of exercises which focuses on synonyms will bring this to the students' attention. After they have had some practice in recognizing the functions of synonyms

in a text, they can use their knowledge as a strategy for sorting out passages which do not make sense to them. An example of an activity for teaching synonyms to advanced level students consists of providing students with a passage that includes italicized synonyms asking them to draw an arrow from the italicized word to the word or words that have the same meaning as the italicized word. Sometimes the students are asked to notice that the meaning of a word may be repeated with words that have a different form (e.g., an adjective may be re-expressed in a noun form).

Hyponyms are synonyms which name members of the same category but at different levels of specificity. It should be mentioned that there is a pattern in the use of hyponyms: Each succeeding hyponym is more general than the one preceding it. This is quite common in English, and it seems to fit with the topic/comment order, in which new information is stated before old. In focused exercises, students can learn how to use such knowledge about hyponyms to improve their reading comprehension. As always, it is a good idea to encourage students to discover patterns such as the one for hyponyms, rather than giving them a rule at the outset. An exercise for beginning level students, for instance, consists of providing the students with a list of words referring to the same thing, but some words are more general than others. The students are asked to write the words in order, beginning with the most specific and ending with the most general.

Teaching how to identify cohesive devices, summary words, and lexical items which signal text relationships also enhances reading comprehension. After students have worked with several types of cohesive devices, it is a good idea to ask them to apply their new knowledge to a longer text. As for summary words, collective words and other generalizing words are particularly challenging for EFL/ESL and other limited English proficient students because, as with other referents, they may not realize that one word is summarizing several others in a passage. Regarding lexical items which signal text relationships, research has shown that they are best learned within the context of texts which are "ideal types" of various organizational patterns in English.

Limitations of the Research

Although the research has uncovered many aspects of the impact of cultural schema on reading comprehension, it is far from complete and not without limitations.

Indeed, the most important limitations relate to the application of the recall protocol and the drawbacks of reading comprehension MCQs as assessment measures. To start with, as with any assessment measure, limitations to the recall protocol exist and must be acknowledged. Alderson (2000) and Brisbois (1992) point to the major disadvantage of the recall protocol procedure, namely that traditional scoring is very time consuming. While Bernhardt (1991) notes that scoring can take up to 10 minutes per recall, Brisbois (1992), based on her research, found that "in order for this procedure to attain wider use, however, the scoring process needs to be rendered less time consuming. Research into the automatization of this process would open the way to increasing the use of this testing method" (p. 169). Thus, due to the enormous scoring time requirements and subsequent impact on rater consistency over time, traditional studies using the recall protocol were necessarily limited to small groups. Clearly, a streamlined, automated procedure would greatly enhance the utility of the recall protocol procedure.

Administration of the recall protocol task can also present problems and affect the resulting data. Alderson (2000) and Lee (1986) denote objections that the immediate recall protocol may be more of a test of memory rather than a measure of comprehension. These objections are minimized since in this procedure, the recall typically occurs immediately after reading. Riley and Lee (1996) found that the performance of the recall task varied by the instructions given to the subjects. The recalls provided by subjects told to summarize the main ideas of the text were found to contain significantly more main idea units that the recalls of subjects simply told to write down what they could remember. From their research, it is clear that the task may have an effect on what is recalled and must be clearly defined. Another frequently listed disadvantage of the recall protocol is that not all students are familiar with this testing format. Therefore, recall protocol as a new format for the students in the study could have impacted on results.

Regarding the limitations of the reading comprehension MCQs as a testing format, Alderson (2000) argues that distracters may trick deliberately, which results in a false measure. Also being a good reader does not guarantee being successful in a multiple-choice test since this type of test requires a separate ability. Cohen (1998) also criticizes the way test-takers do "not necessarily link the stem and the answer in the same way" (p. 106), that the tester assumes. So the test takers may reach the

correct answer by following false reasoning.

Another limitation of the study was the number of participants. Although the population of the study included 90 participants, the number of participants in each group was only 30, which was the minimum number of subjects required to conduct a study. It would be more insightful if this study was replicated with larger groups of participants. Moreover, regarding the reading comprehension MCQs, there was no balance between the number of bottom-up and top-down-related questions. Indeed, there were seven bottom-up related questions, on the one hand, and only three top-down related ones, on the other. This unbalanced distribution of questions did not allow the comparison of the students' performance on the bottom-up related questions to that on the top-down ones. Such a comparison would have given more insights into the impact of cultural schema both on the bottom-up and top-down reading comprehension processing.

Recommendations for Future Research

Since no research can uncover all the aspects of the hypotheses, this study recommends the following. First, despite the fact that Iranian students with no pre-teaching indicated absolutely no knowledge about Emrati wedding customs, their recall protocol scripts indicated otherwise based on some elaborations made. I recommend replicating the study with a group of students from a totally different cultural and perhaps religious background. Moreover, in order to measure the true effects of cultural schema on reading comprehension, this study would also need to be conducted with different levels of students. Research indicates that beginning-level readers benefit more from cultural schema and schema, in general, because they rely on it as an alternative to their low language ability. It would be interesting to see whether those students with higher levels of language proficiency perform in the same way.

References

Ajidaeh, P. (2003). Schema theory-based pre-reading tasks: A neglected essential in ESL reading. *The Reading Matrix*. *31*(1), 1-114. Retrieved February 13, 2005, from http://www.article.pdf+background+and+context+in+acquiring+2 +Vocabulary&hl==en&ie==UTFL

Alderson, J. C. (2000). *Assessing reading*. New York: Cambridge University Press.

Allen, W. P. (1956). *Selecting reading materials for foreign students*. Rockville, MD: English Language Service.

Alptekin, C. (2003). *The role of cultural nativization in L2 reading: The case of inferential and literal comprehension*. Paper presented at the Third International ELT Research Conference "Language for Life," Onserkiz Mart University, Conakkale, Turkey.

Anderson, R. C., Reynolds, R. E., Schallert, D. L., & Goetz, E. T. (1977). Framework for comprehending discourse. *American Educational Research Journal, 14*, 364-382.

Anderson, N. (1991). Individual differences in strategy use in second language reading and testing. *Modern Language Journal, 75,* 460-472.

Anderson, N. (1999). *Exploring second language reading: Issues and strategies*. Boston, MA: Heinle & Heinle Publishers.

Anderson, R. C., & Pearson, P. D. (1984). A schema theoretic view of reading comprehension. In P. D. Pearson (Ed.), *Handbook of Reading Research*. (pp. 225-291). New York: Longman.

Barnett, M. (1989). More than meets the eye. Foreign language reading: Theory and practice. *Language in Education: Theory and Practice, 73*, 150-162.

Bartlett, F. C. (1932). *Remembering: A study in experimental and social psychology*. Cambridge: Cambridge University Press.

Bean, T. W., Potter, T. C, & Clark, C. (1980). Selected semantic features of ESL materials and their effect on bilingual students' comprehension. In M. Kamil & A. Moe (Eds.), *Perspectives on reading research and instruction: Twenty-ninth yearbook of the National Reading Conference* (pp. 1-5). Washington, DC: National Reading Conference.

Bean, T. W., & Steenwyk, F. L. (1984). The effects of summarizing instruction on

sixth graders' summary writing and comprehension. *Journal of Reading Behavior, 16*, 297-306.

Becker, C. A. (1982). The development of semantic context effects: Two processes or two strategies? *Reading Research Quarterly, 17,* 482-502.

Bedir, H. (1992). *Cultural significance in foreign language learning and teaching with special emphasis on reading comprehension through cultural schema*. Unpublished masters thesis, Cucurova University,

Bernhardt, E. B. (1983). Three approaches to reading comprehension in intermediate German. *Modern Language Journal, 67,* 262-276.

Bernhardt, E. B. (1985). Reconstruction of literary texts by learners of German. In M. Heid (Ed.), *New Yorker Werkstattgespach 1984: Literarishe teste im Fremdsprachenunterricht* (pp. 255-289). Munchen: Kemmler and Hoch.

Bernhardt, E. B. (1987). Cognitive processes in L2: An examination of reading behaviors. In J. Lantolf & A. Labarca (Eds.), *Delaware Symposium on Language Studies: Research in second language acquisition in the classroom setting* (pp. 37-50). Norwood, NJ: Abex Publishing Company.

Bernhardt, E. B. (1990). A model of L2 text reconstruction: The recall of literary text by learners of German. In A. Labarca & L. M. Bailey (Eds.), *Issues in L2: Theory as practice/practice as theory* (pp. 21-43). Norwood, NJ: Ablex Publishing Company.

Bernhardt, E. B. (1991). *Reading development in a second language: Theoretical, empirical, and classroom perspective*. Norwood, NJ: Ablex Publishing Corporation.

Bian, L., & Wang, C. (1988). Effects of background knowledge and language difficulty on reading comprehension. *Foreign Language Teaching & Research, 74(2),* 231-243.

Block, E. (1986). The comprehension strategies of second language readers. *TESOL Quarterly, 20*, 463-494.

Brisbois, J. E. (1992). *Do first-language writing and second-language reading equal second-language reading comprehension?: An Assessment dilemma.* Unpublished doctoral dissertation, The Ohio State University, Columbus.

Bobrow, D. G., & Collins, A. (1975). *Representation and understanding: Studies in*

cognitive science. London: Academic Press.

Bobrow, D. G., & Norman, D. A. (1975). Some principles for memory schemata. In D. G. Bobrow & A. M. Collins (Eds.), *Representation and understanding: Studies in cognitive science* (pp. 59-138). New York: Academic Press.

Bransford, J. D., & Johnson, M. K. (1973). Considerations of some problems of comprehension. In W. G. Chase (Ed.), *Verbal information processing (*pp. 383-438). New York: Academic Press.

Brown, A. L., Smiley, S. S., Day, J. D., Townsend, M., & Lawton, S. C. (1977). Intrusion of a thematic idea in children's recall of prose. *Child Development, 48,* 1456-1466.

Brown, L. (1980). *Metecognitive development and reading*. Cambridge: Cambridge University Press.

Brown, A. L., Campione, J. C., & Day, J. D. (1981). Learn to learn: On training students to learn from texts. *Educational Research, 10*, 14-21.

Campbell, A. J. (1981). Language background and comprehension. *Reading Teacher*, *35*, 10-14.

Carrell, P. L. (1981). *Culture-specific schemata in L2 comprehension*. Paper presented at the Ninth Illinois TESOL/BE, Chicago.

Carrell, P. L. (1983b). Background knowledge in second language comprehension. *Language Learning and Communication, 2,* 25-34.

Carrell, P. L. (1984). The effects of rhetorical organization on ESL readers. *TESOL Quarterly, 18*, 441-469.

Carrel, P. L. (1988). Interactive text processing: Implications for ESL/second language reading classroom. In P. L. Carroll, J. Devine, & D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 239-259). New York: Cambridge University Press.

Carrell, P. L. (1988a). Some causes of text-boundedness and schema interference in ESL reading. In P. L. Carrell, J. Devine, & D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 101-113). New York: Cambridge University Press.

Carrell, P. L. (1989). Metacognitive awareness and second language reading. *Modern Journal, 73,* 121-134.

Carrel, P. L., & Eisterhold, J. C. (1983). Schema theory and ESL reading pedagogy.

TESOL Quarterly, 17(4), 553-573.

Carrell, P. B., Pharis, B., & Liberto, J. (1989). Metacognitive strategy training for ESL reading. *TESOL Quarterly, 23(4)*, 762-770.

Carrell, P. L., Devine, J., & Eskey, D. E. (Eds.). (1998). *Interactive approaches to second language reading* (10th ed.). Cambridge: Cambridg University press.

Casnave, C. (1988). Comprehension monitoring in ESL reading: A neglected Essential. *TESOL Quarterly, 22*(2), 283-302.

Carver, R. P. (1990). *Reading rate: A review of research and theory*. NY: Academic Press.

Charniak, E. (1972). *Toward a model of children's story comprehension*. Unpublished doctoral dissertation, Massachusetts Institute of Technology, Cambridge.

Chastain, K. (1988). *Developing second-language skills: Theory and practice* (3rd ed.). San Diego: Harcourt Brace Jovanovich.

Chia, H. L. (2001). Reading activities for effective top-down processing. *English Teaching Forum, 39*(1), 22.

Clay, M. M. (1979). *Reading rate: A review of research and theory*. San Diego: Academic Press Inc.

Coady, J. (1979). A psycholinguistic model of the ESL reader. In R. Mackay, B. Barkman, & C. Jordan. (Eds.). *Reading in a second language* (pp. 56-94). Rowley, MA: Newbury House.

Cohen, A. D. (1998). *Strategies in learning and using a second language*. London: Longman.

Collins, A. M., & Quillian, M. R. (1972). How to make a language user. In E. Tulving & W. Donaldson (Eds.), *Organization of memory*. New York: Academic Press.

Collins, A., Brown, J. S., & Larkin, K. M. (1978). Inference in text understanding. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in comprehension* (pp. 96-132). Boston , MA: Allan & Bacon.

Collins, A., & Smith, E. E. (1980). Teaching the process of reading comprehension. *Teaching Report, 182*. Urbana, IL: Center for the Study of Reading.

Connor, U. (1984). Recall of text: Differences between first and second language

readers, *TESOL Quarterly, 18,* 239-255.

Cooper, M. (1984. Linguistic competence of practiced and unpracticed non-native readers of English. In J. C. Anderson & A. H. Urquhart (Eds.), *Reading in a foreign language* (pp. 102-142). New York: Longman.

Cunninghan, J. W. (1982). Generating instructions between schemata and text. In J. A. Niles & L. A. Harris (Eds.), *New inquiries in reading research and instruction* (pp. 42-47). Rochester, NY: Newbury House.

Cziko, G. (1978). Differences in first and second-language reading: the use of syntactic, semantic, and discourse constraints. *Canadian Modern Language Review, 34*, 473-489.

Dawkins, J. S. (1991). The effect of schema activation activities on the performance of second language writing in English. Unpublished master's thesis, University of South Carolina. Colombia.

De Lopez, C. C. (1993). Developing reading speed. *English Teaching Forum*, (2), 49-50.

De Lopez. C. C., Giancarla Marchi, B., and Arreaza-Coyle, M. E. (1997). A taxonomy evaluating reading comprehension in EFL. *English Teaching Forum.35*(2), 30.

Devine, J. (1987). General language competence and adult second language reading. In J. Devine, P. L. Carroll, & D. E. Eskey (Eds.), *Research in reading in English as a second Language* (pp. 73-86). Washington, DC: Teachers of English to Speakers of Other Languages.

Dole, J. A., & Smith, E. L. (1987). *When prior-knowledge is wrong: Reading and learning from science texts*. Paper presented at the annual meeting of the National Reading Conference, St. Petersburg, FL.

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

Dubin, F., & Bicyna, F. (1991). Academic reading and the ESL/EFL teacher. In M. Celce-Mercia (Ed.), *Teaching English as a Second or Foreign Language* (2nd ed.) pp. 195-215). New York: Newbury House.

Duke, N.K., & Pearson, P. D. (2002). Effective practices for developing reading comprehension. In S. J. Samuels & A. E. Farstrup (Eds.), *What research has*

to say about reading instruction (2nd ed.) (pp. 1-26). Newark, DE: International Reading Association.

Durkin, D. (1978). What classroom observations reveal about reading comprehension instruction. *Reading Research Quarterly, 14*, 481-533.

Enright, M., Grabe, W., Koda, K., Mosenthal, P., Mulkahy-Ernt, P., & Schedle, M. (2000). *TOEFL Monogram Series,* MS-17. Princeton, NY: Educational Testing Service.

Eskey, D. (1986). Theoretical foundations. In F. Dubin, D. Esky, & W. Grabe (Eds.), *Teachings second language reading for academic purposes* (pp. 149-167). Reading, MA: Addison Wesley Publishing Company.

Flavell, J. H., & Wellman, H. M. (1977). Metamemory. In R. V. Kail, Jr. & J. Hagen (Eds.), *Perspective in the development of memory and cognition* (pp. 159-189). Hillsdale, NJ: Lawrence Erlbaum.

Freedman, G., & Reynolds, E. (1980). Enriching basal reader lessons with semantic webbing. *The Reading Teacher, 33*, 677-684.

Fries, C. C. (1945). *Teaching and learning English as a foreign language*. Ann Arbor: University of Michigan Press.

Fries, C. C. (1963). *Linguistics and reading*. New York: Holt, Rinehart, & Waston.

Frith, U. (1994). *Beneath the surface of development dyslexia*. New York: Heinle & Heinle Publishing Company.

Gatbonton, E., & Tucker, G. R (1971). Cultural orientation and the study of foreign literature, *TESOL Quarterly, 5*, 137-143.

Goodman, K. S. (1973). Psycholinguistic universals of the reading process. In F. Smith (Eds.). *Psycholinguistics and Reading* (pp. 21-29). New York: Holt, Rinehart & Winston.

Goodman, K. S. (1976). Reading: A psycholinguistic guessing. In H. Singer & R. B. Ruddel (Eds.), *Theoretical models and processes of reading* (2nd ed.) (pp. 13-102). International Reading Association.

Goodman, K. S.(1988). The reading process. In P. L. Carrell, J. Devine, & D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 11-21).New York: Cambridge University Press.

Goodman, K. S. (1996). *On reading: A commonsense look at the nature of language and the science of reading.* Portsmouth, NH: Heinmann.

Gough, P. B. (1985). One second of reading. In H. Singer & R. B. Ruddell (Eds.), *Theoretical models and processes of reading* (3rd ed.) (pp. 661-686). Newark, DE: International Reading Association.

Grabe, W. (1991). Current development in second language reading research. *TESOL Quarterly, 25,* 375-406.

Grabe, W. (1999). Development in reading research and their implications for computer-adaptive reading assessment. In M. Chalhoub-Deville (Ed.), *Issues in computer-adaptive tests of reading* (pp. 11-48). New York: Cambridge University Press.

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

Graesser, A. C., Singer, M., & Trabasso, T. (1994). Constructing inferences during text comprehension. *Psychological Review*, *101(3)*, 371-395.

Grellet, F. (1981). *Developing reading skills*: A practical guide to reading comprehension exercises. Cambridge: Cambridge University Press.

Haber, L. R., & Haber, R. N. (1981). Perceptual processes in reading: An analysis-by-synthesis model. In F. Pirozzolo & M. Wittrock (Eds.), *Neuropsychological and cognitive process in reading* (pp. 48-158). New York: Academic Press.

Hansen, J. (1981). Inferential comprehension strategy for use with primary grade children. *The Reading Teacher, 34*, 665-669.

Harrison, C. (1992). The reading process and learning to read. In C. Harrison & M. Coles (Eds.). *The narrative of real handbook* (pp. 167-213). London: Routledge.

Heinlich, J. E., & S. D. Pittelman. (1986). *Semantic mapping: Classroom applications*. Newark, DE: International Reading Association.

Hirsh, E. D., Jr. (2003). Reading comprehension requires knowledge of words and the world. *American Educator* (2), 10-29.

Hoban, R. (1968). *A birthday for Frances*. Harmondsworth: Penguin Books.

Holland, D.,& Quinn, N. (Eds.). (1987). *Cultural models of language and thought*. Cambridge: Cambridge University Press.

Hook, P. E., & Jones. S. D. (2002). The importance of automaticity and fluency for efficient reading comprehension. *Dyslexia Quarterly Newsletter, 28*(1), 9-14.

Hosenfield, C. (1977). A learning-teaching view of second-language instruction: The learning strategies of second language learners with reading grammar tasks. Unpublshed doctorat dissertation, The Ohio State University, Columbus.

Honsenfield, C., Arnold, V., Kirchofer, J., Lactura, J., & Wilson, L. (1981). Second language reading: A curricular sequence for teaching reading strategies. *Foreign Language Annuals, 14,* 415-422.

Jimenez, R., & Gamez, A. (1996). Literature-based cognitive strategy instruction for middle school Latino students. *Journal of Adolescent and Adult Literacy, 40*, (20), 84-91.

Johnson, P. H. (1981). Effects on reading comprehension of language complexity and cultural background of a text. *TESOL, Quarterly, 15*(2), 169-181.

Johnson, P. (1982). Effects of reading comprehension of building background knowledge. *TESOL Quarterly, 16*(4), 505-516.

Johnston, P. H. (1983). *Reading comprehension assessment: A cognitive basis*. Newark, DE: International Reading Association.

Kang, H. W. (1992). Cultural inference in second language reading, *International Journal of Applied Linguistics, 2,* 95-119.

Kant, I. (1963). *Critique of pure reason*. (Norman Kempt. Trans.). New York: Macmillan Publishing Company. (Original work published in 1781).

Kern, R. (1989). Second language reading strategy instruction: Its effects on comprehension and word inference ability. *Modern Language Journal, 73*, 135-149.

Klaeser, B. M. (1977). *Reading improvement: A complete course for increasing speed and comprehension*. Chicago: Nelson-Hall Inc.

Kintsch, W., Kozminsky, E., Streby, G., & Keenan, J. M. (1975). Comprehension and recall of text as af unction of content variables. *Journal of Verbal Learning and Verbal Behavior, 14*, 196-214.

Kintsch, W., & van Dijik, T. A. (1978). Towards a model of text comprehension and production. *Psychological Review, 85,* 363-394.

Koda, K. (2005). *Insights into second language reading: A cross-linguistic Approach*. Cambridge: Cambridge University Press.

Koriat, A., Goldsmith, M., & Pansky, A. (2000). Toward a psychology of memory accuracy. *Annual Review of Psychology*, 51, 481-537.

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Lee, J. B. (1986). On the use of the recall task to measure L2 reading comprehension. *Studies in Second Language Acquisition*, *8*, 83-93.

Lyon, G. R. (1995). Towards a definition of dyslexia. *Annals of Dyslexia, 4(3)*, 43-44.

Maarof, N. (1998). *Assessing second language reading*. Selangor, Malaysia: Faculty of Language Studies, University Kebangsaan.

Mackay, R., Barman, B., & Jordan, R. R. (Eds.). (1979). Reading in a second Language: Hypotheses, organization, and practice. Rowley, MA: Newburry House Publishers.

MacLeish, A. (1968). Adapting and composing reading texts. *TESOL Quarterly, 2(1),* 43-50.

Mandelbaum, D. G. (1970). *Society in India* (2 volumes). Berkeley: University of California Press.

Mandler, J. M., & Johnson, N. S. (1977). Remembering of things parsed: Story structure and recall. *Cognitive Psychology, 9,* 111-151.

Mandria, J. (2003). The effects of inferring, verifying, and memorizing on the retention of L2 word meaning. *Studies in Second Language Acquisition, 25*(4), 473-499.

Maria, K. (1990). *Reading comprehension: Issues and strategies*. Parkton, MD: New York Press.

Marquardt, W. F. (1967). Literature and cross-cultural communication in the course of English for international students. *The Florida Foreign Language*, *3*, 126-138.

Marquardt, W. F. (1969). Creating empathy through literature between members of mainstream culture and disadvantaged learners of the minority cultures. *The Florida Foreign Language Reporter, 7,* 133-141, 157.

McNeil, J., & Donant, L. (1982). Summarizing strategy for improving reading Comprehension. In J. A. Niles & L. A. Harris (Eds.), *New inquiries in reading research and instruction* (pp. 215-219). Rochester, New York: National Reading Conference.

Minsky, M. (1975). A framework for representing knowledge. In P. Winston (Ed.), *The psychology of computer vision* (pp. 211-277). New York: Winston.

Murtagh, L. (1989). Reading in a second or foreign language: Models, process, and pedagogy. *Language, Culture, and Curriculum, 2,* 91-105.

Nassagi, H. (2003). Higher-level and lower-level text processing skills in advanced ESL reading comprehension. *Modern Language Journal*, *87*, 261-276.

Nist, S. L., & Mealey, D. L. (1991). *Teacher-directed comprehension strategies*. Oxford: Oxford University Press.

Nuttell, C. (1996). *Teaching reading skills in a foreign language*. Oxford: Hienmann.

Oller, J. W., Jr. (1979). *Language tests at school: A pragmatic approach*. London: Longman.

Ozyaka, S. G. (2001). *The significance of cultural content in EFL reading comprehension: The role of schemata*. Unpublished master's thesis, Ege Univwersity,

Palmer, G. B. (1996). *Toward a theory of cultural linguistics*. Austin: University of Texas Press.

Parry, K. J. (1979). Reading in a second culture. In J. Devine. P. L. Carrell, & D. E. Eskey (Eds.). Research in reading in English as a Second language, pp. 59-70. Washington, DC: TESOL.

Paulstron, C. B., & Bruder, M. N. (1976). *Teaching English as a second language*: *Techniques and procedures*. Cambridge, MA: Winthrop.

Pearson, P. D., Hanson, J., & Gordon, C. (1979). The effect of background knowledge on your children's comprehension of explicit and implicit and implicit information. *Journal of Reading Behavior, 11*(3), 201-209.

Perfetti, C., Rouet, J. F., & Britt, M. (1999). Toward a theory of documents representation. In H. van Ostendorp & S. Goldman (Eds.), *The construction of mental representation during reading (*pp. 99-122). Mahawah, NJ: Lawrence Erlbaum.

Perkins, K., & Angelis, P. J. (1985). Schematic concept formation: Concurrent validity for attained English as a second language reading comprehension. *Language Learning, 35,* 269-283.

Raatz, U, & Klein-Braley, C. 1984. The C-Test – A modification of the cloze procedure. In T. Culhane, C. Klein-Braley, & D. Stevenson (Eds.), *Occasional Papers and Problems in Language Testing* (pp. 37-68).

Cochester, England: University of Essex.

Raphael, T. E., & McKinney, J. (1983). An examination of fifth-and-eighth-grade children's question answering behavior: An instructional study in metacognition. *Journal of Reading Behavior, 15*, 67-86.

Raphael, T. E., & Pearson, P. D. (1985). Increasing students' awareness of sources of information for answering questions. *American Educational Research Journal, 22*, 217-236.

Raphael, T. E., & Wonnacott, C. A. (1985). Heightening fourth-grade students' sensitivity to sources of information for answering comprehension questions. *Reading Research Quarterly, 20*, 282-296.

Reutzel, D. R. (1985). Reconciling schema theory and the basal reading lesson. *Reading Teacher, 32*(2), 194-198.

Richards, J. C., & Renanaya, W. A. (2003). *Methodology and language teaching*. Cambridge: Cambridge University Press.

Riley, G. L., & Lee, J. F. (1996). A comparison of recall and summary protocols as Measures of second language reading comprehension. *Language Testing, 13*(2)173-189.

Ringler, L. H., & Weber, C. K. (1984). *Thinking approach to reading*. San Diego: Harcourt Brace Jovanovich. Inc.

Rivers, W. M. (1968). *Teaching foreign language skills*. Chicago: University of Chicago Press.

Rivers, W. M., & Temperly, M. S. (1978). *A practical guide to the teaching of English as a second or foreign language*. New York: Oxford University Press.

Robinett, B. J. W. (1976). Reading English as a second language. *Papers in ESL*: *Selected Papers from the Association of TEFL*, pp. 61-78. Washington, DC: NAFSA.

Rosch, E. (1975). Cognitive representations of semantic categories. *Journal of Experimental Psychology (General), 104*, 192-233.

Rosch, E., Mervis, C. B., Gray, W., Johnson, D., & Boyes-Braehm, P. (1976). Basic objects in natural categories. *Cognitive Psychology, 8*, 363-439.

Rumelhart, D. (1980). Schemata: The building blocks of language. In R. J. Spiro, B. Bruce, & W. Brewer (Eds.), *Theoretical issues in reading comprehension*

(pp. 33-58). Hillsdale, NJ: Lawrence Erlbaum Association.

Rumelhart, D. E., & Ortony, A. (1977). The representation of knowledge in memory. In R. C. Anderson, R. P. Spiro & W. E. Montague (Eds.), *Schooling and the acquisition of knowledge* (pp. 99-135). Hillsdale, NJ: Lawrence Erlbaum Association.

Rumelhart, D. E. (1985). Toward an interactive model of reading. In H. Singer & R. B. Ruddell (Eds.), *Theoretical models and processes of reading* (3rd ed.) (pp. 722-750). Neward, DE: International Reading Association.

Schallert, D. L. (1980). The role of illustrations in reading comprehension. In R J. Bertram, C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension*. Hillsdale, NJ: Lawrence Erlbaum Association.

Segalovitz, N. S., Poulstron, C., & Komoda, M. (1991). Lower-level components or reading skill in higher-level bilinguals: Implication. *AILA Review, 8,* 15-30.

Schank, R. C., & Abelson, R. (1977). *Scripts, plans, goals, and understanding*. Hilsdale, NJ: Lawrence Erlbaum Association.

Schmidt-Rinehart, B. C. (1994). The effects of topic-familiarity on second-language listening comprehension. *Modern Language Journal, 78*, 179-189.

Sharifian, F. (2003). On cultural conceptualizations. *Journal of Cognition and Culture, 3*(3)*,* 187-207.

Smith, E. E., & Swinney, D. A. (1992). The role of schemas in reading texts: A real-time examination. *Discourse Process, 15*, 303-316.

Stanovich, K. E. (1980). Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly, 17,* 157-159.

Smith, F. (1986). *Understanding reading* (3rd ed.) Hilsdale, NJ: Lawrence Erlbaum Association.

Stanovich, K. E. (1986). Mathew effects in reading: Some consequences of of individual differences in the development of reading fluency. *Reading Research Quarterly, 17*, 157-159.

Stefferson, M. S., Joag-Dev, C., & Anderson, N. (1979). A cross-cultural perspective on reading comprehension. *Reading Research Quarterly, 15*(1)*,* 10-29.

Stefferson, M. S., & Joag-dev, C. (1984). Cultural knowledge and reading. In J. C

Alderson & A. H. Urquhart (Eds.), *Reading in a foreign language* (pp. 112-146).

Stefferson, M. S., Goetz, E. T., & Cheng, X. (1999). A cross-cultural perspective on imagery and effect: Dual coding in Chinese and English. *Journal of Literacy Research, 15*, 10-29.

Stoller, F. (1986). Reading Lab. Developing low-level reading skills. In Dubin, Eskey, & w. Grabe (Eds.). *Teaching second language reading for academic purposes.* Reading, MA: Addison Wesley Publishing Company.

Strauss, C., & Quinn, N. (1997). *A cognitive theory of cultural meaning*. Cambridge: Cambridge University Press.

Swaffar, J., Arens, K., & Byrnes, H. (1991). *Reading for meaning: An integrated approach to language learning*. Englewood Cliffs, NJ: Prentice Hall.

Swales, J. M. (1990). *Genre analysis*. Cambridge: Cambridge University Press.

Taylor, N. E. (1983). Metacognitive priority reading. *Psychology, 2,* 269-278.

Tierney, R., Readance, J. E., & Dishner, E. K. (1995). *Reading strategies and practices*. Boston: Allyn & Bacon.

Thorndike, E. L. (1977). Reading as reasoning: A study of mistakes in paragraph reading. *Journal of Education Psychology, 9, 77-110.*

Urquhart, S., & Weir, C. (1998). *Reading in a second language: Process, product and practice.* London: Longman.

Van Dijk, T. A. (1979). Recalling and summarizing complex discourse. In W. Burghardt & K. Hoelker (Eds.), *Text processing: Papers in text analysis and text description* (pp. 49-118). Berlin: Walter de Gruyter.

Wallace, C. (1992). *Reading*. Oxford: Oxford University Press.

Wallace, C. (2001). Conversations around the literacy hour: A case study of the responses of four builingual children to the British national literacy strategy. Paper presented at *Applied Linguistic Studies into the Millennium Conference*, Cape Town, 98-11 December.

Walter, H. C. (2003). Reading in a second language. *Lang. org*. Retrieved September 29, 2004, from http://lang.org/dj/034560.htm

Weaver, C. A., & Kintsch. (1991), Expository text. In R. Barr, M. L. Kamil, P. B. Mosenthal, & P. D. Pearson (Eds.), *Handbook of Reading Research 2* (pp. 230-245). New York: Longman.

Weddings in the U.A.E. (n.d.). *Zawaj.com*. Retrieved 20, September, 2005, from http://www. Zawaj.Com/ weddingways/uae.html

Whitehead, F. (1975). *Children's reading interests*. London: Longman.

Williams, E. (1987). Classroom reading through activation of content-based schema. *Reading in a Foreign Language, 4*(1), 1-7.

Yin, K. M. (1990). The role of prior knowledge in reading comprehension. *Reading in a Foreign Language*, *3*(1), 375-380.

Yoon, J., Park, M., & Commeyras, M. (2002). A comparative study of symbolic reading. *Current Issues in Education, 5*(2)*, 23-36*.

Yopp, R. E. (1988). Questioning and active comprehension. *Questioning Exchange, 2*, 231-238.

Yousef, F. S. (1968). Cross-cultural testing: An aspect of the resistance reaction. *Language Learning, 18,* 227-234.

Yule, G. (1996). *The study of language* (2nd ed.). Cambridge: Cambridge University Press.

Appendix A

Pre-reading Activity - Warming-Up

The Traditional Emirati Wedding

I. Preparations (Tradition 1)

- A. The bride's body is rubbed with traditional creams and oils.
- B. The bride's hands and feet are decorated with "henna".
- C. The bride's hair is perfumed with amber and jasmine.
- D. The bride eats the best of foods prepared by her girlfriends.
- E. The bride is not seen for 40 days except by family members.
- F. The groom gives the bride many items to make her "addahbia" or her trousseau.
    1. beautiful jewelry
    2. perfumes
    3. silk materials
    4. other necessary items

II. Festivities

- A. The festivities usually take about one week before the wedding. (Nowadays, most weddings are celebrated in less than one week.)
    1. traditional music
    2. singing
    3. dancing

III. The Henna Night (Tradition 2)

(A few days before the wedding night)

- A. It is a special night for the bride because it is a night for ladies only.
- B. On this night,
    1. the bride's hands and feet are decorated with henna.
    2. the bride's sisters, female family members and

and girls sing, dance and decorate their hands with henna.

IV. Kohl (Tradition 3)

A. The bride lines her eyes with Arabian Kohl or eyeliner.

1. The bride likes to line her eyes on almost every Occasion.
2. Kohl comes from a black stone known as Al Athmad.
3. Kohl processing

B. The bride's hair is perfumed.

C. The bride's hands and feet are decorated with henna.

D. The bride is ready for the wedding night.

V. The wedding night

A. Back-to-back feasts and celebration

B. Different areas of the country have slight difference in their wedding celebrations.

C The general traditions are still practiced today.

Appendix B

Reading Comprehension Text

1. As a tradition in the UAE, the place of the wedding date is the beginning of the bride's preparations for her wedding. Although the groom goes through a number of preparations, the bride's preparations are naturally more involved and time consuming.
2. To get ready for her wedding, traditional creams and oils are rubbed into her body. She uses cleansing and conditioning oils and creams. Her hands and feet are decorated with henna. Her hair is then washed with beautifully-smelling perfumes of amber and jasmine. She eats only the best of foods. Her girlfriends prepare these dishes and then share with her.
3. Traditionally, she is not seen for forty days except by family members. She uses this time to rest at home and get ready for her wedding day. Beautiful jewelry, perfumes, silk materials, and other necessary items are presented to her by the groom. It is with these gifts which she creates her elaborate trousseau called Addahbia.
4. The festivities usually take about one week before the wedding night. During that week, traditional music, singing, and dancing take place. These activities reflect the joy shared by the bride's and groom's family. Nowadays, most weddings are celebrated in less than one week. However, they are just as *elaborate* and traditional.
5. A few days before the wedding night is the henna night. This night is called Laylat Al Henna. This is a very special night for the bride since it is a ladies' only night. On this night, the bride's hands and feet are decorated with henna. Henna is a dark brown paste made from the henna plant. When you leave henna on the skin for some time, the henna leaves a dark red stain.
6. The henna night is a time for all the bride's sisters, female family members and girlfriends to get together and sing and dance. All female family members and guests also decorate their hands with henna. The henna is not only for decorative purposes. It serves as a hair and skin conditioner. When mixed with certain *ingredients* it can be used as a medicine for some wounds.
7. Another tradition of the UAE wedding custom is the Arabian Kohl or eyeliner. The bride likes to line her eyes on almost every occasion. Famous for their large, beautiful, black eyes, Emirati women have used Arabian Kohl for many years.
8. Kohl comes from a black stone known as Al Athmed. This stone is brought from Saudi Arabia. Kohl is prepared through different methods and in different stages. First, the stone is heated until it disintegrates. Then it is processed in water and Arabian coffee or sometimes henna leaves. After that, it is left for forty days to process. Finally, it is ground into a fine powder and it is ready to be used as eyeliner.
9. After her eyes are lined, her hair is perfumed and her hands and feet are decorated with henna, the bride is ready for her wedding night. The back-to-back feasts and celebrations involve both men and women who usually celebrate separately. Although different areas of the country may have slight differences in their celebrations and customs, the general traditions are the same throughout the country most of which are still practiced today.

Source: *("Weddings in the UAE.," n.d.)*
Words: 543words

Appendix C

Bottom-up and Top-down Questions

Bottom-up Questions	Top-down Questions
Vocabulary Meaning from Context	A. Analyze
Referents	Organize Sentences
Appropriate Connectors	Transcoding Information to Graph
Paraphrasing	Recognizing Textual Inconsistencies
Answering Factual Questions	Identifying Progression of Text
Recognizing Definitions	Drawing Conclusion from Explicit Information
Recognizing Comparison-Contrast Relationships	Drawing Deduction from Explicit Information
Recognizing Classifications	Predicting from Explicit Information
Recognizing Cause-Effect	B. Interpret
Recognizing Sequences	Recognizing Topic Sentences
Recognizing Fact-Hypotheses	Recognizing Author's Purpose
Recognizing Description	Choosing Appropriate Title
Recognizing Function of the Text	Identifying Type of Text
	Identifying Source of Text
	Identifying Intended Audience
	Recognizing Tone of Author
	Recognizing Opinion of Author
	Drawing Inferences
	Inferring What Proceeded
	Predicting What Follows from Implicit Information

	Making Analogy Between Information in passage and New Situation

Elaboration of Appendix C

Bottom-up Processing

1. Vocabulary Meaning from Context
   The reader may be asked to determine the meaning of a word based on the context in which it appears. In this type of question, the options all contain valid definitions of the word, so the question does not become a simple dictionary exercise.
2. Determine Referents
   The reader is asked to identify the word or phrase which a particular noun or p refers to, thus establishing cohesive relationships of an anaphoric nature.
3. Select Appropriate Connector or Usage of a Given Connector
   In order to demonstrate his / her comprehension of the relationship among the different propositions presented by the author, the reader may be asked to select appropriate connector or the appropriate usage of a given connector. For example, connector "nevertheless" in the following blank, the reader is demonstrating his recognition that the relationship between the first and second parts of the sent one of contrast:
   "The results were convincing; _____, further evidence from research called."
4. Restate or Paraphrase Specific Information
   To determine if the reader has comprehended explicit information which appears in the text, he / she may be asked to select the most appropriate paraphrase for this information or simply to recognize the answer in specific parts of the text.
5. Answer Factual Questions
   This category refers to items in which the stem appears in the form of a question, and the reader is asked to demonstrate understanding of explicitly stated facts in the reading
6. Recognize Definitions
   The reader may be asked to identify the words which are defined in the text.
7. Recognize Comparison-Contrast Relationships
   The reader may be asked to recognize the elements being compared, the basis for the comparison, or the relationship between two or more elements being compared (similarities or differences).
8. Recognize Classification
   The reader may be asked to recognize the criteria used by the author to classify specific elements and for the relationship between these elements.
9. Recognize sequence (process and chronology)
   The reader may be asked to recognize the sequence (chronology or process) used by the writer, or to recognize the sentence which appropriately describes the relationship between steps or stages in the sequence.
10. Recognize Cause-Effect
    The reader may also be required to distinguish between reasons or motives and consequences clearly and explicitly described in the text by identifying the cause and or effect of a particular action.

11. Recognize Fact-Hypothesis
    The reader may be asked to identify an idea as having been presented in the original test in the form of either fact or hypothesis.
12. Recognize Description
    The reader may be asked to identify what is being described in the reading.
13. Identify Function of a Text
    The reader may be asked to identify the rhetorical function of the text. In these questions, the options do not include information specific to the particular text. The reader would simply recognize key words indicating specific functions.

Top-down

A. Analyze

1. Organize Sentences
   The reader may be asked to place a list of sentences in the correct order to form a coherent paragraph. To do this, he / she must recognize the different indicators of text cohesion and identify propositional relationships between sentences at various Levels.
2. Transcode Information from Text to Graph
   To evaluate if the reader is able to transcode information from a text to graph, he or she may be asked to recognize the most appropriate graphic representation of the information presented verbally in the reading.
3. Recognize Textual Inconsistencies
   The reader is required to recognize the structure or organization of the entire text. In these questions, he or she is required to identify the sentence or idea which does not fit into an otherwise coherent paragraph based on inconsistencies of either a linguistic or conceptual nature.
4. Identify Progression of Text
   The reader is required to recognize the structure or organization of the entire text. He or she must recognize the manner in which the author presents his or her ideas (for example, inductively or deductively), or the order in which they appear.
5. Draw conclusion and / or deduction from explicit information
   The reader must integrate information explicitly present in different parts of the text in order to draw a conclusion and/or deduction.
6. Predict from explicit information
   The reader is asked to predict what follows the information that is presented in the text. This may take the form of completing the last sentence of the reading or predicting what the next sentence or next paragraph will probably deal with.

B. Interpret

1. Recognize Main Idea or Topic Sentence
   The reader is requested to identify the main idea of the reading, i.e, the message which the author wants to transmit. Regarding this category,
2. Recognize Author's Purpose
   The reader must identify the objective, goal or purpose of the author in writing the text. In these questions, the purpose must be specific to the particular text and simply more than just the recognition of general function words.
3. Choose Appropriate Title
   The reader is requested to select the best title for the text. In order to this, he or she must be able to recognize the main idea and or purpose of the author and identify it in a phrase which probably does not appear in the reading.
4. Identify Source and/or Type of Text
   The reader should consider the style, language, and format used by the author to

identify the probable source of the text.

5. Identify Audience
   The reader should consider the style, language, and format used by the author to identify the readers for whom it was written.
6. Recognize Tone of author
   This category refers to the author's point of view. The reader should recognize the tone use by the other, e.g., irony, sarcasm, optimism, pessimism, etc.
7. Recognize Opinion of Author
   The reader should recognize the opinion expressed by the author, e.g., whether or not the author recommends a particular book or supports a specific theory. The reader should identify whether the author's opinion is positive or negative.
8. Draw Conclusions and/or Inferences from Explicit Information
   This is similar to 7, except now the information on which the reader is asked to base his or her conclusion is implicit rather than explicit. In these questions, the reader may be asked to select the opposite of the information which appears in the text, to generalize from specific examples given in the text, or to choose an appropriate example of a general category described in the reading.
9. Infer What Preceded
   The reader utilizes implicit information from the reading as a basis for inferring what might have preceded.
10. Predict What Follows from Implicit Information
    The reader utilizes implicit information from the reading as a basis for inferring what might have followed this text.
11. Make Analogy Between Information
    The reader is asked to make analogy between information contained in the passage and a new situation. In these questions, the reader must apply the information studied in the text to new examples.

Appendix D

The Reading Comprehension Multiple Choice Questions

Read the text and answer the following questions. Circle A, B, C or D.

1. The best title for this text is _____.
   A. Emirati Wedding Customs
   B. Female Preparations for Local Weddings****
   C. Beautification Customs for Emirati Ladies
   D. Marriage Traditions in the Arab World

2. Which of the following is NOT a beauty preparation for an Emirati wedding?
   A. the lady is rubbed with traditional oils and creams
   B. the hands and feet are decorated with henna designs
   C. her favorite dishes are prepared for and fed to her ***
   D. her hair is treated with fragrant perfumes

3. An Emirati lady's future husband presents her with _____.
   A. a 40-day wedding party
   B. beautiful jewelry***
   C. a fancy trousseau
   D. Addahbia

4. At present, Emirati weddings usually last _____.
   A. about one week
   B. around 40 days
   C. longer than in the past
   D. less than a week ***

5. The henna night is a special time in an Emirati wedding because it is_____.
   A. the night before the wedding
   B. a time for traditional music and gift giving
   C. for the bride's female friends and family ***
   D. a time when ladies put on kohl

6. Which of the following is NOT a use for henna?
   A. as an eyeliner***
   B. for decorative purposes
   C. as a hair conditioner
   D. for treating wounds

7. Arabian kohl is ready to be used as an eyeliner after it has been processed with _____.
   A. water and henna leaves***
   B. coffee and forty henna leaves
   C. water and a fine powder

D. a black stone called Al Athmed

8. To celebrate weddings in the UAE, men and women _____.
   A. sing and dance together at back to back festivities
   B. celebrate in separate places***
   C. plan parties with each other before and after the ceremony
   D. celebrate in different parts of the country

9. The word '*elaborate*' in paragraph 4 probably means _____.
   A. simple
   B. traditional
   C. straightforward
   D. sophisticated***

10. The word '*ingredients*' in paragraph 6 probably means _____.
   A. substances
   B. things
   C. elements***
   D. characteristics

Appendix E

Content-Knowledge Questionnaire

What Did You Know before Reading This Text?

Item	Idea	1 None	2 Very little	3 Some	4 Quite a lot	5 A lot
1	Before reading this text, how much did you know about the idea that the place of an Emirati traditional wedding is the beginning of the bride's preparations for her wedding?					
2	Before reading this text, how much did you know about the idea that in an Emirati traditional wedding, traditional creams and oils are rubbed into the bride's body?					
3	Before reading this text, how much did you know about the idea that the Emirati traditional wedding festivities usually take about one week?					
4	Before reading this text, how much did you know about the idea that during a week, traditional music, singing, and dancing take place in the Emirati traditional wedding ceremonies?					
5	Before reading this text, how much did you know about the idea that that nowadays, most weddings in the Emirtes are celebrated I less than one week?					
6	Before reading this text, how much did you know about the idea that a few days before the traditional Emirati wedding night is the 'henna' night?					
7	Before reading this text, how much did you know about the idea that the bride's hands and feet are decorated with henna in the traditional Emirati wedding?					

8	Before reading this text, how much did you know About the idea that another tradition of the Emirati traditional wedding is the bride's use of 'kohl'?					
9	Before reading this text, how much did you know about the idea that in the Emirati traditional wedding, the bride likes to line her eyes?					
10	Before reading this text, how much did you know about the idea that the bride's hair is perfumed in an Emirati traditional wedding?					
11	Before reading this text, how much did you know about the idea that in an Emirati traditional wedding. The bride is ready for her wedding night after her eyes are lined, her hair is perfumed and her hands and feet are decorated with 'henna'?					
12	Before reading this text, how much did you know about the idea that men and women celebrate the Emirati traditional wedding separately?					
13	Before reading this text, how much did you know about the idea that most of the general traditions of an Emirati traditional wedding are still practiced today?					
Interest 1	How much did you like to read about this topic?					
Interest 2	How much were interested in this topic?					

Appendix F

Topic-Familiarity Questionnaire

What Do You Know about These Topics?

Topics	0 None	1 Some	2 A lot
1. Sports in the Emirates			
2. Jobs in the Emirates			
3. Business in the Emirates			
4. Tourism in the Emirates			
5. Marriages in the Emirates			
6. Health in the Emirates			
7. Media in the Emirates			
8. Arts in the Emirates			
9. Transportation in the Emirates			

Appendix G

Oxford Quick Placement Test (OQPT)

Part 1

Questions 6 – 10

In this section you must chose the word which best fits each space in the text below. For questions 6 and 10, mark one letter A, B or C on your answer sheet.

The Stars

There are millions of stars in the sky. If you look (6) _____ the sky on a clear night, it is possible to see about 3000stars. They look small, but they are really (7) _____ big hot balls of burning gas. Some of them are huge, but others are much smaller, like our planet. The biggest stars are very bright, but they only live for a short time. Every day new stars (8) _____ born and old stars die. All the stars are very far away. The light from the nearest star takes more (9) _____ four years to reach Earth. Hundred of years ago, people (10) _____ stars, like the North star, to know which direction to travel in. Today you can still see that star.

6	A at	B up	C on
7	A very	B too	C much
8	A is	B be	C are
9	A that	B of	C than
10	A use	B used	C using

Questions 11 – 20

In this section you must choose the word which best fits each space in the texts. For Questions 11 to 20, mark one letter A, B or C on you Answer Sheet.

Good Smiles Ahead for Young Teeth

Older Britons are the worst in Europe when it comes to keeping their teeth. But British youngsters (11) _____ more to smile about because (12) _____ Teeth are among the best. Almost 80% of Britons over 65 have lost all or some (13)

_____ their teeth according to a World Health Organization survey. Eating too (14) _____ sugar is part of the problem. Among (15) _____, 12-year olds have on average only three missing, decayed or filled teeth.

11	A getting	B got	C having
12	A their	B his	C their
13	A from	B of	C between
14	A much	B lot	C deal
15	A person	B people	C family

Christopher Columbus and the Hew World

On August 3, 1492, Christopher Columbus set sail from Spain to find a new route to India, China and Japan. At this time most people thought you fall off the edge of the world if you sailed too far. Yet sailors such as Columbus had seen how a ship appeared to get lower and lower on the horizons as it sailed away. For Columbus this (16) _____ that the world was round. He (17) _____ to his men about the distance traveled each day. He did not want them to think that he did not (18) _____ exactly where they were going. (19) _____, on October 12, 1492, Columbus and his men landed on a small island he named San Salvador. Columbus believed he was in Asia, (20) _____ he was actually in the Caribbean.

16	A made	B pointed	C proved
17	A lied	B told	C asked
18	A find	B know	C expected
19	A Next	B Secondly	C Once
20	A as	B but	C if

Question 21 – 40

In this section you must choose the word or phrase which best completes each sentence. For questions 21 to 40, mark one letter A, B, C or D on your Answer Sheet.

21 The children won't go to sleep _____ we leave a light on outside their

A except B otherwise C unless D but

22 I'll give you my space keys in case you _____ home before me.

A would get B got C will get D get

23 My holiday in Paris gave me a great _____ to improve my French accent.

A occasion B chance C hope C possibility

24 The singer ended the concert _____ her most popular song.

A by B with C in C as

25 Because it had not rained for several months, there was a _____ of water.

A shortage B drop C scarce D waste

26 I've always _____ you as my best friend.

A regarded B thought C meant D supposed

27 She came to live here _____ a month ago.

A quite B beyond C worry D reaction

28 Don't make such a _____! The dentist is only going to look at your teeth.

A fuss B trouble C worry D reaction

29 He spent a long time looking for a tie which _____ with his new shirt.

A fixed B made C went D wore

30 Fortunately, _____ from a bump on the head, she suffered no serious injuries from her fall.

A other B except C besides D apart

31 She had changed so much that _____ anyone recognised her.

A almost B hardly C not D nearly

32 _____ teaching English, she also write children's books.

A Moreover B as well as C In addition D apart

33 It was clear that the young couple were _____ of taking charge of the restaurant.

A responsible B reliable C capable D able

34 The book _____ of ten chapters, each one covering a different topic.

A comprise B includes C consists D contains

35 Mary was disappointed with her new shirt as the colour _____ very quickly.

A bleached B died C vanished D faded

36 National leaders from all over the world are expected to attend the _____

meeting.

A peak B summit C top D apex

37 Jane remained calm when she won the lottery and _____ about the Business as if nothing had happened.

A came B brought C went D moved

38 I suggest we _____ outside the stadium tomorrow at 8. 30.

A meeting B meet C met D will meet

39 My remarks were _____ as a joke, but she was offended by them.

A pretend B thought C meant D supposed

40 You ought to take up swimming for the _____ of your health.

A concern B relief C sake D causer

Do not start this part unless told to do so by your test supervisor.

Question 41 - 50

In this section you must choose the word or phrase which best fits each space in the texts.
For questions 41 to 50, mark one letter A, B, C or D on your Answer Sheet.

Clocks

The clock was the first complex mechanical machinery to enter the home, (41) _____ it was too expensive for the (42) _____ person until the 19th century, when (43) _____ production techniques lowered the price. Watches were also developed, but they (44) _____ luxury items until 1868 when the first cheap pocket watch was designed in Switzerland. Watches later became (45) _____ available and Switzerland became the world's leading watch manufacturing centre for the next 100 years.

41 A despite B although C otherwise D average

42 A average B medium C wide D common

43 A vast B large C wide D mass

44 A lasted B endured C kept D remained

45 A mostly B chiefly C greatly D widely

Dublin City Walks

What better way of getting to know a new city than by walking around it? Whether you choose the Medieval Walk, which will (46) _____ you the Dublin of 1000 years ago, find out about the more (47) _____ history of the city on the Eighteenth Century Walk, or meet the ghosts of Dublin's many writers on the Literary Walk, we know you will enjoy the experience. Dublin City Walks (48) _____ twice daily. Meet your guide at 10. 30 a.m. or 2. 30 p.m. at the Tourist Information Office. No advance (49) _____ is necessary. Special (50) _____ are available for the families, children and parties of more of more than ten people.

46	A	introduce	B	present	C	move	D show
47	A	near	B	late	C	recent	D close
48	A	take place	B	occur	C	work	D function
49	A	paying	B	reserving	C	warning	D booking
50	A	funds	B	costs	C	fees	D rates

Questions 51 – 60

In this section you must choose the word or phrase which best completes each sentence.
For questions 51 to 60, mark one letter A, B, C or D on your Answer Sheet.

51 If you're not too tired we could have a _____ of tennis after lunch.

A match B play C game D party

52 Don't you get tired _____ watching TV every night?

A with B. by C of D at

53 Go on, finish the dessert. It needs _____ up because it won't stay fresh until tomorrow.

A eat B eating C to eat D eaten

54 We're not used to _____ invited to very formal occasions.

A be B have C being D having

55 I'd rather we _____ we meet this evening, because I'm very tired.

A wouldn't B shouldn't C hadn't D didn't

56 She obviously didn't want to discuss the matter so I didn't _____ the

point.

A maintain B chase C follow D pursue

57 Anyone _____ after the start of the play is not allowed in until the interval.

A arrives B has arrived C arriving D arrived

58 This new magazine is _____ with interesting stories and useful information.

A full B packed C thick D compiled

59 The restaurant was far too noisy to be _____ to relaxed conversation.

A conductive B suitable C practical D fruitful

60 In this branch of medicine, it is vital to _____ open to new ideas.

A stand B continue C hold D remain

Appendix H

Interpretation of the Oxford Quick Placement Test Results

Table 1 Look-up Table for Pen Scores

Table 1 shows how to interpret the results in terms of the ALTE levels from 0 to 5.

ALTE Level	Paper and Pen	Test Score
	Part 1 Score out of 40	Parts 1&2 Score out of 60
0 Beginner	0 – 15	O – 17
1 Elementary	16 - 23	18 – 29
2 Lower Intermediate	24 - 30	30 – 39
3 Upper Intermediate	31 - 40	40 – 47
4 Advanced	If a student scores 36 or more, it is recommended they complete Part 2 of the test.	48 - 54
5 Very Advanced		55 - 60

Appendix I

Oxford Quick Placement Test

Table 2 Chart of Equivalent Levels

Table 2 shows the ALTE (Association of Language Testers in Europe) scale maps onto the Council of Europe Levels, and the Cambridge Examinations.

ALTE Level	ALTE Level Description	Council of Europe Level	Cambridge Examinations
0	Beginner (Breakthrough)	A1	
1	Elementary (Waystage)	A2	KET
2	Lower Intermediate) (Threshold)	B1	PET BEC Preliminary CELS Intermediate
3	Upper Intermediate (Independent User)	B2	FCE BEC Intermediate CELS Preliminary
4	Advanced (Competent User)	C1	CAE BEC Advanced CELS Intermediate
5	Very Advanced (Good User)	C2	CPE

Appendix J

Recall Protocol Analysis

Subjects' Mean Performance on Various Measures

Measure	Group C	Group E(A)	Group E(B)
Reading Time			
Recall Time			
Gist (Quantity of Idea Units Recalled)			
Value (Quality of Idea Units Recalled)			
Top-Level Idea Units Recalled			
Elaborations			
Distortions			
Omissions			
Other Overt Errors			

Appendix K

Steffensen and Joag-Dev's Method of Measuring Their Subjects' Mean Performance on Various Measures

Nationality	Americans		Indians	
Measure	American Passage	Indian Passage	American Passage	Indian Passage
Time (seconds)	168	213	304	276
Gist	52.4	37.9	27.3	37.6
Elaboration	5.7	.1	.2	.3
Distortion	.1	7.6	5.5	5.9
Other Overt Errors	7.5	5.2	8.0	5.9
Omissions	76.2	76.6	95.5	83.3

(Alderson & Urquhart, 1984, p. 54)

Appendix L

Pausal Units

1.
As a tradition in the UAE,
the place of the wedding date
is the beginning
of the bride's preparations for her wedding.
Although the groom goes through a number of preparations,
the bride's preparations are naturally more involved
and time consuming.

2.
To get ready for her wedding,
traditional creams and oils are rubbed into her body.
She uses cleansing and conditioning oils and creams.
Her hands and feet are decorated with henna.
Her hair is then washed with beautifully-smelling perfumes
of amber and jasmine.
She eats only the best of foods.
Her girlfriends prepare these dishes
and then share with her.

3.
Traditionally, she is not seen for forty days
except by family members.
She uses this time
to rest at home and
get ready for her wedding day.
Beautiful jewelry, perfumes, silk materials,
and other necessary items are presented to her by the groom.
It is with these gifts
which she creates her elaborate trousseau
called Addahbia.

4.
The festivities usually take about one week
before the wedding night.
During that week,
traditional music, singing, and dancing take place.
These activities reflect the joy
shared by the bride's and groom's family.
Nowadays, most weddings are celebrated in less than one week.
However, they are just as elaborate and traditional.

5.
A few days before the wedding night is the henna night.

This night is called Laylat Al Henna.
This is a very special night for the bride
since it is a ladies' only night.
On this night,
the bride's hands and feet are decorated with henna.
Henna is a dark brown paste
made from the henna plant.
When you leave henna on the skin
for some time,
the henna leaves a dark red stain.

6.
The henna night is a time
for all the bride's sisters,
female family members
and girlfriends
to get together and sing and dance.
All female family members and guests
also decorate their hands with henna.
The henna is not only for decorative purposes.
It serves as a hair and skin conditioner.
When mixed with certain ingredients
it can be used as a medicine
for some wounds.

7.
Another tradition
of the UAE wedding custom
is the Arabian Kohl
or eyeliner.
The bride likes to line her eyes
on almost every occasion.
Famous for their large, beautiful, black eyes,
Emirati women have used Arabian Kohl
for many years.

8.
Kohl comes from a black stone
known as Al Athmed.
This stone is brought from Saudi Arabia.
Kohl is prepared through different methods
and in different stages.
First, the stone is heated until it disintegrates.
Then it is processed in water and Arabian coffee
or sometimes henna leaves.
After that, it is left for forty days to process.
Finally, it is ground into a fine powder
and it is ready to be used as eyeliner.

9.

After her eyes are lined,
her hair is perfumed
and her hands and feet are decorated with henna,
the bride is ready for her wedding night.
The back-to-back feasts and celebrations
involve both men and women
who usually celebrate separately.
Although different areas of the country may have slight differences in their celebrations and customs,
the general traditions are the same throughout the country
most of which are still practiced today.

Source: (*"wedding in the U.A.E.,"n.d)*
Words: 543words
FK: 8.7

Appendix M

Distribution of the Reading Comprehension Text Pausal Units and their Values

Paragraph	Pausal Unit	Value
1	As a tradition in the UAE,	3
	the place of the wedding date	4
	is the beginning	3
	of the bride's preparations for her wedding.	4
	Although the groom goes through a number of preparations,	3
	the bride's preparations are naturally more involved	3
	and time consuming.	3
2	To get ready for her wedding,	4
	traditional creams and oils are rubbed into her body.	3
	She uses cleansing and conditioning oils and creams.	3
	Her hands and feet are decorated with henna.	3
	Her hair is then washed with beautifully-smelling perfumes	3
	of amber and jasmine.	2
	She eats only the best of foods.	3
	Her girlfriends prepare these dishes	3
	and then share with her.	2
3	Traditionally, she is not seen for forty days	3
	except by family members.	2
	She uses this time	2
	to rest at home and	1
	get ready for her wedding day.	1
	Beautiful jewelry, perfumes, silk materials,	3
	and other necessary items are presented to her by the groom.	3
	It is with these gifts	2
	which she creates her elaborate trousseau	3
	called Addhahbia.	1
4	The festivities usually take about one week	4
	before the wedding night.	2
	During that week,	3
	traditional music, singing, and dancing take place.	4
	These activities reflect the joy	2
	shared by the bride's and groom's family.	2
	Nowadays, most weddings are celebrated in less than one week.	4
	However, they are just as elaborate and traditional.	4
5	A few days before the wedding night is the henna night.	4
	This night is called Laylet Al Henna.	1
	This is a very special night for the bride	2
	since it is a ladies' only night.	2
	On this night,	2
	The bride's hands and feet are decorated with henna.	4

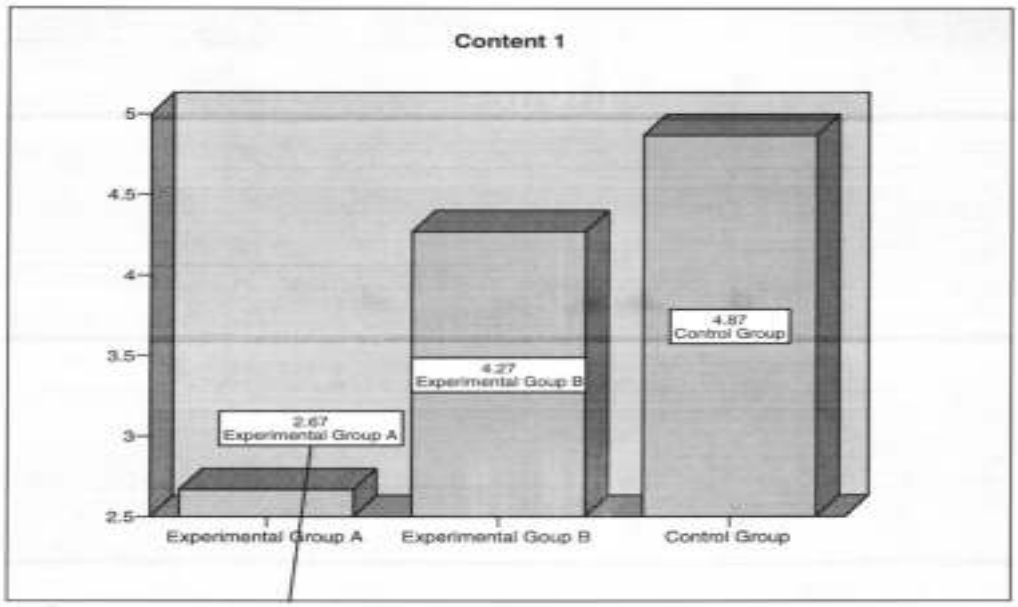
	Henna is a dark brown paste	2
	made from the henna plant.	1
	When you leave henna on the skin	3
	for some time,	2
	the henna leaves a dark red stain.	3
6	The henna night is a time	2
	for all the bride's sisters,	2
	female family members	2
	and girlfriends	2
	to get together and sing and dance.	2
	All female family members and guests	2
	also decorate their hands with henna.	2
	The henna is not only for decorative purposes.	1
	It serves as hair and skin conditioner.	1
	When mixed with certain ingredients,	1
	it can be used as a medicine	1
	for some wounds.	1
7	Another tradition	4
	of the UAE wedding custom	3
	is the Arabian Kohl.	4
	or eyeliner.	3
	The bride likes to line her eyes	4
	on almost every occasion.	2
	Famous for their large, beautiful, black eyes,	4
	Emirati women have used Arabian Kohl	2
	for many years.	2
8	Kohl comes from a black stone	2
	known as Athmed.	1
	This stone is brought from Saudi Arabia.	2
	Kohl is prepared through different methods	3
	and in different stages.	3
	First, the stone is heated until it disintegrates.	2
	Then it is processed in water and Arabian coffee	2
	or sometimes henna leaves.	1
	After that, it is left for forty days to process.	2
	Finally, it is ground into fine powder	2
	and it is ready to use as eyeliner.	2
9	After her eyes are lined,	4
	her hair is perfumed	4
	and her hands and feet are decorated with henna,	4
	the bride is ready for her wedding night.	4
	The back-to-back feasts and celebrations	4
	involve both men and women	3
	who usually celebrate separately.	3

	Although different areas of the country may have slight differences in their	3
	celebrations and customs,	3

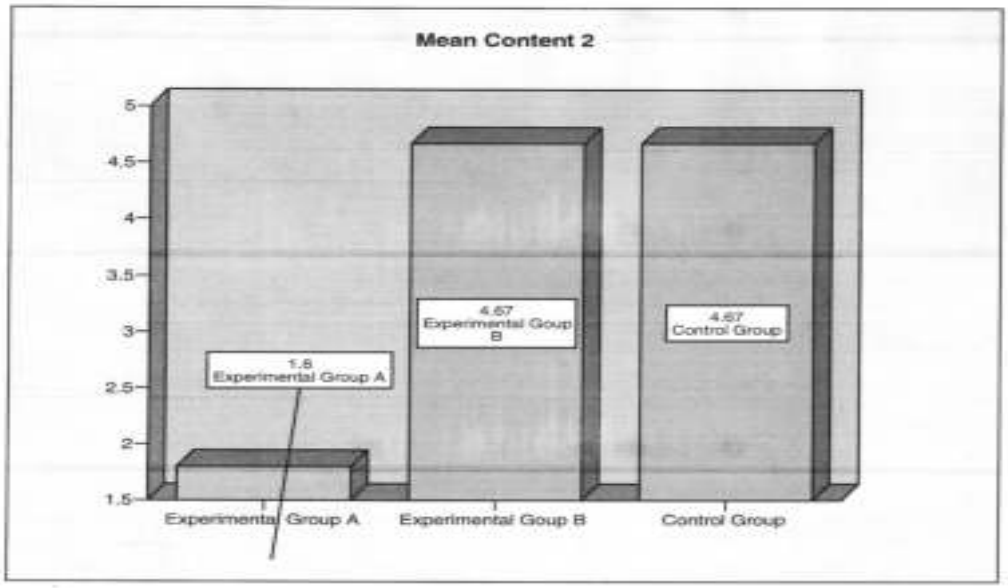
Appendix N

Graphic Representation of Each Individual Question on the Content-Knowledge Questionnaire

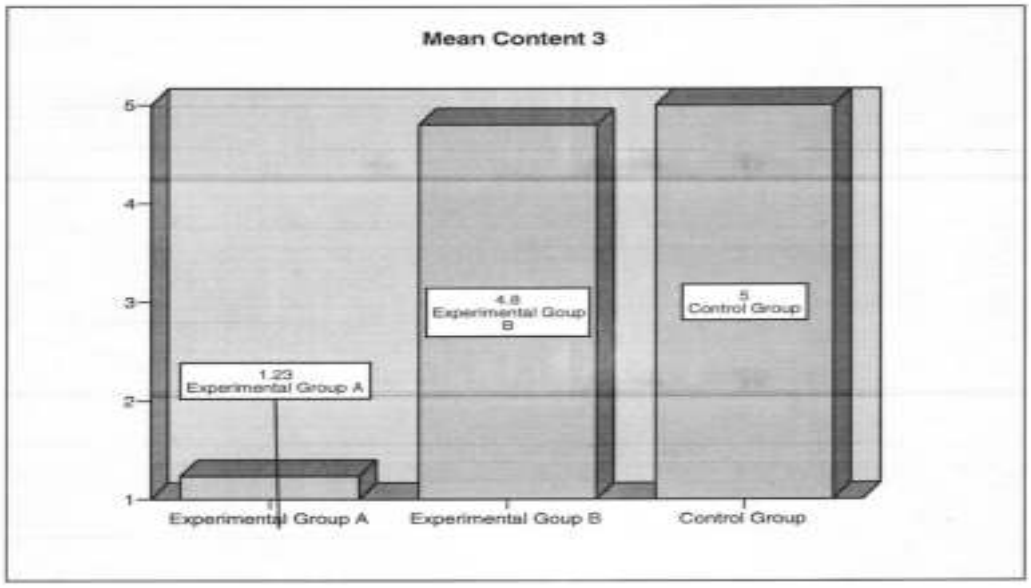
The representation of the three groups' means on content 1



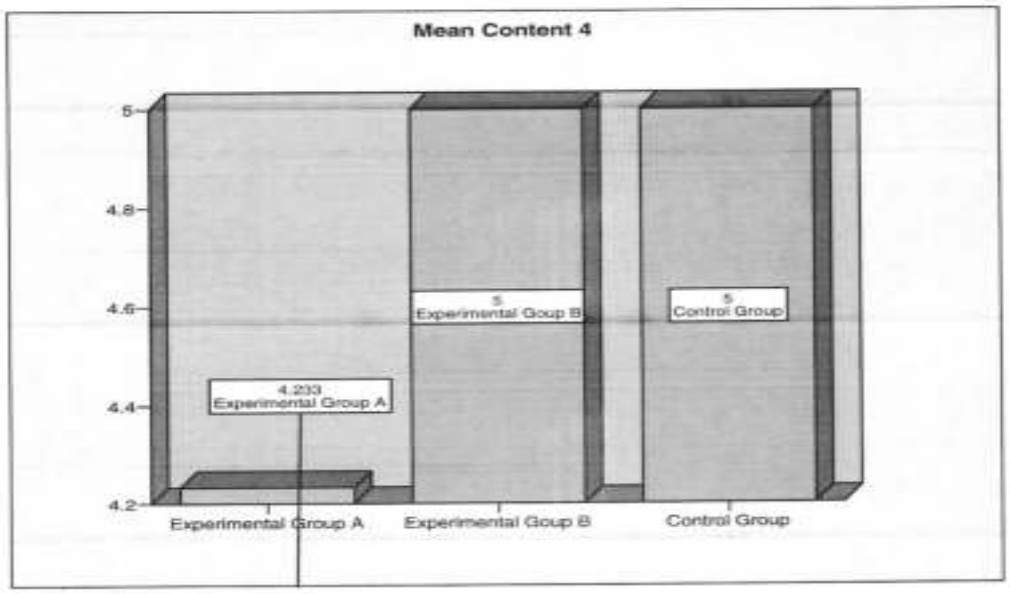
The representation of the three groups' means on content 2



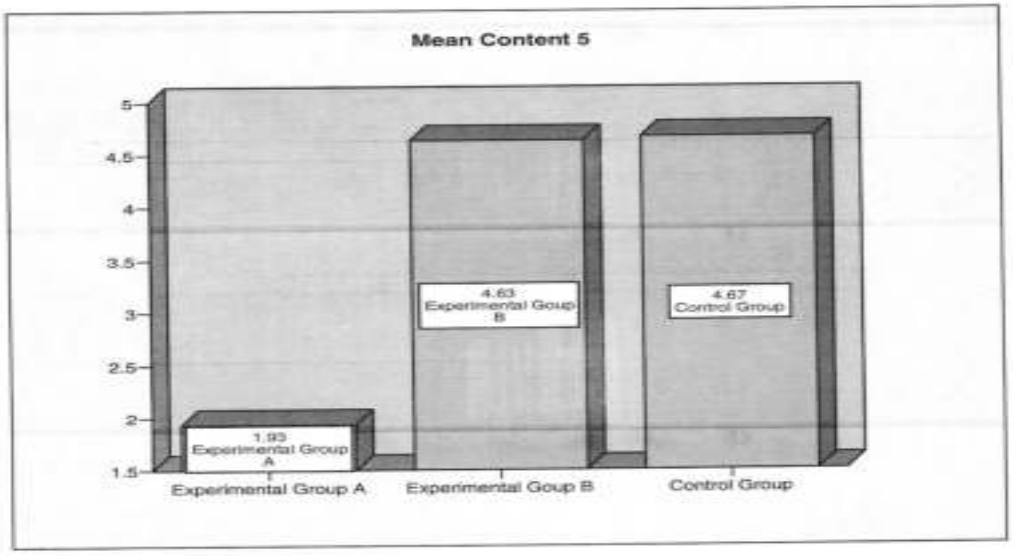
The representation of the three groups' means on content 3



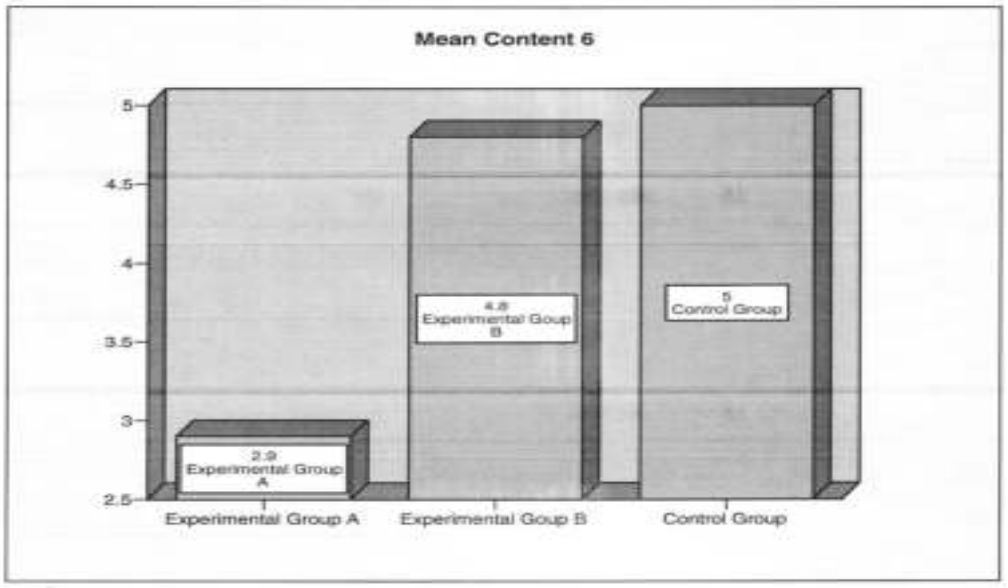
The representation of the three groups' means on content 4



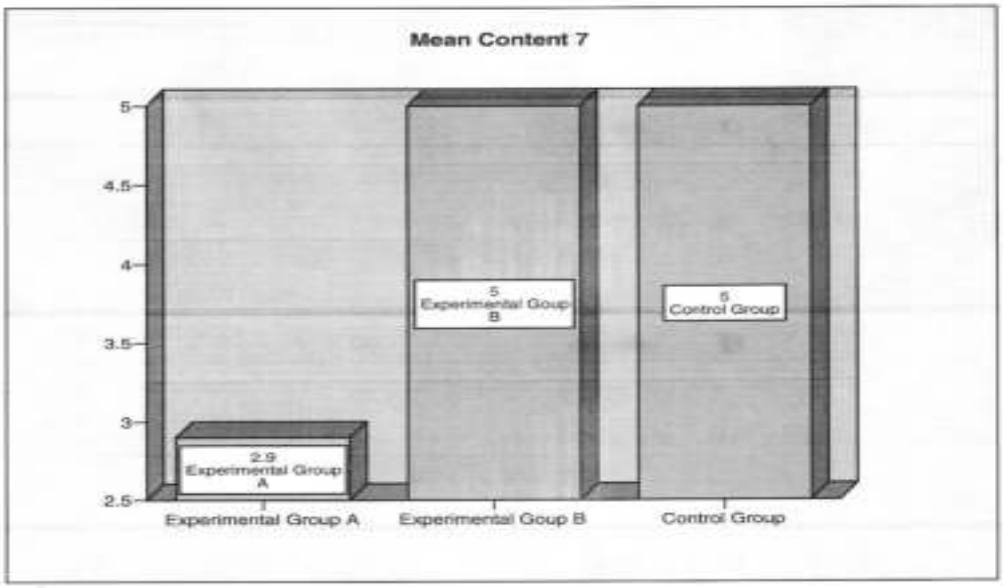
The representation of the three groups' means on content 5



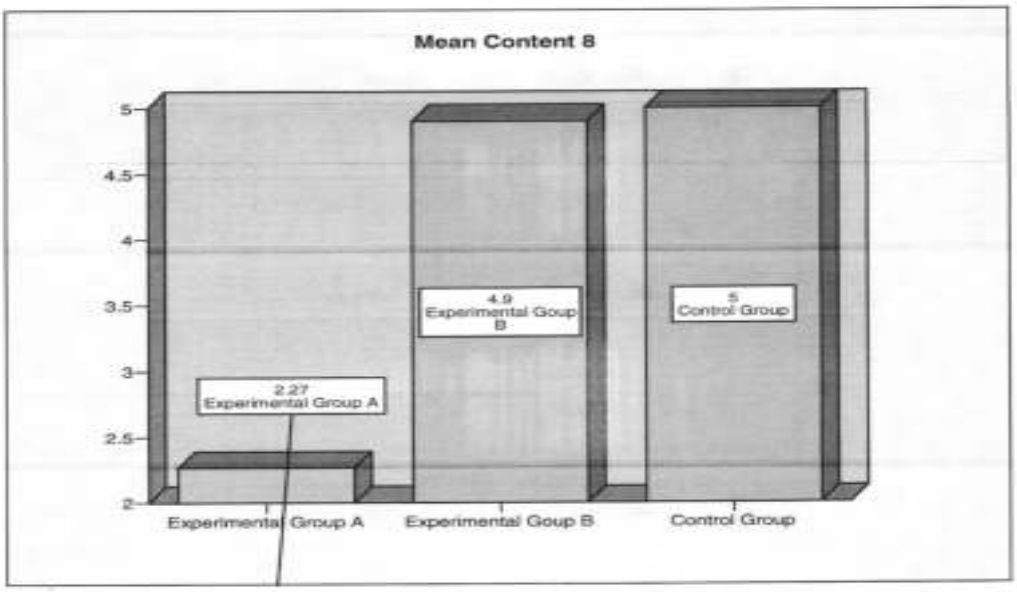
The representation of the three groups' means on content 6



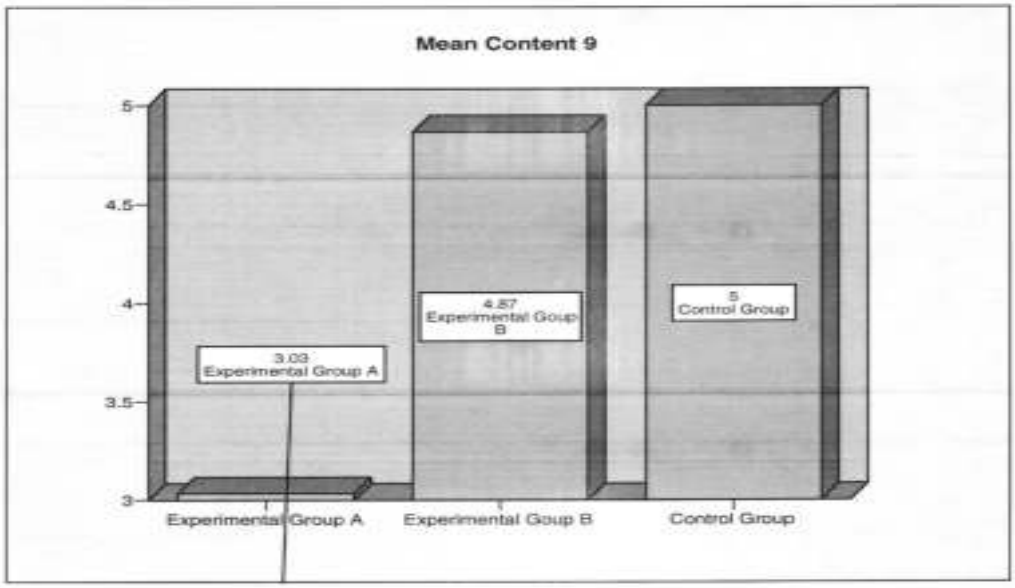
The representation of the three groups' means on content 7



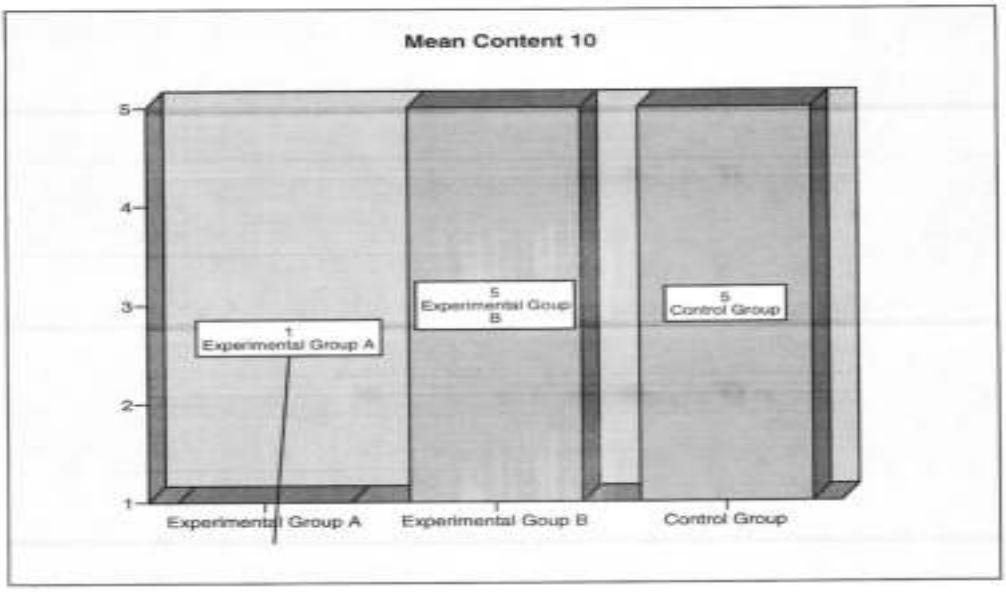
The representation of the three groups' means on content 8



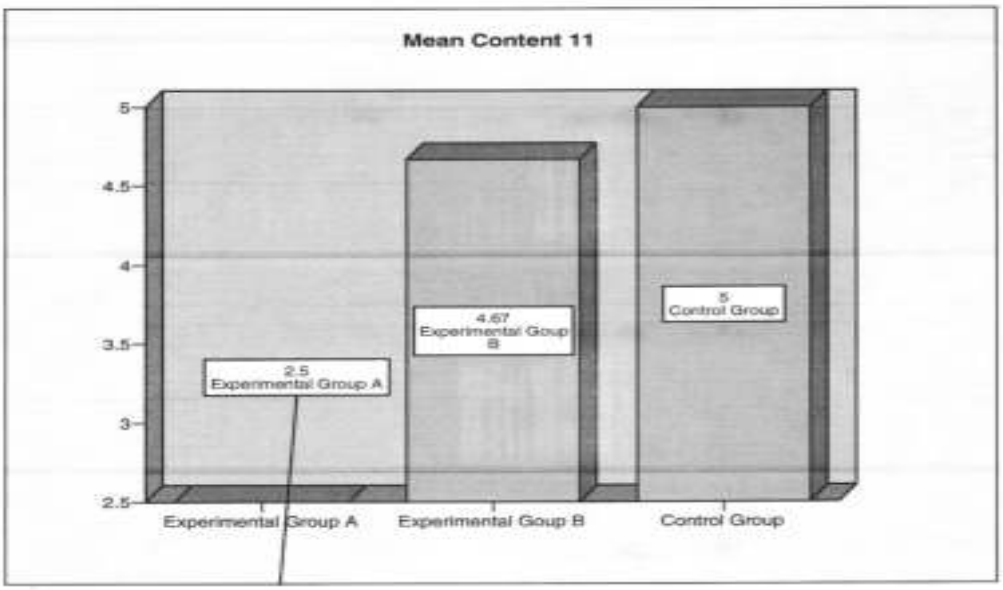
The representation of the three groups' means on content 9



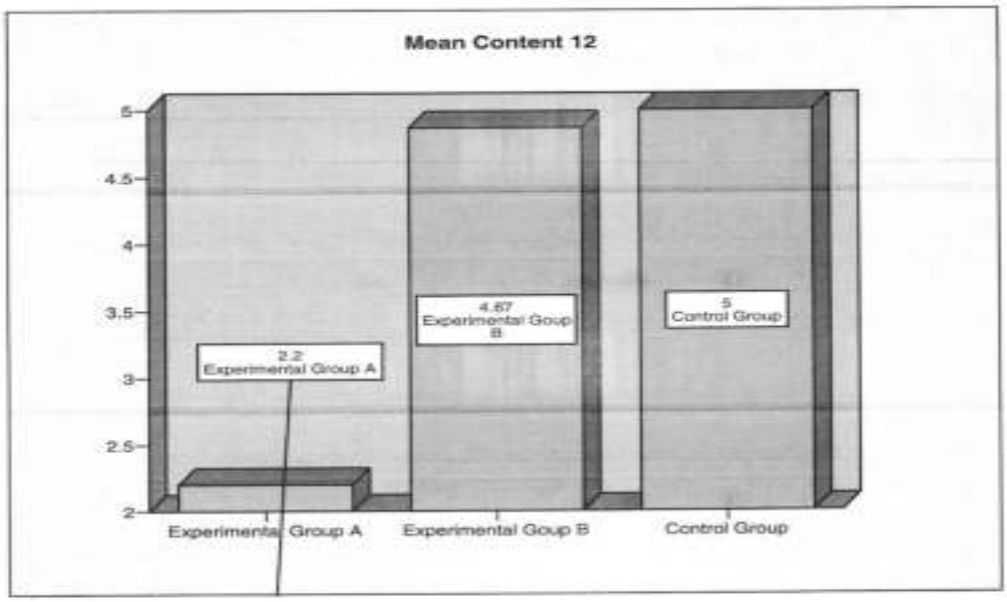
Representation of the three groups' means on content 10



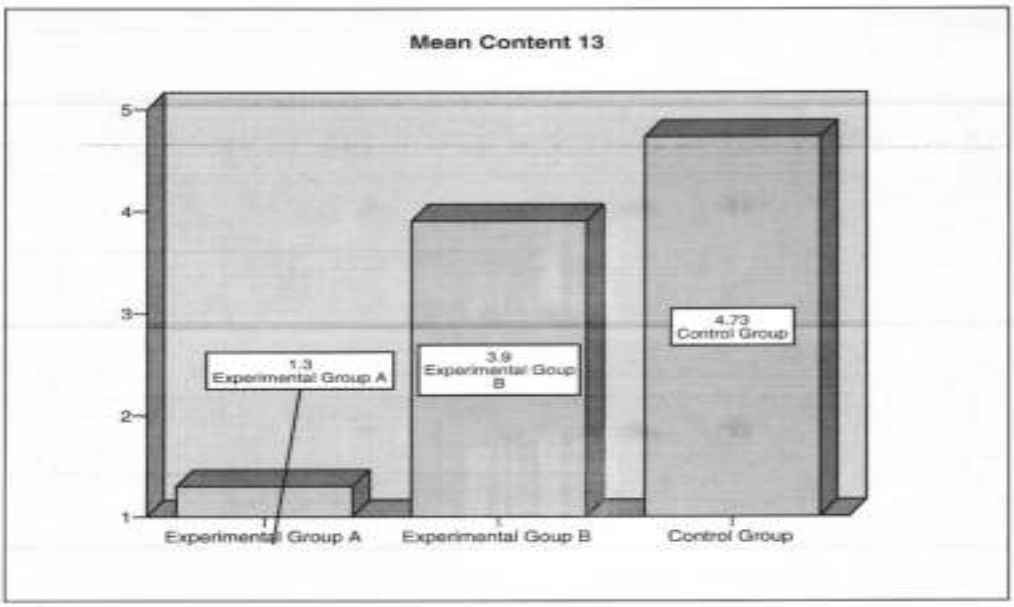
The representation of the three groups' means on content 11



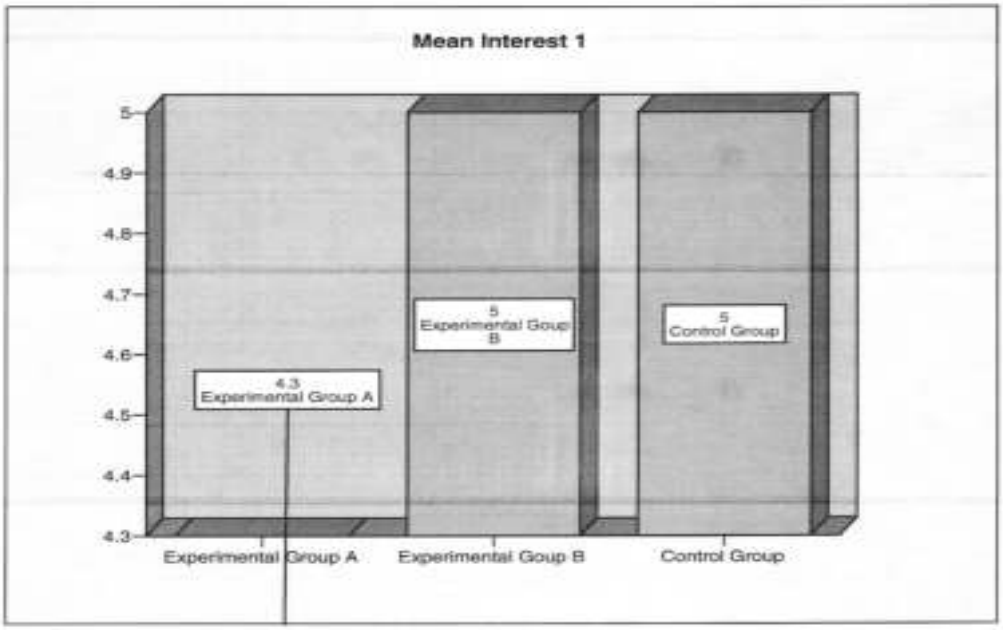
The representation of the three groups' means on content 12



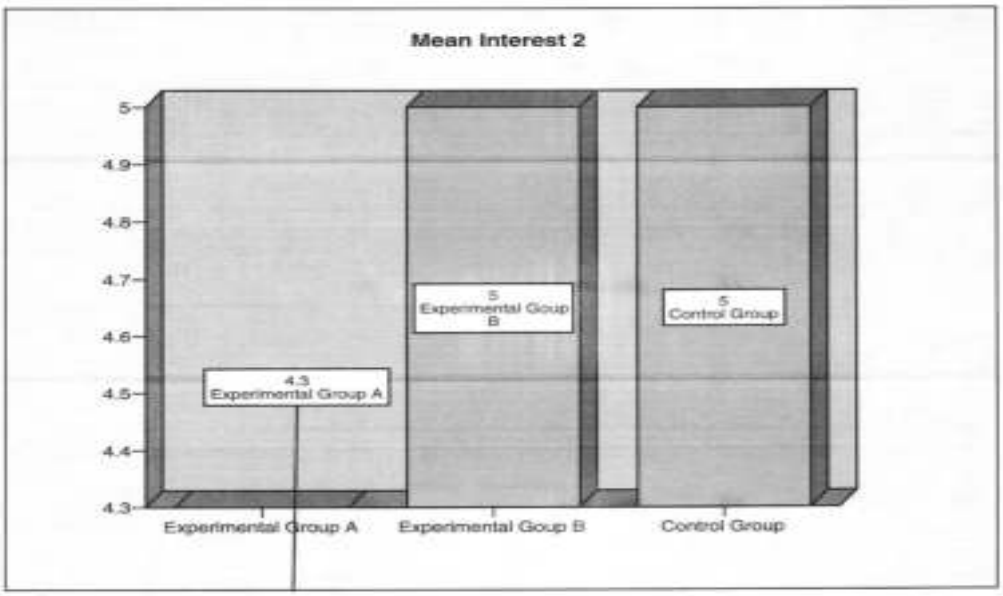
The representation of the three groups' means on content 13



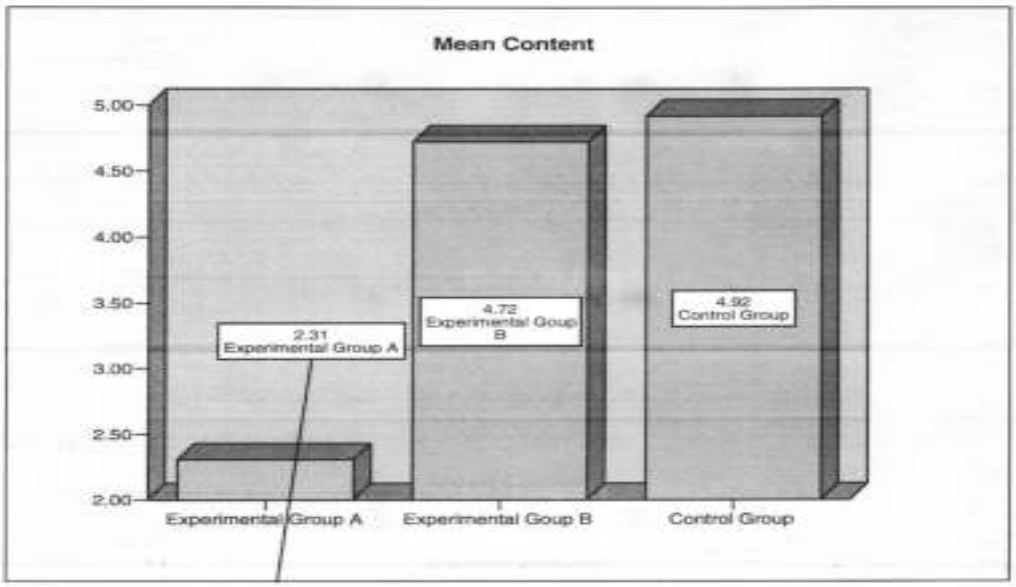
The representation of the three groups' mean scores on interest 1



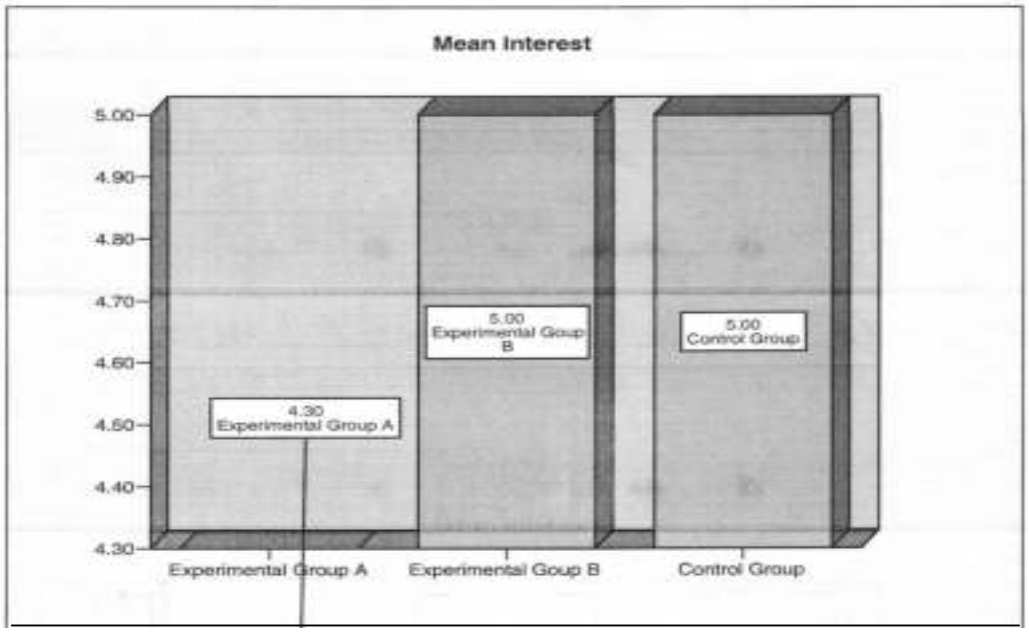
The representation of the three groups' mean on interest 2



The representation of the three groups' means on the thirteen content questions combined



The representation of the three groups' means on the two interest questions combined



Appendix O

Descriptive Statistics on Each Individual Question on the Content-Knowledge Questionnaire (n= 30)

Experimental Group A

Frequency Tables

Content 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non	18	10.0	10.0	10.0
	Very little	10	33.3	33-3	43.3
	Some	13	43.3	6.7	86.7
	Quite a lot	2	6.7	6.7	93.3
	Total	30	100.0	100.0	

Content 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non	18	60.0	60.0	60.0
	Very little	5	16.7	16.7	76.7
	Some	2	6.7	6.7	83.3
	Quite a lot	5	16.7	16.7	100.0
	Total	30	100.0	100.0	

Content 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non	24	80.0	80.0	80.0
	Very little	5	16.7	16.7	96.7
	Some	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Content 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Quite a lot	23	76.7	76.7	76.6
	A lot	7	23.3	23.3	100.0
	Total	30	100.0	100.0	

Content 5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non	18	60.0	60.0	60.0
	Very little	4	13.3	13.3	73.3
	Quite a lot	8	26.7	26.7	100.0
	Total	30	100.0	100.0	

Content 6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	10	33.3	33.3	33.3
	Some	13	43.3	43.3	76.7
	Quite a lot	7	23.3	23.3	100.0
	Total	30	100.0	100.0	

Content 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	10	33.3	33.3	33.3
	Some	13	43.3	43.3	76.3
	Quite a lot	7	23.3	23.3	100.0
	Total	30	100.0	100.0	

Content 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non	8	26.7	26.7	26.7
	Very little	11	36.7	36.7	63.3
	Some	6	20.0	20.0	83.3
	Quite a lot	5	16.7	16.7	100.0
	Total	30	100.0	100.0	

Content 9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	5	16.7	16.7	16.7
	Some	19	63.3	63.3	80.0
	Quite a lot	6	20.0	20.0	100.0
	Total	30	100.0	100.0	

Content 10

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non	30	100.0	100.0	100.0

Content 11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	18	60.0	60.0	60.0
	Some	9	30.0	30.0	90.0
	Quite a lot	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Content 12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	24	80.0	80.0	80.0
	Some	6	20.0	20.0	100.0
	Total	30	100.0	100.0	

Content 13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non	21	70.0	70.0	70.0
	Very little	9	30.0	30.0	100.0
	Total	30	100.0	100.0	

Interest 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	1	3.3	3.3	3.3
	Some	5	16.7	16.7	20.0
	Quite a lot	8	26.7	26.7	26.7
	A lot	16	53.3	53.3	100.0
	Total	30	100.0	100.0	

Interest 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	1	3.3	3.3	3.3
	Some	5	16.7	16.7	20.0
	Quite a	8	26.7	26.7	46.7
lot		30	100.0	100.0	
	Total				

Total Interest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	1	3.3	3.3	3.3
	Some	5	16.7	16.7	20.0
	Quite a	6	26.7	26.7	46.7
lot		16	53.3	53.3	100.0
	A lot	30	100.0	100.0	
	Total				

Experimental Group B

Frequency Tables

Content 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Some	11	36.7	96.7	96.7
	A lot	19	63.3	63.3	63.3
	Total	30	100.0	100.0	

Content 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	1	3.3	3.3	3.3
	Some	3	10.0	10.0	13.3
	Quite a	1	3.3	3.3	16.7
lot		25	83.3	83.3	100.0
	A lot		100.0	100.0	
	Total				

Content 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	1	3.3	3.3	3.3
	Some	3	10.0	10.0	13.3
	Quite a	1	3.3	3.3	16.7
lot		25	83.3	83.3	100.0
	A lot	30	100.0	100.0	
	Total				

Content 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Content 5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	1	3.3	3.3	3.3
	Some	3	10.0	10.0	13.3
	Quite a lot	2	6.7	6.7	20
	A lot	24	80	80.0	100.0
	Total	30	100.0	100.0	

Content 6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Some	1	3.3	3.3	3.3
	Quite a lot	4	13.3	13.3	16.7
	A lot	25	83.3	83.3	100.0
	Total	30	100.0	100.0	

Content 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	90	100.0	100.0	100.0

Content 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Quite a lot	3	10.0	10.0	10.0
	A lot	27	90.0	90.0	100.0
	Total	30	100.0	100.0	

Content 9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Quite a lot	4	13.3	13.3	13.3
	A lot	26	86.7	86.7	100.0
	Total	30	100.0	100.0	

Content 10

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Content 11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Quit a lot	10	33.3	33.3	33.3
	A lot	20	66.7	66.7	100.0
	Total	30	100.0	100.0	

Congtent12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Quite a	4	13.3	13.3	13.3
lot		26	86.7	86.7	100.0
	A lot	30	100.0	100.0	
	Total				

Content 13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Some	13	43.3	43.3	43.3
	Quit a lot	7	23.3	23.3	66.7
	A lot	10	33.3	33.3	100.0
	Total	30	100.0	100.0	

Interest 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Interest 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	

Total Interest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Control Group C

Frequency Tables

Content 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Quite a lot	4	13.3	13.3	13.3
	A lot	26	86.7	86.7	100.0
	Total	100.0	100.0	100.0	

Content 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Quite a lot	10	33.3	33.3	33.3
	A lot	20	66.7	66.7	100.0
	Total	30	100.0	100.0	

Content 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Content 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Content 5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Quite a lot	10	33.3	33.3	33.3
	A lot	20	66.7	66.7	100.0
	Total	100.0	100.0	100.0	

Content 6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Content 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Content 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Content 9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Content 10

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Content 11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Content 12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Content 13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Some	1	3.3	3.3	3.3
	Quite a lot	6	20.0	20.0	23.3
	A lot	23	76.7	76.7	100.0
	Total	100.0	100.0	100.0	

Interest 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.0

Interest 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	100.0	100.-

Total Interest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	30	100.0	10.0	100.0

VITA

Abdelfattah Dimassi is an English instructor at Al-Qudwa School for Basic Education in Kalba, United Arab Emirates. He is originally from Ksar-Hellal in Tunisia and has taught English for the past nineteen years, three quarters of this time at government schools in the Middle East. He has a BA degree in teaching English, is working towards his MA in TESOL, and hopes to pursue a doctorate in Education specializing in teaching methodologies.

His interest is the four skills. He presented "Meaningful Drilling as an Alternative to Mechanical Drilling," "How to Learn from Mistakes?", and "How to be a Successful Teacher?" at Emirati government schools in 1977, 2001, and 2003. He won the first prize on his action research "Cultural Schema and Reading Comprehension" under the auspices of the UAE Ministry of Education, Dubai sector, in 2005.