# THE EFFECTS OF TEXT FAMILIARITY ON THE READING COMPREHENSION STRATEGIES OF THREE ARABIC-SPEAKING READERS: A CASE STUDY

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The study reported here was undertaken to obtain data on the types of reading strategies adult second language (L2) learners use on familiar and less familiar texts. The study addressed the following questions: 1) How does degree of text familiarity affect reading comprehension? 2) What kind of reading strategies do adult Arabic-speaking learners use in reading various L2 (English) texts? 3) What effect does prior knowledge and text familiarity have on the use of reading strategies? 4) Does strategy use vary on familiar texts versus less familiar texts? 5) How does strategy use vary according to text familiarity? This study focuses on three adult learners of English currently attending a southwestern university. Results of the Reading Tasks, Think Aloud Protocols, and a Reading Strategy Inventory suggest that prior knowledge does lead to improvements in comprehension and recall. Results also suggest that readers use different strategies on less familiar texts than on more familiar texts. Furthermore, the findings of this particular study showed that while readers were aware of what strategies to use, and made attempts to use them, they often used them ineffectively on less familiar texts. Results are discussed in terms of implications for reading instruction and future research.

## Introduction

In the traditional view of reading, the reader is a passive recipient of information rather than an active participant in the reading process, and uses strategies to comprehend text. This view of reading is in direct contrast to the positions shared by schema theory which demonstrates that a reader's topic familiarity and prior knowledge affect the comprehension of texts and that knowledge is systematically organized (Rumelhart, 1980). According to schema theory, a text does not carry meaning itself, but provides directions to readers about the retrieval of relevant information from prior knowledge, and how that prior knowledge should be restructured in response to the text (Carrell & Eisterhold, 1983). Readers are thought to use schema to anticipate text content and text structure in order to facilitate comprehension while reading, and to aid recall after reading. Efficient comprehension therefore, requires the reader to relate material to background knowledge.

## Background

### Schemata or Prior Knowledge

Most studies investigating schemata or prior knowledge are variations on Carrell's (1987) paradigm. This study involved 28 Muslim Arabs and 24 Catholic Hispanic English as a Second Language (ESL) students of high-intermediate proficiency enrolled in an intensive English program at a midwestern university. Each student read two texts, one with Muslim-oriented content and the other with Catholic-oriented content. Each text was presented in either a well-organized rhetorical format or an unfamiliar, altered rhetorical format. After reading each text, the subjects answered a series of multiple-choice comprehension questions and were asked to recall the text in writing. Analysis of the recall protocols and scores on the comprehension questions suggested that schemata affected the ESL readers' comprehension and recall. Participants better comprehended and remembered passages that were similar in some way to their native cultures. Other studies have shown similar effects in that

participants better comprehended and/or remembered passages that were more familiar to them (Ammon, 1987; Carrell, 1981; Johnson, 1981, 1982; Langer, Bartolome, Vasquez, & Lucas, 1990; Shimoda, 1989). Further evidence from such studies also suggested that readers' schemata for content affected comprehension and recall more than their formal schemata for text organization. Johnson's (1981) study investigated the effects of the cultural origin of prose on the reading comprehension of 46 Iranian intermediate advanced ESL students at the university level. The recall questions and the texts were also given to 19 American subjects for comparison purposes. Results revealed that the cultural origin of the story had a greater effect on comprehension than syntactic or semantic complexity of the text. In another study, Johnson (1982) compared ESL students' recall on a reading passage on Halloween. Results of recall protocols suggested that prior cultural experience prepared readers for comprehension of the familiar information about Halloween on the reading passage. However, exposure to the unfamiliar words did not seem to have a significant effect on their reading comprehension.

**Text Schemata**

Many studies have also 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. The structures in the texts (e.g., compare-contrast, problem-solving structures in expository text, and standard versus structurally interleaved versions of stories) were identified. Recalled information was analyzed for specific variables such as the number of propositions recalled, and temporal sequence of story components.

For the most part, these studies suggested that different types of text structure affected comprehension and recall (Bean, Potter, & Clark, 1980; Carrell, 1984). Some studies also showed that there might be differences among language groups as to which text structures facilitate better recall (Carrell, 1984). For example, Carrell's (1984) study showed that Arabs remembered best from expository texts with comparison structures, next best from 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. These results, however, must be taken as tentative as further studies examining the interaction of language background with text structure are needed.

A great deal of research has been conducted in the area of schema theory illustrating that readers' schemata or prior knowledge and familiarity with text structure affect comprehension and recall. Less attention, however, has been paid to the relationship between prior knowledge or text familiarity, and the reading strategies used by readers on reading tasks. The more current view is that reading is a psycholinguistic process through which readers create meaning from text relative to what they know (Smith, 1986). Goodman (1996) suggests that there is an ongoing process while reading which involves the continuous process of sampling from the input text, predicting what will come next, testing and confirming predictions, etc. Readers do not read word for word, but rather use their background knowledge and various strategies such as predicting and confirming to comprehend text. It becomes clear then that more importance should be attached to readers' meaning-seeking strategies that involve background knowledge, particularly with respect to texts that are less familiar to them.

## Reading Strategies

In the context of L2 learning, a distinction can be made between strategies that make learning more effective and strategies that improve comprehension. The former are more generally referred to as learning strategies in the L2 literature. Comprehension strategies on the other hand, indicate how readers conceive a task, how they make sense of what they read, and what they do when they do not understand. In short, such strategies are processes used by the learner to enhance reading comprehension and overcome comprehension failures. Because a large number of studies have investigated strategies used by L2 learners, it would be beneficial to provide the reader with a conceptual framework in order to allow for consistency in the terminology used throughout this paper. Although a number of studies have attempted to conceptualize the notion of strategies used by language learners, Oxford and Crookall (1989) offer a useful classification scheme. Within the broad context of reading strategies, the following six strategies can more appropriately be called substrategies: cognitive, memory, compensation, metacognitive, affective, and social. Cognitive strategies are used by learners to transform or manipulate the language. In more general terms this includes note taking, formal practice with the specific aspects of the target language such as sounds and sentence structure, summarizing, paraphrasing and translating. Techniques that help the learner to remember and retrieve information are referred to as memory strategies. Compensation strategies include skills such as inferencing, guessing while reading, avoiding communication partially or totally, adjusting or approximating the message, coining words, using circumlocution or synonyms, and using reference materials such as dictionaries. Metacognitive strategies help learners to plan, arrange, and evaluate their own learning. Learners use affective strategies to lower anxiety, and encourage learning. Lastly, social strategies are those that involve other individuals in the language learning process. They refer to cooperating with peers, questioning, asking for correction, and receiving feedback. These strategies vary depending on the language area or skill to be mastered. Task requirements help determine strategy choice.

The study reported here was undertaken to obtain data on the types of reading strategies adult learners use on various reading comprehension tasks. Thus, the primary research questions were: 1) How does degree of text familiarity affect reading comprehension? 2) What kind of reading strategies do adult Arabic-speaking learners use in reading various L2 (English) texts? 3) What effect does prior knowledge and text familiarity have on the use of reading strategies? 4) Does strategy use vary on more familiar versus less familiar texts? 5) How does strategy use vary according to text familiarity?

# Method

## Subjects

The subjects in this study were three adult male students. All three subjects were enrolled in the third year of the electrical engineering undergraduate program at a southwestern university. Their native language is Arabic -- one subject is from Lebanon and two are from the United Arab Emirates. The subjects completed high school in their native countries and came to the United States to pursue higher education. They have been in the United States between five and six years. All subjects learned English as their L2 and are fairly homogeneous in their English proficiency level. They are between the ages of 23-28. The subjects were asked to volunteer as participants in this research study.

## Instruments

The instruments used in the data collection consisted of a Student Profile, a Reading Comprehension Test with a think-aloud protocol, and a Reading Strategy Inventory.[1] The Student Profile was comprised of questions relating to students' background. The Reading Comprehension Task Instrument consisted of three passages which differed in topic/content and form, and therefore in degree of familiarity to the three readers. The passages were used in order to gather data on the reading strategies that these readers were using on more familiar versus less familiar texts. The first text was a story entitled "The World We Lost" by Farley Mowatt (1965). The specific story was chosen because the subjects had not read it and because the genre and literary devices were unfamiliar to them. The second page was a two-page piece entitled "Sociolinguistic Rules" by Kenneth Pakenham (1994) which discusses what it means for a nonnative speaker to learn a second language successfully. The text was selected because it contained specific vocabulary used in the field of sociolinguistics or L2 acquisition, terminology unfamiliar to the readers. The text, however, did contain examples of misunderstandings that have occurred between native and nonnative speakers to which the readers would presumably relate. The last piece, a two-page text entitled "Electrical Instruments" (Serway, 1990), was selected from a physics textbook commonly used in engineering courses. The text was expected to be familiar to the three readers in terms of content and structure.

Each text included a series of questions which were designed to elicit from the readers the types of strategies readers were using. The questions were interspersed between sections of each text to get at the range of strategies they were using on each task. Such questions were also intended to obtain more detailed information about the readers' thought processes while they were completing the task and providing responses. The readers responded to the questions out loud while working on this in-line task. The process was audio recorded. Finally, an Interview Protocol consisting of ten questions was used following the think-aloud protocols. The questions were used to collect information on how the students viewed each of the three reading tasks, their degree of familiarity with them, the nature of the difficulties they experienced on each task, and the reading processes and strategies they believed they used on each one.

## Procedure

Following completion of the Student Profile, the readers completed the Reading Comprehension Tasks consisting of three texts differing in degree of familiarity. As previously stated, these texts and related questions were employed to provide insight into the strategies the readers were using on these tasks. The Reading Comprehension Tasks were administered to each subject individually on three different days. Questions on both vocabulary and comprehension were designed to elicit the various strategies the students were using while reading. For the most part, when asked a question, students were permitted to refer back to the text to find information. Since time was not a factor, they had opportunities to reread the text silently before answering questions. However, students did not make reference to the text if the question required a prediction on their part, or when retelling the text. After the Reading Comprehension Tasks, the subjects were asked to complete the Reading Strategy Inventory which took approximately 30 minutes to administer.

## Data Analysis

An initial framework for analyzing the think-aloud data was developed by the researcher before data was collected. In the process of constructing this framework, information from previous studies examining reading strategies was compiled. Analysis of student protocols resulted in the identification of a few additional strategies which were also included in the framework. Because a number of reading strategies could be classified as either cognitive, metacognitive, and so forth, it was necessary to code the transcription of the protocols in two parts: "Strategy Type" + "Strategy Behavior" in order to provide a more accurate description of the strategy the student was using. "Strategy Type" included the following broad categories: cognitive, compensation, memory, metacognitive, affective, social, and textual. These types of strategies were further broken down into specific strategy behaviors that the students engaged in. For example, in the context of reading cognitive, strategies include paraphrasing and summarizing text, anticipating content, previewing text, employing context clues, using connectors, and rereading. Compensation strategies involve guessing/hypothesizing. Memory strategies occur when the reader uses cognates, makes word associations, creates an association between new material and what is known, and so forth. Metacognitive strategies involve the correction of errors, word recognition, self-monitoring and evaluation, and differentiating more important information from less important information. Affective strategies occur when the reader makes encouraging statements to him/herself, while social strategies occur when the reader asks for clarification and verification. Lastly, textual strategies refer to the reader's ability to react emotionally to the text. These include the reader's interpretation and opinions of the text. Previously such two-part coding had not specifically been used to classify reading strategies. Instead, reading strategies were simply grouped into broader categories such as cognitive and metacognitive. Since, however, this did not cover the entire range of strategies used in L2 reading, we felt that this new coding scheme could assist in more accurately identifying the strategies being used.

Some form of verbalization was necessary for strategies to be recognized, but students did not have to explicitly identify or define them. In addition, some strategies were particularly amenable to qualitative analysis because of the amount of verbal interaction that accompanied their use. The Reading Strategy Inventory (RSI) therefore, was used to tap this information, all of which could not be obtained through the think-aloud protocols of the Reading Comprehension Tasks. Lastly, the interviews conducted after the think-aloud sessions provided additional information in this domain. Patterns were identified that characterized the students' knowledge of the tasks and their strategy use.

## Results and Discussion

The discussion of the findings is organized by the research questions posed for this study. Each of the patterns uncovered during analysis is presented and illustrated with examples. As was expected, the reading comprehension scores for more familiar texts were higher than for less familiar texts. Table 1 indicates that the engineering text, "Electrical Instruments" (Serway, 1990), yielded the highest score and the English text, "The World We Lost" (Mowat, 1965), yielded the lowest score. The text entitled "Sociolinguistic Rules" (Pakenham, 1994) yielded scores that fell in between the other two texts, most likely because the subjects were somewhat familiar with the content in terms of their personal experiences,

despite their low scores on the vocabulary component of the task. Because the questions varied in terms of length and type of answer required, the questions were assigned different values. Raw scores were converted into percentages to facilitate comparison of scores across the three reading tasks.

**Table 1: Reading Comprehension Scores on Unfamiliar and Familiar Texts**

| Text | Electrical Instruments /41 | Sociolinguistic Rules /61 | The World We Lost /60 |
|---|---|---|---|
| Reader 1 | 39/41 = 95% | 36/61 = 59% | 27/60 = 45% |
| Reader 2 | 37/41 = 90% | 34/61 = 56% | 31/60 = 52% |
| Reader 3 | 39/41 = 95% | 40/61 = 66% | 32/60 = 53% |

From the above figures in Table 1, it is clear that text familiarity affects overall reading comprehension. The subjects were better able to understand texts that were more familiar to them. These results confirm the findings of other studies which show that schema or background knowledge does affect comprehension. These sources of background information have been referred to more technically as schemata (Rumelhart; 1980; Carrell & Eisterhold, 1983; Cohen, 1994). For the purposes of this discussion, it is important to consider the various types of schemata. Schemata have been classified according to three basic types: 1) content schemata are systems of knowledge, values and cultural conventions; 2) language schemata refer to sentence structure, grammatical inflections, spelling and punctuation, vocabulary and sentence structures; 3) textual schemata refer to the rhetorical structure of different modes of text, for example, stories, research papers, and science textbooks.

The electrical engineering text was familiar to the readers in terms of content, language, and textual schemata. This familiarity resulted in higher reading comprehension scores. While the sociolinguistic text was less familiar to the subjects in terms of language and textual schemata, it was somewhat familiar to the subjects in regard to content schemata. During the think-aloud protocols when asked if their experiences were similar to those described in the text, all three subjects indicated that they had experienced misunderstandings with native speakers. For example, Reader 2 said, "As a matter of fact I faced some similar things when I came to America. When our teacher spoke to us, we would just nod and say few words. We didn't want to be misunderstood so we didn't say much."

During the interview questions, I also asked the readers to comment on what they found most familiar and least familiar. Their responses confirmed my expectations. They all identified the engineering text as being most familiar and the English literature text as being least familiar. When I asked Reader 2 the same question, he posed a question for me: "Do you mean familiar in experience or familiar in knowledge?" He went on to explain that the sociolinguistic text was similar to his experience because he experienced several misunderstandings with native speakers due to lack of linguistic competence on his part. He further stated that in terms of knowledge, the engineering text was most familiar to him. It was also evident from subjects' responses to the interview questions that the English literature text was the most difficult; it was least familiar to them in terms of content, language, and textual schemata. For example, Reader 1 stated, "He used too many

expressions like 'wasteland echo.' I don't know what he means." Overall, the subjects' comprehension scores indicated that schema affected text comprehension, and prior experience enabled the readers to better understand specific texts. In terms of strategy use on the three Reading Tasks, some interesting results emerged from the data. In general, readers appeared to be using a wider range of cognitive strategies on less familiar texts than on more familiar texts. For example, all three readers analyzed sentence structure and words in the sociolinguistic and English literature text more than in the engineering text. The subjects needed much more time to answer the comprehension questions as they had to refer back to the text and examine the syntax or word structures. The short story required more analysis than the others because it contained idiomatic expressions and literary devices, such as metaphors, personification, and analogy. The readers also appeared to employ context clues to a greater extent on the two less familiar texts than on the engineering text. They tended to go back to the text and examine the sentences and words that preceded and followed a word they were asked to define. When asked how they determined the meaning of the word, they responded in a similar manner; for example, Reader 3 stated, "From the sentence." The readers also tended to repeat words that were less familiar to them or to divide words, both of which are cognitive strategies. For example, when asked what the word "sociolinguist" meant, Reader 1 stated, "A person who studies linguistics." When asked how he determined the meaning of that word, he stated, "Well, linguistics, so it is a person who studies that. Like a psychologist studies psychology." When asked what "intercultural" meant all three readers examined the two parts of the word separately. Reader 3 offered this definition, "Different cultures, or maybe together -- something that belongs to society." Reader 2 stated, "Mix of cultures -- inter means inside so the cultures that are inside." The readers also tended to reread phrases and sentences in the texts that were less familiar to them. Again, this may have been a strategy to facilitate their comprehension of the texts themselves. In fact, at one point, Reader 2 stated, "There are a lot of long words. I don't know how to pronounce them and I have to read them again to understand the sentence. The most difficult parts are the new words for me." In the more familiar engineering text, overall, the subjects were better able to predict information, and were also more competent in the summaries that they provided. Subjects also previewed the engineering text to see how it was organized when asked to comment on what might be discussed in the text. All readers scanned the text to look for subheadings and subtitles, something which they did not do on the less familiar texts.

It was interesting to note that while a wider range of cognitive strategies was used on the less familiar text, the strategies were not always used effectively. For example, Reader 1 paid little attention to the titles of the texts. None of the readers made adequate use of context clues or sentence connectors. When asked to define the meanings of specific words, readers offered definitions of words that were clearly not appropriate for that particular context. All readers also appeared to be using compensation and memory strategies more frequently on less familiar texts than on familiar texts since the less familiar texts contained more unknown vocabulary items. For example, Reader 1 and 2 guessed the general meanings of words that they did not know. Even when context clues were used and they were uncertain of the meanings, they hypothesized about the possible meanings of the words. Reader 3 however, was much more reluctant to guess and often declared that he did not know the meaning of the word. All three readers also employed memory strategies more frequently on the sociolinguistic text and on the short story, specifically word grouping and

word associating strategies. For instance, when asked what "bravado" meant, Reader 1 said it had something to do with the word "brave." For the word "brute," Reader 3 offered "brutal" because it was similar to brute. Readers were therefore making connections between words they already knew that were similar in form. For example, when asked what "engendered" meant, Reader 3 stated, "I know gender is sex, but 'engendered' I don't know." The word "claustrophobia" was defined by all three readers as being "scared of something" indicating the connections they made to the word "phobia", but they did not know to what the first half of the word referred. The cognitive strategy of word division and the memory strategies of word associations were often used to determine the meanings of unknown words.

Overall, some metacognitive strategies such as monitoring and error correction also appeared to be used more frequently on less familiar texts than on more familiar texts. Because the text was read out loud by the readers, it was clear that they were monitoring their performance on the sociolinguistic and English literature piece to a greater extent than on the engineering text. The subjects were much more careful in their pronunciation of words and if they perceived words as being mispronounced, they corrected their miscues before proceeding. Because of such careful reading on the unfamiliar texts, readers tended to read at a much slower pace. In general, their reading appeared to be more bottom-up on these texts.

On the engineering text, the subjects read much more fluently because they were familiar with the content, language and format. They read at a faster pace and in a top-down manner. All three readers used the metacognitive strategy of differentiating more important information from less important information more effectively on the engineering text than on the other texts. This was evident from their straightforward responses to the questions, and the clear and concise retellings and summaries of this text. When providing summaries for the less familiar texts, it was much more difficult for the subjects to identify even the main ideas. For example, when Reader 1 was asked to summarize the sociolinguistic text which described the conflicts that could occur between native and nonnative speakers due to language or cultural differences, he stated the following: "It's about a foreign host and an American host and the communication between two cultures. The American host invited the other host for food - offered him once, then again. Its about two different cultures and politeness. Like the American people invite people once or twice, but the Japanese people do after the third time..." Such summaries were typical of the readers; the main ideas were not identified and the ideas were specific to the text, rather than interpretations. They were also somewhat scattered in terms of organization. Reader 3 said this when asked to provide a summary of the engineering text: "This text mentions the basics of circuits. It mentions the instruments to measure volts of any component and to measure any current, or the resistance in a circuit. The voltmeter measures voltage, the ammeter measures amps, and the ohmmeter measures resistance of the circuit." Summaries of the familiar text were more structured and provided the overall main idea of the text.

Affective strategies refer to self-encouraging statements that readers make to themselves while reading or about their reading. It was apparent that readers were less confident about their performance on the less familiar texts than on the engineering texts. At one point, during the interview questions, Reader 3 said the following about the short story: "Well, what I just read - for me it is harder. I'm not interested in this material." While reading the short story, Reader 1 said, "I don't have any idea. I guess I'm not very good at reading. I don't like reading I guess." Self-encouraging statements were therefore used less

frequently on less familiar texts. Because the readers understood less on the sociolinguistic text and the short story, they tended to engage in social strategies to a greater degree when reading these texts. For example, when something was not understood, they asked for clarification. The subjects also asked for verification of pronunciation and requested feedback about their responses. Such strategies were not used on the more familiar engineering text.

Lastly, it is important to consider how textual strategies were used. The readers could react to the texts emotionally and could express their opinions about texts. They were clear about their likes and dislikes in terms of what they read and could also comment on what they believed caused difficulties in their interpretation of texts. All three subjects stated that the vocabulary, the expressions, and the language of the short story caused them difficulty. While students could offer interpretations of all texts, conclusions about the themes of the texts were most accurate for the engineering and the sociolinguistic texts. Each of these was either familiar to them because of their background knowledge, or prior personal experience. For example, when asked which text they enjoyed the most, Reader 1 stated it was the engineering text, while Readers 2 and 3 stated that it was the sociolinguistic text. Reader 3 had this to say about the sociolinguistic text: "Yeah, I liked it because I had similar experiences. It also teaches us how to communicate with different people around us." This was interesting since the engineering text was described as being most familiar to all the readers. It was also interesting to note how aware readers were of their performance on the texts and that they could offer opinions about that awareness. Reader 2 said the following after reading the short story: "Well, it gave me an idea of how long it takes me to read words and understand." Overall, the three readers used different strategies on less familiar texts than on more familiar texts.

It must be recognized that the above results illustrate general tendencies rather than absolutes in terms of the strategies the readers used on each text. For example, on the sociolinguistic text and the short story, the readers used context clues and repeated words and phrases much more frequently than on the engineering text. This does not imply that strategies not mentioned above were not used by the readers, but rather that the strategies mentioned were used more frequently on the specific texts. Based on the results of the data, it appears that readers do use different strategies on texts differing in content, language, and textual familiarity. In addition, readers also use some similar strategies on both familiar and unfamiliar tasks, but to differing degrees.

The results of the Reading Strategy Inventory are also quite revealing as shown in Table 2. The RSI was used to gather additional data on how frequently readers used specific strategies when reading. The table below presents the reported average frequency scores of the various strategies used when reading, as identified by the three readers.

**Table 2: Results of RSI - Average Frequency Scores of Strategy Use in Reading**

| Part | Strategy Type | Reader 1 | Reader 2 | Reader 3 |
|---|---|---|---|---|
| A | Cognitive | 2.2 | 2.0 | 2.2 |
| B | Compensation | 3.0 | 3.0 | 1.67 |
| C | Memory | 2.75 | 3.0 | 2.0 |
| D | Metacognitive | 1.4 | 2.4 | 2.0 |
| E | Affective | 1.75 | 2.25 | 2.5 |
| F | Social | 2.0 | 2.67 | 2.0 |

Results of the RSI were consistent with patterns found on the Reading Tasks. For example, in general, results of the questionnaire showed that the readers used cognitive strategies less frequently than compensation strategies. None of the three subjects responded "frequently = 3" to more than four statements in the cognitive category of the questionnaire. This may indicate that cognitive strategies on the whole may not be used effectively. Furthermore, while the readers used cognitive strategies, some readers (like Reader 1) did not make use of titles, and none of the readers used context effectively to determine word meanings. Both Readers 1 and 2 had high averages for the compensation strategies section on the RSI and, interestingly enough, these were the two readers who guessed at unknown word meanings. Reader 3, who had the lowest average on the RSI in this area, was the most reluctant to guess the meaning of unknown vocabulary items. Although Reader 3 did obtain higher comprehension scores overall, his vocabulary scores on the sociolinguistic text and short story were the lowest. The average scores for the memory strategies section were also higher for Readers 1 and 2. Most of these statements in the RSI were related to word associations and therefore vocabulary. Reader 1 had the lowest score on the metacognitive section and it is interesting to note that his score on the short story was also the lowest. While his performance on the vocabulary items was relatively good, his overall understanding of the text was poor compared to the other readers. This, perhaps, reflected his inability to recognize important information in the text. He may also have had difficulty identifying the main purpose of the text as his statements in the think-aloud protocols indicate. While he was careful to pronounce words correctly, he paid little attention to the message of the text itself. In general, all three readers appeared to monitor pronunciation or oral reading and were reading bottom-up on the less familiar texts. Differences in the RSI responses to the affective and social categories are not entirely clear in terms of concrete emerging patterns. However, Reader 1 did have the lowest affective score and he tended to make more negative statements about his reading performance. Reader 2 was the most outgoing and provided lengthier responses to the questions asked. He also had the highest score on the social category of the RSI.

## Conclusion

### Summary of Findings

Unquestionably the small number of students and the type of students limit the generalizability of the current study. Therefore, such a study would have to be replicated with larger groups and varying L2 populations. Having said that however, a few general observations can be made from this study. First, as expected, background knowledge does affect reading comprehension performance. Second, evidence from this study suggests that readers tend to use some strategies on more familiar texts and others on less familiar texts. On more familiar texts, learners are already acquainted with the content, language, and textual schemata. There is less need to make use of compensation, social, specific memory, metacognitive, and cognitive strategies such as word repetition, rereading, analyzing, and context clues. However, when readers are faced with less familiar texts such strategies are useful. Evidence from this study also suggests that even if readers know what strategies to use when confronted by less familiar material, such as unknown vocabulary items, they may not use them effectively.

**Implications for Research and Practice**

This study suggests that educators may want to learn more about the value of focusing L2 readers' attention on the relationship between strategy use and reading comprehension. L2 students need to be aware of the resources they possess, and the difficulties they face as readers. The findings of this study also suggest that the explicit teaching of reading strategies may be necessary in order for L2 readers to understand how to effectively use strategies to enhance their comprehension. Numerous studies have shown that explicit strategy instruction in reading leads to improved comprehension (Barnett, 1988b; Carrell, Pharis and Liberto, 1989; Garner, 1987; Hansen, 1981; Jimenez and Gamez, 1996; Kern, 1989; Palincsar and Brown, 1984). Goodman, Watson, & Burke, (1996) present a comprehensive series of reading strategy lessons organized around the evaluated needs of students that can be incorporated into the classroom. Such lessons can serve as prototypes or can be modified for specific purposes or learners.

This raises another important issue relating to text selection. Regardless of the strategy lessons to be used, the content of the strategy lessons must be taken into account. Teachers must use caution in selecting material when the content is of little interest to their readers. Teachers must also assist students in selecting texts of optimal difficulty level so that students have opportunities to fully use the repertoire of strategies available to them. Monitoring students' text selection can also enable teachers to expose students to a variety of genres and rhetorical formats which can allow students to practice strategy use in different settings.

Discussions of how genre, text length, and the purpose of reading affect reading comprehension can also serve important functions in the classroom. Knowing what opportunities are available and what obstacles are present can lead to more beneficial learning and reading experiences for readers. As a final note, I conclude that the problems in reading comprehension of the ESL students at this level, as illustrated in the present research, clearly demonstrate the need to facilitate the development of reading skills as a goal of the second/foreign language curriculum. As these students approach the end of three years of university education, a retrospective study of their experiences as L2 learners would be beneficial.

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## Notes

1. The reading strategies on the questionnaire were divided into substrategies for the purposes of later analysis. Oxford's (1990) classification of strategies is quite comprehensive and can be applied to the four language areas. Therefore, similar terminology was used in the area of reading strategies. Similar questionnaires/inventories have been used in previous research studies carried out in the area of reading and comprehension strategies (Hahn, 1984; Oxford, 1990; Paris & Myers, 1981; Waxman & Padron, 1987). Also, some studies have shown that learners' perceptions of the strategies they use have predictive validity for their reading comprehension (Barnett, 1988a; Waxman & Padron, 1987).

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