PERCEIVED AND ACTUAL READING STRATEGY

USE BY SIX MULTILINGUAL COLLEGE

STUDENTS: A CASE STUDY
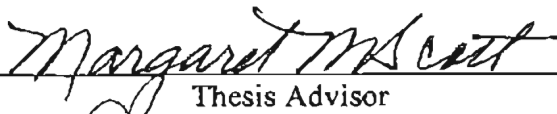
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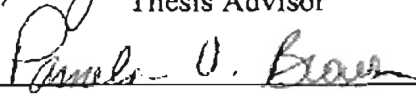Lancaster University,
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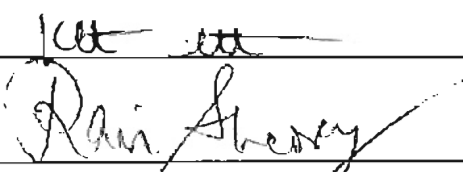
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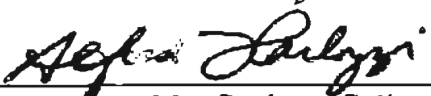
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ACKNOWLEDGEMENTS

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CHAPTER I

Introduction

This study explored the awareness and use of reading strategies when reading in multiple languages. Specifically, it investigated the perceived and actual use of specific reading strategies by six college students when reading for academic purposes. The main questions of interest related to (a) whether differences exist between perceived and actual use of reading strategies when reading academic materials in French, their second language and in English, their foreign language, and (b) whether there is evidence for reading strategy transfer across languages.

Research on first (L1), second (L2), and foreign language (FL) reading is extensive. This research emphasizes the importance of reading ability in learning and academic performance (e.g., Baker & Brown, 1984; Block, 1986; Carrell, 1989; Fitzgerald, 1995). Bernhardt (1991), one of the leading researchers in second language reading, noted that the ability to read is acknowledged to be the most stable and durable of second language modalities. In other words, learners may use their productive skills to comprehend what they are reading. Reading is described by Feng and Mokhtari (1998) as a complex process in which skilled readers use many sources of knowledge by using different strategies for the comprehension of what they read. That complexity of reading

has lead, since the 1970s, to research by many theorists; advocating teaching students the use of reading strategies for improved academic performance (Carrell, 1989).

Singhal (1998) noted that reading in the second language is similar to reading in the first language because reading in both the languages require knowledge of content, formal and linguistic schema. Reading is also a meaning- making process involving an interaction between the reader and the text. Readers use mental activities to construct meaning from a text. These activities are generally referred to as reading strategies or reading skills. These skills or strategies can take different forms because the readers will engage in conscious and unconscious behavior to enhance their comprehension of the reading passage.

Baker and Brown (1984) view readers who use strategies to monitor their reading comprehension, as skilled readers and those who fail to do so as unskilled readers. In other words, readers who are aware of and use effective strategies to comprehend what they read are often better readers than those who lack such awareness. Block (1986) and Hosenfeld (1977) studied differences between proficient and nonproficient L2 readers. They generally agree that successful readers have several characteristics, including

1) Keeping the meaning of the passage in mind during the reading.

2) Reading in "broad phrases", meaning having a more general idea.

3) Bypassing words that do not hinder the understanding of the ideas in the text.

4) Having positive conceptions of themselves as readers.

Unsuccessful readers, on the other hand, are characterized as

1) Lacking ability to understand and retain what they read.

2) Focusing on word reading rather than on ideas in text.

3) View of reading as mainly a decoding activity.

Much of the research presently available regarding reading comprehension in first and second language is informed by cognitive psychology and psycholinguistics. One of the contributions of this research pertains to the importance of the readers' prior knowledge or awareness of what they do when reading, and how they regulate or monitor their reading. Researchers (e.g., Pressley, 2000; Bernhardt, 2001) generally agree that Metacognition (knowledge of one's cognitive or thinking processes when reading) and control of such cognition (the process of regulating or monitoring the actions one takes when reading) are very important to proficient first and second language reading. Such research ahs shown that metacognitive awareness of reading processes has been found to be positively related to overall reading performance. In other words, unlike poor readers, proficient readers have a higher level of awareness of the strategies requires when reading. In addition, they have been found to actually use an array of strategies when reading (e.g., Feng & Mokhtari, 1998; Jimenez, Garcia, & Pearson, 1995, 1996; Pressley, 2002; Sheorey & Mokhtari, 2001). For instance, in a study that examined the reading strategies used by 20 Chinese proficient college students when reading easy and difficult texts in English and Chinese, Feng and Mokhtari (1998) found that readers used a diverse supply of strategies while reading in English and in Chinese; however, a majority of the strategies actually used when reading were used more frequently in English than in Chinese.

In a more recent study which looked at differences in the metacognitive awareness and perceived use of reading strategies among 105 United States (US) and English as a Second language (ESL) university students in the U.S., Sheorey and

Mokhtari (2001) found that both US and ESL students demonstrated a high level of awareness of nearly 30 reading strategies. They also found that US female students reported a significantly higher usage of reading strategies than did their male counterparts, and that the use of reading strategies was associated with higher levels of reading ability for both groups of students.

In a series of studies using mixed methodologies, Jimenez and his colleagues (1995, 1996) compared the types of strategies that both successful and less successful readers used in their English reading. They found that successful bilingual readers (a) tended to have similar views of reading in Spanish and English, (b) demonstrated awareness of several strategies, with some limited actual use of certain strategies (such as use of cognates, code-switching, and translation) that are quite unique to their bilingual status, and (c) were aware of the fact that strategies used in one language can also be used in another language. In other words, they knew that information and strategies learned or acquired in one language could be used to comprehend text written in another language.

On the other hand, the less successful bilingual readers did not see reading in a similar way is both languages. And because they saw the two languages as unrelated, they did not believe it was good to use strategies such as searching for cognates, code mixing, and translation. According to these researchers, metacognitive awareness as applied to reading is not an automatic outcome of simply being a bilingual. In other words, less proficient readers must be helped to develop an awareness of and use the reading strategies that have been found to be successful.

In the Jimenez et al. studies and others, it is clear that the use of strategies is vital to proficient first and second language reading.

Purpose of the Study

The purpose of the present study was to explore the perceived and the actual use of specific reading strategies by six multilingual college students when reading in two languages, namely French and English. The main questions of interest examined whether differences existed between perceived and actual use of reading strategies when reading academic materials in French, their second language and in English, their foreign language, and whether there is evidence for reading strategy transfer across languages. The following questions were explored in this research:

1. What strategies do adult multilingual readers use when they read in French (as a second language) and in English (as a foreign language)?

2. Is there any evidence of strategy transfer across these two languages?

Problem Statement

Despite the fact that much research has been done in second and foreign language reading, little research has been done on bilingual and multiliterate people's reading strategies. Nowadays, the research on metacognitive knowledge and reading strategies by speakers of French and English as second or foreign languages is at an embryonic stage, which means that little research has been done on the strategies used by multi-literate individuals when reading in French and English. As a result of this situation, the assumption, then, is that those people's reading potential in French and English is not revealed. This study will help understand the way they read in French and English.

Significance of the Study

This study has the potential of contributing to the existing knowledge about the strategies used by multilingual readers when reading in two languages—one learned as second language, the other as a foreign language. Much of what is known about awareness and use of reading strategies pertains to reading among Spanish-English bilingual school children in the United States. Though research has been undertaken to support strategic reading in a second language, no published studies exist which examine adult reader awareness in foreign languages such as French and English among adult college students. In addition, the present study examines the awareness and actual use of reading strategies across two languages.

Definition of Key Terms

The following terms have been defined for purposes of this study:

- *Metacognition*: "Refers to one's knowledge concerning one's own cognitive processes and products or anything related to them, e.g., the learning-relevant properties of information or data. (Flavel, 1976, p.232). This definition by Flavel views metacognition as the control of one's cognition.

- *Reading Strategies*: "A reading strategy is an action (or a series of actions) that is employed in order to construct meaning" (Garner, 1987).

- *Think-aloud protocol*: Is reporting verbally from a task that requires someone to say everything aloud he/she thinks and anything occurring to him/her during a reading (Garner, 1987, p. 69)

Assumptions

In reviewing the results of this study, the reader should assume that all participants are adults, that they all speak at least one language natively, and that they all learned French as a second language and English as a Foreign language. It is also assumed that they have varied abilities in each of these languages and that none has any known language or reading disabilities.

Limitations of the Study

The present study is limited in the following ways. First, the participants are members of a small case study of six adult college students. As such, they do not necessarily represent other subjects with similar backgrounds. Second, because the focus of the research is on awareness and actual use of reading strategies when reading one expository text, the results cannot be applied tom other types of reading materials such as narratives or descriptive texts. Third, all participants were from one specific part of West Africa, which limits the generalizability of the findings to other subjects from the same or other parts of Africa. Finally, because of the nature of the study and of the limited

number of subjects, the results cannot be generalized to other settings or research contexts.

Organization of the Study

The study consists of five chapters. Chapter I is an introduction to the study; it presents a brief overview of the research and the main parts of the study. Chapter II provides a review of the key research related to the main topic of the study, namely metacognitive awareness and use of reading strategies. Chapter III describes the methodology used in conducting the study, including a description of the subjects, research instruments used, procedures, and analyses. Chapter IV presents the results while Chapter V includes a discussion of the findings.

CHAPTER II

Brief Review of the Literature

This part of the study reviews some of the literature related to the topic of reading strategies in second language reading. In order to have a clear understanding of the strategies readers use when reading in first and second languages, key research findings related to this topic will be reviewed. The first part of this chapter will be about the theoretical framework explaining the main aspects of cognitive aspects of reading in second language. In the second part, the role of culture in reading will be presented. Finally, I will discuss the importance of metacognitive strategies and their relationship with reading comprehension.

Learner strategies can be broadly divided into two categories: learning strategies and use strategies. The strategies the learner uses to enhance the learning and acquisition are the learning strategies. The strategies the learner employs to enhance his/her performance are use strategies. Examples of these strategies are the strategies used to complete a language task, to communicate with others in the target language and to take a test. Learning strategies are continual and ongoing while use strategies are situational, which means that they are used only for a particular situation (Gagne et al. 1993). Language teacher researchers tend to look at use strategies rather than learning strategies

(Phakiti, 2003). That is why this research is mainly about strategies in reading in order to find out more about learning in this field.

Cognitive Aspects of Reading in the Second Language

Nowadays, most of the theories about reading are based on cognitive, psycholinguistic and sociolinguistic views. Many studies conducted on reading strategies (Carrell, 1985; Carrell, Pharis & Liberto, 1989; Palinscar & Brown, 1984) showed that poor readers in first and second language either do not possess any knowledge about strategies or misuse them. For that reason, Anderson (1999) suggests the distinction between cognitive strategies and metacognitive ones because that gives some indication of which strategies are the most crucial in determining the effectiveness of learning. For him, second language learners are actively involved in metacognition when they try to know that what they are doing is effective or not. He proposes a way, which allows these learners to evaluate the strategy use. This way consists of the following four questions whose thoughtful responses are efficient to evaluate one's strategy use and learning.

1) What am I trying to accomplish? In this question, the teacher wants the students to know that they are trying to get the main idea of the text they are reading because doing so is a key to understanding the rest of the text.

2) What strategies am I using? This is to know which strategies are available and which ones fit better to identify the main idea?

3) How well am I using the strategies? Here, the main goal is to make the readers know how well they are using the strategies they have chosen. In other words, it is just to check if the chosen strategies are well used and appropriately.

4) What else could I do? This last question tries to rescue the reader facing a problem.

To put it in another way, this is a way to help the reader use other strategies if the one ones that are used are not helping. There are many factors influencing reading ability in second language. The knowledge of both first and second language makes this investigation difficult (Block, 1986). An integrative review of research done on English as a second language learners' cognitive reading process (Fitzgerald, 1995) suggested that those readers recognized cognate vocabulary fairly well and used many metacognitive strategies. In second language learning, two exemplars appear to be very crucial when it comes to cognitive approaches The first exemplar emanates from the initial series of studies by Meisel, Clashen and Pienemann (1981) and Clashen, Meisel and Pienemann (1983) on the acquisition of German as an L2 by immigrant speakers of Italian and Spanish in a natural setting. Pienemann (1989) extended the same approach to speakers of Italian, learning German in a classroom situation. The second approach is from Parker (1989) cited in Larsen, Freeman and Long (1991) and Quintero (1992) on learning strategies in second language acquisition and the prediction made by those strategies in second language learning by Japanese. Both of these approaches found that second language learners decode, analyze, store and produce in ways determined by cognitive general factors. Those factors are the "saliency" of the material, the "continuity" of the elements and the "basic conservatism" of the learners not to extend

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hypotheses to domains not warranted by the ordinary input. According to this approach, people consider events in terms of actors, actions, person and things acted upon. Those are more "salient" than the places, time and manner of events. In other words, second language learners will attend to and acquire actors, actions and things acted upon before they will attend to and acquire adverbials dealing with places, time and manners of the event.

Researches conducted have proved that orthographic knowledge can help a skilled reader reduce his/her dependence on processing the information from the text (Underwood & Batt, 1996). They also pointed out that a known word helps a reader guess the meaning of the available information. Further, they mentioned that other factors could help reduce this dependability. Cotterall (1990) conducted a study on the metacognitive strategy instruction of four Japanese and Iranian students learning English as a Second Language (ESL) and found that these learners benefited from the strategy instruction. The metacognitive awareness training done by Auerbach and Paxton in their second language reading classes through pre and post course reading interviews, reading comprehension questionnaire, strategy awareness questionnaires, reading inventories and think aloud protocols allowed to increase those learners'metacognitive awareness. Another study on native speakers of Arabic reading academic texts in English proved that those readers use more strategies in English, their second language than in Arabic their first language (Alsheikh, 2002). Researchers have found that bilinguals monitor their comprehension, use schemata and prior knowledge to sustain their comprehension and recall things (Lightbown, 1978; Fitzgerald, 1995).

Other approaches to second language acquisition reveal that the use of strategies is a useful tool for the language learner to face some of the difficulties he/she can face during the second language acquisition. Jimenez et al. (1996) brought more light to reading in the second language. They studied the metacognitive reading strategies used by fourteen bilingual students, in the seventh grade. These students were classified as successful and unsuccessful readers of English. They deduced from their study that good readers found that their first language was a good source of knowledge for their performance in second language reading (English.).They also mentioned the use of specific strategies for the bilingual context like the use of cognates and translating. On the other hand, the unsuccessful readers were considering Spanish, their native language, as a handicap to their reading performance in English. They were using the same strategies to read both languages. In other words, the successful readers controlled and benefited more from their reading than the unsuccessful ones did. A study made by Bartolone, Vasquez and Lucas (1990) on Spanish children revealed that these children use their Spanish knowledge to support their comprehension in reading difficult passages in English. Pritchard (1990) came to the same conclusion when he conducted a study on Latino high school students. A research on 176 fourth and sixth grade students revealed that the use of strategies is extremely important in processing and retaining information (Grabe, 1980). These 176 students were given reading passages. Later, in a test, they were asked to recall the information in the passages. The results of the test showed that poor readers were not skillful enough to engage in such type of cognitive process.

In another study (Feng & Mokhtari, 1998), twenty Chinese native speakers read and reported their thinking process while they were reading an easy expository text and a

difficult one. The aim of that study was to see if there were any differences in strategy use while reading easy and difficult passages in both Chinese and English. They found that those adult Chinese readers were using more strategies for English and for difficult texts than for Chinese and easy texts. In other words, those Chinese readers used more strategies for English texts and for difficult texts in both Chinese and English than they did with the easy texts. Phakiti (2003) conducted a study on 384 students enrolled in a fundamental English course at a Thai university who took an 85- item, multiple-choice achievement test in reading comprehension. The test was followed by a cognitive-metacognitive questionnaire. Eight of those test takers were selected for retrospective interviews. The results of that study revealed two important things:

1) The use of cognitive and metacognitive strategies had a positive relationship to the reading test performance.

2) Highly successful test takers reported significantly higher metacognitive strategy use than the moderately successful ones who also used more strategies than the unsuccessful test takers.

Reading researchers usually divide reading strategies in two main categories (Salataci & Aykel, 2002) which are:

1. *Cognitive reading strategies*

Are those, which allow the reader to construct meaning from a text. Researchers (Aebersold & Field, 1997) found that cognitive readers engage in what they called bottom up and top down strategies. In other words, their information processing starts at the sentence level (bottom up strategies) and then, they try to see how the information from that sentence fits in the text (top down strategies such as background knowledge,

prediction). They enable the reader to understand a written text. Whitehead (2002) makes two broad groups of thinking strategies which are the perspective thinking strategies and the imagery thinking strategies. Each of these groups of strategies plays an important role in the comprehension process.

Perspective thinking strategies enable readers to comprehend texts from many social and physical perspectives. For example, how today's scientific discoveries, like space exploration, will be seen in forty years, implies a time perspective strategy because in forty years, science will have evolved and today's discoveries would be outdated. How many men are required to move a big rock is a size perspective strategy because the size of the rock will be proportional to the number of persons required to move it. How people will interpret Martin Luther King assassination is a cultural perspective strategy because each of the persons who will interpret it will view it through his/her culture.

Imagery Thinking Strategies are the strategies that the reader uses to have an accurate and comprehensive image of a text. As stated by Presley (1986), language is not only words and can be expressed through image. That is why both writers and readers can use image because images can evoke words just as some words can evoke images.

2. *Metacognitive Reading Strategies*

Metacognitive strategies are the ones used to control or regulate the cognitive strategies (Devine, 1993; Flavel, 1981). The notion of metacognition, though it was not revealed yet, could be traced back to Plato and Aristotle (Brown, 1987). Later, in 1977, Flavel and Wellman came up with the theory of metamemory to explain how children recall or lack strategies. It was late in the 80's that people espoused the theories of metacognition. Recent research and practice in reading comprehension show a deep

interest in metacognition (Tierney & Parson, cited in Wong, 1992). However, the lack of metacognition to be taken as an explanation to reading comprehension is new (Turgescent, 1975). That is why metacognition, what readers know about their cognition, became a field of investigation where many researchers revealed a lot of metacognitive skills in reading (Brown, 1980; Baker & Brown, 1984; Mokhtari & Reichard, 2002). It is under the title "metacognition" that researchers discuss motivation, focusing attention, managing time, deciding what to read along with methods of reading. These methods can be: reading the conclusion first, reading for main ideas, reading for key words, identifying the structure of the text (Grow, 1996).

Most of the skills that were identified were: clarifying the purpose of reading and monitoring activities for comprehension purpose. Of the many studies undertaken in reading in the second and foreign language, few have studied the use of strategies, using the think aloud protocol for multilingual and multiliterate people when reading in two languages. For Paris and Winograd (1990) cited in Mokhtari and Reichard (2002), metacognition is the "knowledge about cognitive states and abilities that can be shared among individuals while at the same time expanding the construct to include affective and motivational characteristics of thinking" (Paris & Winograd, 1990. p. 15). In practice, these two strategies work together because researchers have found that better readers and learners face learning tasks with more strategies. That means that they have better conscious control over what and how they read (Grow, G., 1996).

Studies in which poor and good readers were compared showed that good readers use metacognitive strategies before, during and after their reading in order to facilitate their comprehension. As for poor readers, they stick on the meaning of the word rather

than on the comprehension monitoring. Metacognitive reading strategies can be divided into, at least, three categories: planning, regulation and evaluation (Paris & Jacob, 1984).

1. Planning: is when the reader is identifying the purpose of the reading and the actions to be undertaken to reach the reading goal.

2. Regulation: is the monitoring of one's reading actions to reach his/her goal.

3. Evaluation: is the last stage in which one assesses his/her cognitive abilities to reach the goal.

Those steps are called reading strategies awareness. They are significant in reading because they allow distinguishing poor and good readers.

All these researches show that reading strategies are very important for the learner in general and particularly for the second language learners.

Reading and Culture

Reading in a second language was viewed as a slower version of doing the same task in the native language. That brought researchers to ask the intriguing questions of knowing if the two kinds of reading were a parallel cognitive process at work or strategies accommodating to both languages (Singhal, 1998). Whether it is in the first or second language, reading involves the text, the reader and the interaction between the reader and the text (Rumelhart, 1977). Although there are many similarities between the two reading systems, they have different processes. For, many factors come into play when it comes to reading in a second language. The first important factor is the schema or schemas, which is the reader's prior knowledge, in general, that helps understand

easily a reading passage or hinders the reader. The cultural orientation can also play an important role in second language reading. An illustration of the role of prior knowledge and cultural background on reading was shown in a study by Carrell (1987). This study involved 28 Muslim Arabs and 24 Catholic Hispanic ESL (English as a Second Language) students who were enrolled in an intensive English program at a Midwestern university. They read two texts; one Muslim- oriented-content and the other Catholic-oriented- content. Then, they had to write down what they recalled from the two texts. An analysis of this recall protocols showed that the participants comprehended and recalled passages that were similar to their native culture, or familiar to them. Other studies confirmed that readers comprehended passages which were more familiar to them (Ammon, 1987; Carrell, 1981; Vasquez &Lucas, 1990). Steffensen and Joag-Dev (1984) conducted a study in which they used two descriptions, both written in English. One description was an American wedding and the other one was an Indian one. The readers were asked to read and recall the descriptions. It was found that readers understood the description about their culture more accurately than the other. For example, the unfamiliar protocol of an Indian wedding, made it difficult for Americans to understand the description.

As Freire (1987) said, reading the word is reading the world. This implies that the reader's prior knowledge of the world is vital in understanding a reading material. As nonnative speakers read, they see things in a different world, with different language and culture. That also demonstrates that culture determines the way we see things. For Vygotsky "all fundamental cognitive activities take shape in a matrix for social history and form the products for sociohistorical development" (Luria, 1976). For him the

cognitive skills and patterns of thinking are not determined by innate factors but are the consequences of the environment in which the child grew up. That means that the society in which a child grows up and the own personality and history of that child will determine how he/she thinks and views the world (Murray, 1993).

The Importance of Reading Strategies

As Dewey said about thinking, "It Makes Possible Action with a Conscious Aim" (1933, p.17). In other words, thinking is highly important and makes the difference between man and animals. Dewey goes on by saying that thinking enables us to plan, direct and execute our activities. It allows us to act deliberately and intentionally to reach our goals. Therefore he suggests the training of thought in order to be effective. The use of strategies can be considered a one aspect of this training. Teachers, who teach students the purpose of reading strategies, how and when to use them, promote learning because knowing and using strategies gives the power to the students to control and improve their own reading comprehension (Paris & Jacobs, 1984). They made this deduction after a study of eight and ten- year- old students. Half of each group had received four months of classroom instruction in reading strategies twenty to thirty minutes twice a week for fourteen weeks. The aim of this instruction was to make these children aware of reading strategies, how and when to use them. When these two groups of children took three reading comprehension tests, the ones who had great awareness of reading strategies scored higher compared to those who were not taught how to use strategies. Though researchers have proved that one difference between good readers and bad ones reside in

their knowledge of strategies, not all studies, especially with young readers, have produced evidence to support this prediction. Cross and Paris(1988) found that third grade students showed less congruence between their knowledge of reading strategies and their actual reading performance than did fifth grade students. In a study of fourth grade readers, Paris and Myers reported that good readers were aware of "harmful strategies" that would interfere with reading (such as watching television while reading) than poor readers were.

In a reading situation, readers' knowledge of strategies may differ from their use of strategies. In studies with high school level students or older, most researchers have found that good readers tend to report, in self report data from protocols, more strategies than poor readers do. (Hare & Pulliam, 1980; Smith 1967; Sullivan, 1978). Opposite views were reported concerning this statement Hare and Smith (1982) found in one research study that strategy use and reading achievement were linked. Later in another study, he proved the opposite. Olshavsky (1976-1977) found that good high school readers used strategies more frequently than poor readers did. Later, in another study (1978) she found that there was no difference between poor and good high school readers in either the number or the type of strategies. The rationale behind this last result was that, as the reading passage was more difficult, both groups were using fewer strategies. In data collected from good middle school readers, Bednar (1987) confirmed that the use of strategies would decline whenever the reading passage would be difficult.

Conclusion

To sum up, one can see that reading appears to be an important aspect of language learning and needs to be supported. Though a lot of research has been done on reading, few of them were about reading strategies used by second language learners. That is why strategy use, which, itself, is a support for reading and learning, should be valued by language teachers and learners.

CHAPTER III

Methodology

This chapter describes the methodology used in conducting the study, including a statement of the purpose and research questions, as well as a description of the subjects, the research instruments used, procedures, and analyses.

The purpose of the study was to explore the perceived and the actual use of specific reading strategies by six multilingual college students when reading in two languages, namely French and English. The main questions of interest examined whether differences existed between perceived and actual use of reading strategies when reading academic materials in French, their second language and in English, their foreign language, and whether there is evidence for reading strategy transfer across languages. The following questions were explored in this research:

4. What strategies do adult multilingual readers use when they read in French (as a second language) and in English (as a foreign language)?

5. Is there any evidence of strategy transfer across these two languages?

Participant Selection

The subjects for the study consisted of six adult college students who were pursuing graduate degree at a large comprehensive university in the Midwestern United States. To recruit them for participation in the study, I went through the following steps. First, I identified the African students from French speaking African countries (Mali, Senegal, Ivory Coast, Guinea, Burkina Faso), living here in Stillwater. I got in touch with those students and explained to them how the research was going to be conducted.

When they understood the procedures and the time needed for their participation, only six of the persons identified agreed to participate in all the phases of the study. As the deadline to report the results of the study was approaching, the time constraint was also another factor contributing to having a reasonable number of participants who would be entirely devoted to the study. The participation to this study was, first, based, on the willingness to participate in the study. Second, the candidate had to be committed to spend at least four hours to participate in all the phases of the study. They, also, had to show evidence of their proficiency in English. This proficiency was demonstrated if the participant had obtained a score of 550 or higher in the Test of English as a Foreign Language for graduate students and 500 or higher for undergraduate students. Their levels of study at the university was considered to be a proof of a good level. For, nobody is accepted at OSU (Oklahoma State University) without the required level of English, which is a score of 550 or higher in the Test of English as a Foreign Language (TOEFL) for graduate students and 500 or higher for undergraduates. As for the level of the French language, that was confirmed through private meetings with the participants and by

consulting their academic records. The participants, first, completed a background questionnaire and a reading strategies inventory. This phase of the research was to get the answer to the first question used in the research. As for getting an answer to the other question, all the participants were willing to read in the two languages and think aloud in them.

Participant Description

Ten participants were identified. All of them were studying at Oklahoma State University (OSU) and all of them resided in Stillwater. Six of them were graduate students, three were undergraduates in different fields and one was a teacher. All these people were from West African countries where French is the official language. That means that French is used as the medium of instruction in these people's home countries and they have their own mother tongue in addition to French. To put it in another way, the participants were bilingual or multilinguals with French as a second language. This meant that all the participants could read and write in French and had studied it for at least twelve years. Each of them had, at least, six years of study in English. In other words, all the participants could read and write in the two languages. Due to their different levels, they also had different levels in English and French. Among those people, the researcher identified six people who agreed to participate in all the phases of the study. Two of these participants were undergraduate students in finance and computer science and the other four were graduate students. The questionnaire (see appendix A)

was used to get some more background information about the participants. They formed a group of two males and four females as shown in table 1.

Table 1

Description of Participants

Subj.	Age	Gend.	Test	Grade	Yrs/US	Yrs/St	Rank	Lang.	Maj.
KB	33	M	550	-	3	12	Grad.	3	Ec.
BC	20	F	450	-	3	8	Und.	2	Fin.
DT	43	M	600	3.70	5	11	Grad.	4	N.Sc.
ND	25	F	500	-	3	8	Und.	3	C.Sc.
EM	23	F	550	-	-1	10	Grad.	3	AgSc.
FT	42	F	580	3.91	5	10	Grad.	3	N.Sc.

Subj = Subject; Gend = Gender; Yrs/US = Number of years in the US; Yrs/St = Number of Years of Study in English; Lang. = Language; Maj. = Major

All the participants were born in West African countries and had French as a second language and as a medium of instruction in schools. French was also the official language in the participants' countries.

Table 1 shows that only one participant had less than two years of stay in the United States. The table also shows that all the participants have had eight or more years of study in English. It indicates that the time they spent here in the United States was good enough to reinforce their basic English language.

The subjects were chosen from four different fields of study, which are economics, finance, nutrition and computer science. Just like the gender classification, two of the participants were undergraduate students while the other four were graduates. Their TOEFL scores ranged from 550 to 600. The participants' mean of performance in their first language was based on a ten point Likert scale. It varied from 6 to 8.33; which

implies a good enough performance for the validity of the research. As for their second

language, the mean was between 7 and 8.33. Like the first language, this performance is a

reliable one for adequate research.

Table 2

Participants Ability in First and Second Language

First language

Skills	KB	BC	DT	ND	EM	FT
Listening	10	9	10	10	10	10
Speaking	10	10	10	10	10	10
Reading	10	10	10	8	10	10
Writing	10	10	10	9	10	9

Second language

Skills	KB	BC	DT	ND	EM	FT
Listening	7	10	10	10	10	7
Speaking	5	10	9	10	10	8
Reading	5	9	10	8	10	9
Writing	5	8	9	8	10	9

Table 3

Participant Description by Language Background

Subjects	Native language	L2	Foreign L.	Field
KB	Mina	French	English	
BC	French	English	English	
DT	Mandingo, Wolof	French	English	
ND	French, Wolof	English	English	
EM	More	French	English	
FT	Mandingo	French	English	

- **_KB_** is from Togo. He is thirty-three years old and is a doctorate student in economics. He has been in the States for almost three years. He speaks French and English fluently but is more proficient in French.

- **_B.D._** is twenty years old. She is from Ivory Coast and is doing her undergraduate studies in finance. She has been in the States for two years. She speaks French and English fluently but is more proficient in French

- **_D.T._** is in his third year in the United States pursuing his doctorate in nutrition science. He is 42 years old and he is from Senegal. He has studied English for eleven years. He is fluent in French, meaning that he can read, write and speak fluently. He considers himself more proficient in French followed by English.

- **_N. D._** is in the middle of her third year in the United States. She is twenty five years old and is doing her undergraduate studies in computer science. She is from Senegal and has studied English for eight years. She speaks French and English fluently. She is more proficient in French, followed by English.

- **_E.M._** is a first year graduate student in agricultural economics and has been here in the States for only three months. She is from Burkina Faso. She is twenty three years old and is fluent in More, French, and English. All in all, she is more proficient in French, followed by English.

- **_F. T._** *is* in her fifth year in the United States. She is forty three years old and is doing her doctorate in nutrition science. She is from Guinea. She speaks both French and English fluently but is more proficient in French.

It is important to mention here that the two undergraduate students who were supposed to have a lower level of French, because of their college rank, had French as a first language. This means that their proficiency, in French, could be the same or even better than the other participants who were graduates. Moreover, none of the participants had English as a major in their previous academic studies. In deduction, it is assumed that all the participants have good and similar levels in the two languages.

Research Instruments

The instruments that were used to conduct the study were the questionnaire in appendix A, a reading strategies inventory (see appendix B), and a think aloud protocol. Here is a brief description of each of these instruments:

Background questionnaire

The questionnaire (see appendix A), adapted from Mokhtari (2002), was used to gather demographic data about the participants. This information consisted of various variables including age, gender, academic major, educational background, frequency of language use, birthplace; self reported reading and language proficiency, TOEFFL score, length of stay in the Unites States and other questions capable of bringing the necessary and precise information about the subjects.

All the subjects completed the Survey Of Reading Strategies (SORS) (Mokhtari and Sheorey, 2002). This instrument is intended to measure the metacognitive awareness and strategies used by native and non-native speakers of English. In their research, the authors of this instrument found that it measures three categories of strategies, which are:

The Global Reading Strategy (GLOB) can be considered as the generalization of the global reading strategies setting the stage for the reading act.

Using the Problem Solving Reading Strategy (PROB) the reader tries to solve a targeted problem or repair strategies when problems develop while trying to understand the information in a reading passage. Support Reading Strategy (SUP) provides the support mechanism or tools, which can sustain responsiveness to reading.

After being tested on native and non-native speakers of English, it was found that the instrument had well-established psychometric properties. As the authors have stated, the SORS instrument is not intended to measure the readers'comprehension monitoring capabilities. Its aim is to increase the reader's metacognitive awareness and strategy use during the reading. The results of this awareness can be useful in situations like assessment, improving teaching and research. The instrument was developed, based on the review of recent research literature on metacognition and reading comprehension. Four other reading strategy instruments were also considered by the authors for better ideas regarding format and content (Mokhtari & Reichard, 2002). This SORS instrument was administered to the subjects in French and English. A translation of the instrument in French is in Appendix C. The authenticity of the translation of the instrument into French

was done and confirmed by a group of people who mastered both French and English, including one author of the SORS instrument.

Think Aloud Protocol

The whole process of the think aloud took three weeks. In the first week, the researcher informed the participants about the research and they were given the SORS instrument in French and asked to fill it in. At the same time, they were informed, individually, about the tape recording of the think aloud, which was going to take place at Oklahoma State University, in the Reading Center. This information session took almost thirty minutes. Before the actual recording, the researcher, in the second week, trained the participants to think aloud. The training was initially scheduled to take place in the Reading Center. Because of the schedule of the Center, which was not open in the morning, the participants received their think aloud training sessions at home and individually. The training was done in three phases. A first session was done and then the participants were given the opportunity to ask questions during the second session. The third session was to be sure that all the participants understood how to think aloud. Each of these three sessions took, approximately, forty-five minutes.

Reading Passages

The passages were typical expository reading materials. The French text of eight hundred words was selected from "L'ESSOR", the national newspaper of Mali, a West African

country. The text is about the biography of the first president of the African Union. The Organization of African Unity, created in the 1960's in Addis Ababa in Ethiopia, was given a new name and function in July 2002 in Durban, South Africa. The choice of this text is very important because it tells about someone who is going to lead this first Pan African organization and teaches about the history of the continent. The readability was checked and rated 55% on the Flesher scale, which corresponded to college reading level. This means that the text is convenient enough for the level of college students' reading. As for the English version, it is about parental involvement in children's learning science. It has been retrieved from the educational magazine "Science and Children". The choice of the topics, in these texts, was done according to the following criteria. First, the African Union is the new organization that is supposed to give hope to the African continent in a more and more global planet. Africans also see in this organization the solution to their daily problems like conflicts, AIDS and many other problems that the continent is facing. As for the second topic, parental involvement, it is known that everyone deals or has dealt with this topic in his/her school career. All the participants read the texts in the two languages (English and French) and report their thinking aloud in each of the two languages. As reported by Feng & Mokhtari (1998) the reading passages can be marked by red dots or a red flag that can be placed every two or three sentences to remind the report of the readers' think aloud. The researcher preferred using the red dots to remind the readers to think aloud. Raising the red flag, as suggested by Feng and Mokhtari, can divert the reader and even force him/her to think aloud when he/she is not ready to do it. A copy of each passage is included in the appendixes of this research.

The third week was devoted to the data collection of the think aloud. With the help of the teaching staff at the College of Education, the first two participants'recording of the French reading passage took place at the Reading Center. The first day, the researcher started with the recording of the French reading passage during which only four people were recorded. The second day, two people were expected to be recorded to complete the French version but because of their schedule change, the rest of the recording was done during the long weekend before the Labor Day. That gave the opportunity to the researcher to tape the remaining participants, individually, at home. The English reading passage was recorded on Saturday and Sunday, according to the availability of each participant. The remaining participants of the think aloud in English were recorded on Monday. Each of the recordings took approximately twenty-five minutes for the French reading passage and thirty-five minutes for the English one. The recordings were done interchangeably so that the first reading could not influence the second one. In other words, the participants who were recorded the first day took a one-day interval off to come for the second recording and while some were recording in French, others were recording in English and vice versa.

The subjects were asked to read the passages in the two languages and report their thinking while reading. The think aloud was reported while reading in the language in which the text was. However, they were free to do it in the language they were comfortable with. Only one participant did her think aloud in French while reading the English passage.

The data collected were analyzed both quantitatively and qualitatively because of their varied sources. The different analyses were then put together for a general interpretation. A basic descriptive statistics was used to analyze the data about the subjects and a descriptive profile of each participant was written.

Analysis of the SORS Data

The SORS survey in French and English was analyzed to find out the strategies perceived by these adult readers in the two languages.

The researcher used the framework developed by Someren, Barnard and Sandberg (1994) to analyze the think aloud data in order to identify the reading strategies, actually used by the participants. It consisted of three main steps. First, the data had to be transcribed. After the transcription, it (the data) had to be segmented. The segmentation was no more than putting the transcription in segments; which meant putting them into sentences. According to the author (1994), the pauses in the recording could be marked as the end of a full sentence or idea. The last step was the coding of the data. The coding consisted in giving "codes" to each statement in the transcript. For that part, the researcher used the SORS instrument to code the data. That meant that each statement in the participants'think aloud was given, as stated in the SORS, one of the following labels: "GLOBAL", "SUPPORT" or "PROB". That meant that each statement was classified as a Global reading strategy or Support strategy or a Problem solving one.

The researcher was assisted by two people who were trained to be judge assistants in the classification of the strategies. The statements that could not be classified as one of the SORS elements were identified as "OTHERS". That meant that they did not belong to any of these codes.

CHAPTER IV

Results

This study explored the perceived reading strategies of multi-lingual college students and their actual use of strategies while reading in French, a second language and English, a foreign language. The main questions of interest focused on (a) whether differences existed between perceived and actual use of reading strategies when reading academic materials in French and English, and (b) whether there is evidence for reading strategy transfer across languages.

Research Question #1: What strategies do adult multilingual readers report using and actually use when they read in French (as a second language) and in English (as a foreign language)?

Reported Strategy Use

The participants' responses to the Survey of Reading Strategies Survey (Mokhtari & Sheorey, 2002) were used to determine their awareness or perceived use of reading strategies when reading in French and English. The results for the subjects' reported or perceived use of reading strategies are presented in tables 4 for all six subjects and in table 5 by subject.

Table 4 shows the mean differences in reported strategy use for all subjects for both languages. These data reveal three interesting findings. First, collectively, the six subjects reported a relatively high level of usage of reading strategies when reading academic materials in French and in English. The overall reported usage is slightly above average (Mean = 3.62 on a scale a 5-point scale) for French and English (Mean =3.77). It is interesting to note that the mean strategy use ranged from a low of 2.66 to a high of 4.71 in French. The mean strategy use in English ranged from a low of 3.22 to a high of 5.00.

Second, for all subjects, the highest level of strategy use was reported for the Problem Solving Strategies, followed by Global Reading Strategies, and Support Reading Strategies. Finally, the subjects reported a slightly higher level of strategy use for English, their foreign language than they did for French, their second language.

Table 4

Mean Differences in Reported Reading Strategy use by Participants in French and English

Strategy	French	English
Global Reading Strategies	**3.80**	**3.83**
Setting purpose for reading	4.33	4.16
Using prior knowledge	3.50	4.50
Previewing text before reading	3.66	3.50
Checking how text content fits purpose	3.33	3.50
Noting text characteristics	3.16	3.00
Determining what to read closely	4.00	3.50
Using text features (e.g. tables)	4.33	4.66
Using context clues	4.00	4.33
Using typographical aids (e.g. italics)	3.33	3.66
Analyzing and evaluating the text	3.66	3.83
Checking understanding	3.83	3.83
Predicting or guessing text meaning	3.33	3.83
Confirming prediction	3.16	3.50

Table 4 (continued)

Strategy	French	English
Problem Solving Strategies	**3.95**	**4.06**
Reading slowly and carefully	4.16	4.50
Trying to stay focused on the reading	4.66	4.00
Adjusting reading rate	3.83	4.00
Paying close attention to reading	4.00	4.33
Pausing and thinking about reading	3.16	3.66
Visualizing information read	3.33	3.50
Re-reading for better understanding	4.00	4.00
Guessing meaning of unknown words	4.00	4.00
Support Reading Strategies	**3.12**	**3.42**
Taking notes while reading	3.00	2.83
Reading aloud for better understanding	3.33	3.66
Underlining information in the text	3.83	3.83
Using reference material (e.g. dictionary)	3.66	3.83
Paraphrasing for better understanding	3.33	3.33
Finding relationship among ideas	3.33	4.00
Asking oneself questions	3.00	3.50
Translating from French to English	2.33	2.83
Thinking in both languages when reading	2.00	3.00
Overall Reading Strategies	**3.62**	**3.77**

Note: Mean ratings indicate how often subjects reported they use specific strategies when reading academic materials. A rating scale from 1 (low perceived use) to 5 (high perceived use) was used.

Table 5 shows the strategies reported as being used by each of the subjects. An examination of these data shows a similar pattern. That is, for most of the subjects, a higher means strategy use was reported when reading in English than when reading in French. In addition, the strategies that were reported used most were in the Problem Solving category followed by the Global Reading Strategies and the Support Reading Strategies. However, it is important to note that these findings pertain to the subject's perceptions about reading academic materials in general. The following section presents findings about actual use of strategies when reading passages in each of the languages.

	KB Eng	KB Fre	BC Eng	BC Fre	DT Eng	DT Fre	ND Eng	ND Fr	RM Eng	RM Fre	FT Eng	FT Fre
GLOBAL READING STRATEGIES	4.00	3.92	3.84	3.61	3.69	4.15	4.15	3.92	3.92	4.38	3.84	3.84
Setting purpose for reading	4	4	4	4	4	3	5	5	4	5	5	5
Using prior knowledge	5	4	4	3	4	3	4	3	4	5	5	4
Previewing text before reading	4	4	4	4	3	5	5	4	5	4	4	1
Checking how text content fits purpose	3	3	3	2	4	3	3	5	4	4	1	4
Noting text characteristics	3	4	3	2	3	5	1	5	4	5	4	5
Determining what to read	3	5	4	4	3	5	5	5	3	4	4	5
Using text features (e.g., graphs)	5	4	4	4	5	4	5	4	3	3	5	4
Using context clues	5	4	4	4	4	5	5	4	5	5	4	5
Using typographical aids (e.g., italics)	4	4	4	4	3	5	5	3	3	3	2	4
Critically evaluating what is read	4	3	4	4	5	4	4	3	4	5	4	5
Checking one's understanding	4	4	4	4	4	5	4	3	4	5	4	3
Predicting or guessing text meaning	4	4	4	4	3	14	4	3	4	4	4	3
Confirming predictions	4	4	4	4	3	13	4	4	4	5	4	2
PROBLEM SOLVING STRATEGIES	3.87	3.62	4.00	3.75	4.87	4.75	4.12	4.00	4.00	3.57	3.50	3.57
Getting back on track while reading	3	4	4	4	5	5	5	5	5	5	4	4
Reading slowly and carefully	4	4	4	4	5	5	4	5	4	5	4	5
Adjusting reading rate	4	3	4	4	5	5	3	5	3	3	5	3
Paying close attention to reading	4	4	4	4	5	5	4	3	3	2	2	5
Pausing and thinking about reading	4	3	4	4	4	4	4	3	4	4	2	1
Visualizing information read	4	4	4	4	5	5	4	4	5	4	4	2
Re-reading for better understanding	4	3	4	4	5	4	5	3	4	5	3	4
Guessing meaning of unknown words	4	4	4	2	5	5	4	4	4	5	3	5

Table 5 (continued)

SUPPORT READING STRATEGIES	3.55	3.77	4.00	3.66	3.66	3.88	3.55	3.00	3.22	2.33	3.22	3.77
Taking notes while reading	3	2	4	4	5	4	3	3	3	3	3	2
Reading aloud when text becomes hard	4	4	4	4	5	5	4	2	2	1	1	5
Underlining information in text	4	4	4	4	5	4	3	2	2	1	5	5
Using reference materials	4	4	4	4	3	5	3	2	2	1	4	5
Paraphrasing for better understanding	3	4	4	4	4	4	4	5	5	4	3	3
Going back and forth in text	4	4	4	4	5	4	4	4	5	4	3	4
Asking oneself questions	4	4	4	4	4	4	5	5	4	3	3	4
Translating from one language to another	3	4	4	1	1	3	3	2	3	2	3	3
Thinking in multiple languages	3	4	4	4	1	2	3	2	3	2	4	3
TOTAL USE												
OVERALL READING STRATEGIES	3.80	3.77	3.94	3.67	4.07	4.26	3.94	3.64	3.71	3.42	3.52	3.72

Note: Numbers 1, 2, 3, 4, & 5 indicate how often subjects reported they use specific strategies when reading academic materials. A rating scale from 1 (low perceived use) to 5 (high perceived use) was used.

Actual Strategy Use

Table 6 lists the strategies actually used by each of the subjects when reading in French and in English. These data show that unlike the reported use (see Table 4), the subjects used far fewer strategies when reading passages in each of the languages than they reported when asked to simply report what they would use when reading academic materials in general.

	KB		BC		DJ		RD		EM			
	Eng	Fre	Eng	Fre	Eng	Fre	Eng	Fre	Eng	Fr	Eng	Fr
GLOBAL READING STRATEGIES												
Setting purpose for reading	0	10	1	0	3	7	0	4	1	2	1	0
Using prior knowledge	2	4	0	0	1	1	2	1	0	0	0	0
Previewing text before reading	0	0	0	0	0	0	0	0	0	0	0	0
Checking how text content fits purpose	0	0	0	0	0	0	0	0	0	0	0	0
Noting text characteristics	0	0	0	0	0	0	0	0	0	0	0	0
Determining what to read	0	0	0	0	0	0	0	0	0	0	0	0
Using text features (e.g., graphs)	0	0	0	0	0	0	0	0	0	0	0	0
Using context clues	2	4	2	6	1	0	2	6	4	1	4	2
Using typographical aids (e.g., italics)	0	0	0	0	0	0	0	0	0	0	0	0
Critically evaluating what is read	3	0	3	0	6	3	2	0	3	1	10	7
Checking one's understanding	0	0	1	0	0	0	1	0	1	0	2	0
Predicting or guessing text meaning	0	0	0	1	0	0	0	0	0	0	0	0
Confirming predictions	0	0	0	0	0	0	1	0	0	0	0	0
PROBLEM SOLVING STRATEGIES												
Getting back on track while reading	0	0	0	0	0	0	0	0	0	0	0	0
Reading slowly but carefully	0	0	1	0	0	0	0	0	1	0	0	0
Adjusting reading rate	0	0	0	0	0	0	0	0	1	0	0	0
Paying close attention to my reading	5	0	5	0	0	0	0	0	1	0	1	0
Pausing and thinking about reading	1	0	0	0	1	0	0	0	3	0	1	0
Visualizing information read	1	0	2	0	0	0	1	0	1		0	0
Re-reading for better understanding	1	0	0	0	0	0	0	0	0		0	0
Guessing meaning of unknown words	2	0	0	0	0	0	2	0	0		0	1

Table 6 (continued)

SUPPORT READING STRATEGIES

Taking notes while reading	0	0	0	0	0	0	0	0	0	0	0	0
Reading aloud when text becomes hard	0	0	0	0	0	0	0	0	0	0	0	0
Underlining information in text	0	0	0	0	0	0	0	0	0	0	0	0
Using reference materials	0	0	0	0	0	0	0	0	0	0	0	0
Paraphrasing for better understanding	0	0	0	0	0	0	0	0	1	0	0	0
Going back and forth in text	0	0	0	0	1	0	0	0	0	0	1	0
Asking oneself questions	1	1	0	1	0	0	0	1	0	0	0	0
Translating from one language to another	1	0	0	0	0	0	0	0	0	0	0	0
Thinking in multiple languages	1	0	0	0	0	0	0	0	0	0	0	0
OVERALL READING STRATEGIES	**20**	**19**	**15**	**8**	**12**	**11**	**11**	**12**	**17**	**14**	**10**	**10**

Note: Numbers indicate how many times subjects actually used the specific strategies when reading online. Thus, the number '7' indicates the strategy was used 7 times while reading the assigned passages.

As table 6 indicates, the strategies used by the subjects ranged from 8 (BC) to 20 (KD). Many of the strategies were simply not used at all by the subjects. On the other hand, the strategies that were actually used were mostly in the Global Strategies category followed by Problem solving Strategies and Support Reading Strategies. Finally, a closer look at the strategies used across languages shows that fro almost all subjects, when strategies were used; they were used more often in English, the subjects' foreign language than in French, their second language.

Research Question #2: Is There Evidence of Strategy Transfer across Languages

The transfer of strategy awareness or perceived use and online or actual use is evident in the subjects' responses as exemplified in Tables 4 and 5. As both tables show, each of the subjects reported using a fairly similar strategy load in each of the languages. For example, each of the subjects indicated using certain strategies in French and in English. However, for the actual strategy use, the transfer was not as obvious as in the reported strategy use. From Table 5, for example, one can see that several strategies were used in both languages by some but not all of the subjects. In general, it appears that, with some exceptions, when subjects used certain strategies in one language, they also were found to use these same strategies in the other language. For instance, KD used the strategy "using prior knowledge" 2 times in English and 4 times in French. DT used the strategy "critically evaluating what is read" 6 times in English and 3 times in French.

Some of the subjects, however, did use some strategies in one language but not in the other. For instance, ND used the strategy "critically evaluating what is read" twice in English but not at all in French. Similarly, FT used the same strategy 7 times in French but not in English. It is also interesting to note that when strategies were used by the

subjects across languages, such strategies tended to be mostly from the Global Reading or Problem Solving categories.

A Sampling of the Strategies Actually used by the Participants' while Reading as Revealed by the Think Aloud in English and in French.

The following is a sampling of some of the strategies actually used by the subjects when reading in both languages. The examples are classified by strategy categories (i.e., Global Reading, Problem Solving, and Support Reading strategies). Examples of types of strategies within each of these categories are used as illustrations from selected participants.

Sample Global Reading Strategies

The following examples pertain to the use of the global reading strategy "critically analyzing what one reads". Participants used this strategy to critically analyze and evaluate the information presented in the text. For instance KB tries to think logically about what he is reading. In other words, he's trying to understand why a piece of information is at a precise place in a text.

> "OK. We got some volunteer- six parent and nine teacher almost more than ten people in the program and they share the experience."
>
> "OK. The experiment in the session in the first lesson have specific name "building with wonderful junk" and "Mystery Bottles" and ... name of the

experiment is very meaningful in the sense that it describes almost the process of the experiment. Uhh OK."

"OK. You are close to the final goal of the "Playtime is Science" so parents get involved and succeed also in playing their role uhhh even without specific instruction the succeed helping the teachers in doing what they are asked to do and I think finally the..the purpose of the program was reached; because it says "New Model for Parental Involvement" and if they can come into class and work with children, that will help children to understand that science is just like playing games at home and I think it's what I learned from that last passage."

Another participant (BC) used four specific strategies within the global reading strategies category. These strategies are "setting purpose for reading", "using context clues", "critically evaluating one's reading", and "checking one's understanding". Here's how BC used these strategies.

"For… now uhm.. I can say that… they want…I think it's a kind of research on parents, how to get parents to volunteer. I think the text is about that."

So, during the… the stu… like how to put the the program together. I think they talk about… like how science was like the key role of science and… how to encourage our children to like, you know, science, math and all those beneficial technical field."

"Now, he is saying how they concluded the meeting and … they finally found out like the schedule and kind of stuff where the parents will take part in the program."

"Now, he is kind of giving uhmmm the lesson and the program like in more details. What is the program more about and uhh I think they are just working with kind of chemistry and recycle material stuff, to make the kids, I think, uhuh, really like this part of science."

"So, that.... He is saying now uhmmm. How the parents really volunteered in it and they really helped the structure.. the teachers, excuse me uhmm in this program."

"Now, they are saying that some parents just assisted and to be assisted learning to go on training and all these stuff. Uhmmm they were just kind of assisted the teachers if they need anything which is non institutional stuff. So that was about uhuh. I mean they were showing being good parents I think and show the students how it is like the good interest they should have in…… science."

"Now, I think they are talking about the person who is putting the program together. How he found out the program and who he is kind of targeting for this program."

DT, the third participant, used the following within the Global Reading Strategies:" Setting purpose for reading", "Using prior knowledge", "Using context clues" and "Analyzing and evaluating Information in the text." Here are the sentences illustrating the use of these strategies.

1. Setting purpose for reading

"It's very very difficult to think…. How achieve uhuh.. these kinds of goals' cause the parent involvement is something very difficult you don't know some parents

take care, some others don't. Intellectual parents will.. will.. ..intellectual parents have no problem to go with."

"Uhmmm. This is very interesting and surprise me that I think the strategy is good, very good one when you solve the culture. And it's a best way to have uhmmm to have uhmmm the program getting appropriated by the children because one has to take into account the culture."

"Uhmmm this is uhmm same order of ideas you want to involve the parents, you want to involve the community. You want them to involve uhmm involve the... culture—all the the child and the.. and wanting you you have these three majors... this triology, if you want; I think the message ...the scientific message could pass."

2 .Using prior knowledge

"Uhm... I'm not really surprised because this is like.... How would you develop this kind of project?"

3. Using context clues

"So, this is the strategy and the technicality with the...would involve the.... That's the strategy of teachers."

4. Analyzing and evaluating the text

"Uhmm... OK This is uhuhhh another improvement uhhh..this strategy. You have uhuh..a fellow parent as uhm someone who is to deal with the other parents not an official from the school and they.. the parents might feel more comfortable."

"Uhmmm This is a kind of uhmmm wake up course for those parents who think that their kids are not uhmm will ..will would not be good at science because

there is a kind of prejudices.. uhmmm for some certain uhmmm uhmmm science..

social science."

"Yeah. This is just very normal and... I'm... I'm not surprised that the session

was uhmm.. that successful because you liberate all these possibilities in these

kids and the capacities of children when involve parents and there no

psychological hindrance and the session should be very successful. Uhmm I was

expecting the session to be a success."

"Yeah. I like this... approach. I like the word mystery like " Mystery Bottles"

Those are things that attract kids so you make science look like simple like things

they live at home……things like that. It's a good strategy. I would never think

about those strategies."

"This is a very natural way of teaching science and math. This is just chemistry, if

you want, or physics teaching but this is a very, very good way. So the kid does

not feel that he is in another world. He does not want to take the kids to another

world where he feels like a foreigner. If you want to tame the kid in his own world

and bring science to this world, it's gonno work. So, this is a marvelous strategy."

"This is very good; no prior training. So you have the parents naturally and

everything would work. This is a a... wonderful, an outstanding way of teaching

math and science in class."

EM also used four categories of strategy in the Global Reading Strategy: "Setting purpose for reading", "Using context clues", "Analyzing and evaluating text" and "Checking understanding". They are in the following examples:

1. Setting Purpose for Reading

"Hum.. What I understand here is that they want parents to be volunteer... have meetings with teachers, the students and parents together. They are wondering how they can reach these goals."

2. Using Context Clues

"So, he also had a support of a grade...second grade student at the school, who helped him to hire participants and train them about the program."

"So, here he... the program has been accepted by all of the teaching staff, the management team and also the parent association and the author have... has to train other people about the program"

"So, this the first time the training session was taking place and nine teachers and six parents attended it. They had been trained during three hours and they used videos to introduce the program."

"So, they was able to make the parents' involvement in the science lessons and in the classroom activities through this program."

3. Analyzing and evaluating the text.

"This is the last thing they do in the training session by meeting with parents and visiting classrooms and to know about the logistics they used during the training sessions with parents. So, the session was very appreciated by everyone and they did two sessions and also invited the parents to come and visit the classrooms during the science lessons. I think they want the parents to see how the training sessions helped to improve the science lessons."

"So, the involvement of parents was very good because they have been models for children and they show the children that they are very interested in science and this can also help the students to be interested in science and do well in this classroom."

So, this is the practice time. They show how to build a structure with recycled material and also..."

4. Checking Understanding

"So, she helped to uhuh.. to... she.. she shared her excitement about science and the program to the parents and the other girls and other community events also."

Sample of Problem Solving Strategies

KB used the following five strategies in the "Problem Solving Reading Strategy": "Paying close attention to reading", "Pausing and thinking about reading", "Visualizing information read" and "Re-reading for better understanding". This is how he used them.

1. Paying close attention to reading.

"So, the author is talking about the parent who take everything, who took everything in charge... just to talk to everybody, to the parent... and explain the program, the program "Platime is ....Science" to other people in the community."

In the strategies used below, the reader is facing some cultural problems when it comes to the comprehension of the message conveyed in the passage. He is also interpreting the ideas with his own cultural view.

"So, what is new for me here is that you need a agreement for everybody. Everybody has to agree on a program before he can implement that program. So he need the principal, the school planning, a management team and even the teacher- parent association because parent will be associated to the program" Playtime is Science". So, they need a a... consent."

"Of drumming up. The word" drumming up" means probably... means... drumming up... to increase or to raise the support for the program and also there is a word" advocate" like the supports; the same way or o.. by opposition.. by opposition to opponent and also there is a mention of second grade student... what is the link with grade K3 may be K2? I don't know- may be."

"OK. Usually, I think in the US may be some parents in this country people of color, as it was stated before, are less represented in science or may be also girls also less represented in science, pure science, math and technical field."

2. Pausing and Thinking about reading

"OK. The first thing is parental involvement. What does that mean? May be parents can pay their students' fees... and have the kid to prepare the classes but here it seems like more related to volun... teerism. And... how can they get parents to be in such system?"

3. Visualizing information read

"OK. After starting the program, it was so successful the first training was so successful that they get more people involved. OK I think the farer goal of the project is to get more people. I think they are on the right path."

4. Re-read for better understanding

"There is a reference to some author may be they are in the science of education. Sprung, Froschl and Colon.... I have no idea of those authors but I think... they are specialists in science of education and may be in a domain related to children. And also the word "stress" is used as a verb in the... in this paragraph.....uhhh usually use stress just only for the state of mind or state of the body."

"The word "playtime is science" the name of the program is cited again and the word emphasizes is also used like in the uhmm... uhm.... I think in the first or second paragraph the word "emphasize" again."

5. Guessing meaning of unknown word

"OK, the frequency of the visit of the parent are planned and see if the team was composed with the management team and the school planning to get the right schedule and also the logistics. Logistics means uhhh.. the log.. of the logistics of implementing. OK the support, the material to support in my mind and when I read logistics, I think about... a class of mine in econometrics where you have logistics function. Uhh I think that is a different context in this... different meaning in this context."

BC used three categories in the "Problem Solving Strategy". These strategies are: "Reading slowly and carefully", "Paying close attention to reading", and "Visualizing information read"

1. Reading Slowly and Carefully

"Uhmm, now he is talking about training and initial; that means that a lot of people are gonno go though a lot of training for.... in order to work for this program well [rereading silently] and it was saying that it was a good thing that

he found a good member and school community to help him to put the program together in this school."

2. Paying Close attention to reading

"Now I can see that... I'm really sure that now it's a kind of program to involve the parents and the ed... uhuh... the.. the children education and... it's involving some other people like involving the kids of other cultures and stuff."

"OK. Now they are saying that uhm.. it's kind of whole thing like education of the kids is gonno involve a lot of people, school, home and community; but volunteerism is the key in ....word because I think the parents have to volunteer."

"OK, so...... the characteristics of solutions... and suspension demonstrated... OK. The second experiment with "Mystery Bottle" they used mixture... mixture means I think uhh melting different products. A solution is like a liquid in science were demonstrated and explored and..."

"OK... So, finally they get people involved specially parents and they went together with the teacher as it was the.. goal...one of the goal of the program. Uh.. Uhmmm. Now I know that science now is involved in this program to educate children and they are gonno help children who are not very rich, who cannot, you know, afford this program. And then, now the person is saying like kind of giving all the steps he went through to put the.. the program together. For now on, I think that to find a good school and parents —teacher association, kind of thing."

"Now, it's saying what the active member of the school community did. I think she gave like uhmmm.. She talks a lot about the assignments for the science to the kids and stuff; trying to make them feel more excited about science."

3. Visualizing Information Read

"Now, this part, I think, of the text, is about how, like after finding all the people he needed for this program; how he really put the thing together so they can start it at the.. the program effectively. And I think it's saying that uhuh… uhmmm the number of parents who took part of it, the teachers and stuff and how the session and the training started.

He is saying that uhm.. the first session really worked out fine and so he had to do another one and uhmmm they're gonna try to… put the program like test it on the second graders and stuff. So, I think the program is working, really, fine."

DT used one category among the **Problem Solving Strategies**: "Pausing and thinking about reading"

"Yeah.You uhm… you can also have children gain confidence and competence. I think you have to involve those persons with whom the children feel comfortable like his parents together with the teachers. If you isolate the teacher from parents or the parents from the teacher, it can be a hindrance for the thinking; putting them together is a good strategy."

"Uhm… Yeah! I think that it's…. the program is interesting. It's a kind of noble thing, new thing and I. I have not thought of it before. Now I realize that it is very very useful; because when I take my own example, when I went to school for the first time without my parents and it affected me psychologically and in this way you can loose your good student like that."

As for EM, she used four categories of Problem Solving Strategies: "Reading slowly and carefully", " Paying close attention to reading", "Pausing and thinking about

reading" and " Visualizing information being read". The examples are given in the following:

1. Reading Slowly and Carefully

[Rereading] "What I understand here is they want equity and to achieve these goals they have to.. use cross-curricular ties... to other cultures, persons of color and women."

2. Paying close attention to reading

"So, the author find... explain here that he find...found the program through a graduate course and he had to make a travel to be trained about the program during the summer because he had to help people who are underrepresented in science."

3. Pausing and Thinking about reading

"So, the program is designated to help children and parents uhuh. to display their background about science because they already know something: science. And this will help children to be more confident and to improve their competence in learning science."

"So, here they're talking about under representation of some groups in science and a discussion whose topic was to... to encourage children to do science and other technical fields. So...... how to use the... how to make bottles."

4. Visualizing information read.

"So, here they mean that the students and parents must learn together to do science even.... People who have... who don't have the material. They..."

Playtime is Science" encourages them to come and use the material together,

parents and children."

very low

Support Reading Strategies by the First Participant

KB used only three varieties of Support Reading Strategy: "Asking oneself questions", "Translating from French to English" and "Thinking in both languages when reading"

1. Asking oneself questions. By so doing, he was referring to his second language for better understanding.

"OK. So, the author just show how he found out about the program and also the way he learn about the program but travel to New York city."

2. Translating from French to English

"OK. In this part of ... the text, ... it's clear that there is two or three step to achieve the goals that is clear to membership and through volunteerism; how they can interact with school community and help children in everyday life and the word "volunteerism" comes from "volunteer" and the structure of the word seems strange for me- " volunteerism". I was thinking about the French word "volontarisme""

3. He was also thinking in both languages when reading

"OK. There is a specific name to the program "Playtime is Science" and... what is the meaning of grade... K3 Uhmmm I think about the French system just like elementary school may be the third class in the elementary school and the word

"equity"." Equity" is related to here a state like in business- but in thisss context it means probably the same type of... education. Equity for all chil... all children and also cross-curricular ties to other culture in person of colors and women mean more interaction with what is new to the children."

BC did not use any Support Reading Strategy at all; but DT, the third, participant used only one category "Finding relationship among ideas in the text."

"Uhmm.. There is a good start. The parents involve hours. This is what I was expecting from the development of that project... what I have read before."

EM used only one subcategory of the Support reading strategy: "Paraphrasing for better understanding"

1. Paraphrasing for better understanding.

"So, the program has some objectives which are.... Which are to create a partnership between home, school and community and the link between these is volunteerism and the parents should be involved in their school community. And they also talk about the science evident in everyday life."

CHAPTER V

Summary of Major Findings

This study sought to explore the perceived reading strategies of multi-lingual college students and their actual use of strategies while reading in French, a second language and in English, a foreign language. The main questions of interest focused on (a) whether differences existed between perceived and actual use of reading strategies when reading academic materials in French and English, and (b) whether there was evidence for reading strategy transfer across languages. The results can be summarized as follows:

First, there was a discrepancy between the subjects' perceived use or awareness of reading strategies when reading academic materials in French and in English. In general, each of the subjects was reported using many more strategies than they actually used when they were asked to read a passage in each of the languages. Second, there was some evidence of transfer of strategy use across the two languages. For instance, some of the subjects used similar strategies in both languages. When they did not use any of the strategies, it was true for both languages. Finally, there was a tendency on the part of some subjects to use more strategies in one language than in the other. For instance, in some cases, more strategies were used in one language either French or English (typically the 'weaker language'). In other words, subjects used more strategies in the language

they rated as less proficient than they did in the language about which they felt more proficient.

These findings are consistent with prior researchers who have found that (a) college readers use different types and volume of strategies depending on the language used and the difficulty level involved (e.g., Feng and Mokhtari, 1998), (b) English and Spanish bilingual school students use an array of strategies in two languages but their usage is affected by their proficiencies in each of the languages (e.g., Jimenez et al., 1995, 1996), and (c) multi-lingual college students were found to use certain strategies more often in one language (English) than in another (Arabic) (e.g., Alsheikh, 2003).

The above findings have important implication forL1 and L2 research in reading and instruction. First, the findings have raised some questions that need to be investigated with more languages, more subjects, and multiple reading assignments. For instance, we don't know whether the subject's awareness and actual use of reading strategies is consistent across different languages, especially those that differ significantly in orthography such as Arabic and French. It would also be beneficial to study whether such awareness and use of strategies is present among school, children studying second and foreign languages in similar and different school environments. Further, it is unclear whether the type and difficulty, and reading ability affect the use and transfer of reading strategies across languages.

The findings also have implications for reading assessment and instruction. Teachers should develop and or acquire instruments that are designed to assess students' awareness of reading strategies when reading for multiple purposes. Instruments such as SORS would be very beneficial in this regard. Techniques such as the 'think-aloud' can

be very helpful in uncovering students' reading processes. These tools can provide diagnostic information which enables teachers and other practitioners to help students become metacognitively aware and to develop the strategic reading skills necessary for proficient reading.

Finally, as indicated in the introduction, the present study does have some limitations. These limitations have to do with the sample size (only six subjects), the type of text used to determine actual strategy use (expository text type), and subject characteristics (all subjects from the same country). These issues limit the generalizability of the findings and raise questions that should be studied in greater depth.

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Appendix A

Background Questionnaire

General Information

1. Age

2. Gender

3. Birthplace

4. Length of stay in the US

5. Years studying English

6. Current major in College

7. Rank in College: Graduate, undergraduate, (1st, 2nd, 3rd and 4th year)

8. Grade point Average (Optional)

9. TOEFL score (in English)

10. List down all the languages you can speak, read and write

11. Which language(s) is (are your first or native language?

11.1 How often do you use your first or native language? Everyday? Often? Occasionally? Never?

11.2 For what purposes do you use your first or native language(s)?

11.3 Where did you learn your first or native language? Home country___ another country

11.4 On a scale from 1 – 10 rate your proficiency in your first or native language. Please provide a rate for each of the language skills

listed. Circle your proficiency rating

Language skill	Low Proficiency High Proficiency
Listening	1 2 3 4 5 6 7 8 9 10
Speaking	1 2 3 4 5 6 7 8 9 10
Reading	1 2 3 4 5 6 7. 8 9 10
Writing	1 2 3 4 5 6 7 8 9 10

12. Which language(s) is (are your second language (s

12.1 How often do you use your second language (s) Everyday_ Often_ Occasionally_ Never_?

12.2 For what purpose do you use your second language(s)

12.3 Where did you learn your second language (s) Home country__ another country?

12.4 Approximately how old were you when you began learning your second language?

12.5 Approximately how many years did you spend learning your second language?

listed. Circle your proficiency rating.

Language Skill	Low Proficiency					High Proficiency				
Listening	1	2	3	4	5	6	7	8	9	10
Speaking	1	2	3	4	5	6	7	8	9	10
Reading	1	2	3	4	5	6	7	8	9	10
Writing	1	2	3	4	5	6	7	8	9	10

14. Overall, in which of the languages above are you most proficient? and least proficient?

15. What particular difficulties, if any, do you face when you read in your first or second language

Appendix B

SURVEY OF READING STRATEGIES (SORS)
Mokhtari & Sheorey (2002)

1. French

Le but de cette enquête est de collecter des informations sur les différentes techniques que vous utilisez quand vous lisez les documents académiques en Anglais tels que les livres de bibliothèques, des manuels scolaires etc. Lisez attentivement chaque information ci-dessous. Ensuite, encerclez le chiffre (1, 2, 3,4, ou 5) qui correspond le mieux, selon l'échelle utilisée. Par exemple si en général vous lisez après le dîner, vous entourez le chiffre 4

1 signifie << **Je ne le fais jamais ou presque jamais** >>
2 signifie << **Je le fais occasionnellement** >>
3 signifie << **Je le fais de temps en temps (environ 50% de mon temps)** >>
4 signifie << **Je le fais en général** >>
5 signifie << **Je le fais tout le temps ou presque tout le temps** >>

Notez qu'il n'y a pas de réponses fausses ou justes pour cette liste. Vous devez simplement entourer le chiffre qui traduit votre réponse.

GLOB	1. J'ai une idée en tête quand je lis.	1 2 3 4 5
SUP	2. Je prends des notes lorsque je lis pour comprendre ce que je lis.	1 2 3 4 5
GLOB	3 Je réfléchis a ce que je connais pour m'aider a comprendre ce que je lis.	1 2 3 4 5
SUP	4. Je parcours le texte pour avoir une idée générale avant de le lire en détail.	1 2 3 4 5
GLOB	5. Lorsque le texte devient difficile, je le lis à haute voix pour comprendre ce que je lis.	1 2 3 4 5
SUP	6. Je réfléchis pour voir si le contenu du texte correspond a l'objet de ma lecture	1 2 3 4 5
PROB	7. Je lis lentement mais attentivement pour être sur de ce que je lis.	1 2 3 4 5
GLOB	8. Je mets en évidence le plan du texte, sa structure, sa longueur.	1 2 3 4 5
PROB	9. J'essaye de revenir au fil directeur lorsque je me déconcentre	1 2 3 4 5
SUP	10. Je souligne, entoure les idées essentielles du texte pour m'aider a les mémoriser.	1 2 3 4 5
PROB	11. J'ajuste ma vitesse de lecture selon la difficulté du passage du texte que je lis.	1 2 3 4 5
GLOB	12. En lisant, je décide de ce que je dois lire avec attention et de ce que je dois ignorer.	1 2 3 4 5
SUP	13. J'utilise des matériels de référence tels que le dictionnaire pour m'aider à comprendre ce que je lis.	1 2 3 4 5
PROB	14. Quand le texte devient difficile, je fais beaucoup attention à ce que je lis.	1 2 3 4 5
GLOB	15 J'utilise les tableaux, les schémas et les images pour améliorer ma compréhension.	1 2 3 4 5
PROB	16. De temps en temps, j'arrête de lire pour penser a ce que je lis.	1 2 3 4 5
GLOB	17. J'utilise les éléments du contexte pour m'aider à mieux comprendre ce que je lis.	1 2 3 4 5
SUP	18. Je paraphrase, en reformulant les idées dans mes propres mots, pour comprendre ce que je lis.	1 2 3 4 5
PROB	19. J'essaye d'imaginer ou de visualiser les idées pour m'aider a comprendre ce que je lis.	1 2 3 4 5
GLOB	20. J'utilise les outils typographiques tels que les caractères en gras ou en italique pour repérer l'idée essentielle	1 2 3 4 5
GLOB	21. J'analyse et évalue avec un esprit critique les idées présentées dans le texte.	1 2 3 4 5
SUP	22. Je reviens sur certains passages dans le texte pour essayer de trouver une connexion entre les idées qui y sont contenues.	1 2 3 4 5
GLOB	23. Je vérifie ma compréhension quand je découvre une nouvelle idée.	1 2 3 4 5
GLOB	24. J'essaye de deviner le sujet traité dans le texte quand je lis.	1 2 3 4 5
PROB	25. Quand le texte devient difficile, je le relis pour améliorer ma compréhension	1 2 3 4 5
SUP	26. Je me pose des questions dont je m'attends aux réponses dans le texte.	1 2 3 4 5
GLOB	27. Je vérifie si mes suppositions dans le texte sont correctes ou fausses.	1 2 3 4 5
PROB	28. Quand je lis, je devine le sens des mots et expressions dont j'ignore le sens.	1 2 3 4 5
SUP	29. En lisant, je traduis de l'anglais a ma langue maternelle	1 2 3 4 5
SUP	30. En lisant, je réfléchis à la fois en anglais et dans ma langue maternelle.	1 2 3 4 5

SURVEY OF READING STRATEGIES (SORS)

Mokhtari & Sheorey (2002)

The purpose of this survey is to collect information about the various techniques you use when you read academic materials in English (e.g. reading textbooks for home work or examinations; reading journal articles, etc.).

All the items below refer to your reading of college related academic materials (such as textbooks, not newspapers or magazines). Each statement is followed by five numbers, 1,2,3,4,5, and each number means the following :

"1" means that "I never or almost never do this"

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

"3" Means that " I sometimes do this" (About 50% of the time)

"4" means that "I usually do this"

"5" means that "I always or almost always do this"

After reading each statement, circle the number (1, 2, 3, 4, or 5) which applies to you. Note that there is no right or wrong responses to any of the items on this survey.

GLOB	1 I have a purpose in mind when I read.	1 2 3 4 5
SUP	2. I take notes while reading to help me understand what I read.	1 2 3 4 5
GLOB	3. I think about what I know to help me understand what I read.	1 2 3 4 5
SUP	4. I take an overall view of the text to see what it is about before reading it.	1 2 3 4 5
GLOB	5. When text becomes difficult, I read aloud to help me understand what I read.	1 2 3 4 5
SUP	6. I think about whether the content of the text fits my reading purpose.	1 2 3 4 5
PROB	7. I read slowly and carefully to make sure I understand what I am reading.	1 2 3 4 5
GLOB	8. I review the text first by noting its characteristics like length and organization.	1 2 3 4 5
PROB	9. I try to get back on track when I lose concentration.	1 2 3 4 5
SUP	10.I underline or circle information in the text to help me remember it.	1 2 3 4 5
PROB	11. I adjust my reading speed according to what I am reading.	1 2 3 4 5
GLOB	12. When reading, I decide what to read closely and what to ignore.	1 2 3 4 5
SUP	13. I use reference material (e.g. a dictionary) to help me understand what I read.	1 2 3 4 5
PROB	14. When text becomes difficult, I pay closer attention to what I am reading.	1 2 3 4 5
GLOB	15 I use tables, figures, and pictures in text to increase my understanding.	1 2 3 4 5
PROB	16. I stop from time to time and think about what I am reading.	1 2 3 4 5
GLOB	17. I use context clues to help me better understand what I am reading.	1 2 3 4 5
SUP	18. I paraphrase (restate in my own words) to better understand what I read	1 2 3 4 5
PROB	19 I try to picture or visualize information to help remember what I read.	1 2 3 4 5
GLOB	20. I use typographical features like bold face and italics to identify key information.	1 2 3 4 5
GLOB	21. I critically analyze and evaluate the information presented in the text.	1 2 3 4 5
SUP	22. I go back and forth in the text to find relationships among ideas in it.	1 2 3 4 5
GLOB	23 I check my understanding when I come across new information.	1 2 3 4 5
GLOB	24. I try to guess what the content of the text is about when I read.	1 2 3 4 5
PROB	25. When text becomes difficult, I re-read it to increase my understanding.	1 2 3 4 5
SUP	26. I ask myself questions I like to have answered in the text.	1 2 3 4 5
GLOB	27. I check to see if my guesses are right or wrong.	1 2 3 4 5
PROB	28. When I read, I guess the meaning of unknown words or phrases.	1 2 3 4 5
SUP	29. When reading, I translate from English into my native language.	1 2 3 4 5
SUP	30. When reading, I think about information in both English and my mother tongue.	1 2 3 4 5

A New Model for Parental Involvement

We knew that wanting parents to volunteer and getting parents to volunteer are very different things. So we wanted to involve parents in a way that made the most of the limited time teachers, parents and students had together. How could we achieve these goals?

Our answer came in the form of "Playtime Is Science." This child- centered parental involvement program for children in grade K-3 emphasizes equity for all children in science by utilizing cross-curricular ties to other cultures, persons of color and women. The goals of this program are to create a partnership between school, home, and community through volunteerism, effectively bringing parents into the school community. It also promotes a process where students are encouraged to wonder, question and experiment by fostering recognition of the science evident in everyday life.

"Playtime Is Science" encourages parents and children to "do" science together, emphasizing easily accessible materials- even for those who lack the means. Finally, it stresses that teachers and parents know more about science than they think, and can therefore play an important role in helping children gain interest, confidence, and competence (Sprung, Froschl, & Colon 1979)

I found out about the program through a graduate course and found it interesting because it focused on the underrepresented population in science- the audience that I was committed to helping. I later contacted the company and traveled to New York City for training in the summer. After getting a positive reaction from the principal, the school's

planning and management team, and the parent teacher association, the next step was to hold a facilitator's training session.

An enthusiastic supporter of the effort- an instructional assistant and a parent of a second grade student at the school- recruited participants for the initial training session. Having an active member of the school community as an advocate was an effective means of drumming up support. She was able to talk to the parents as a fellow parent and share her excitement for science at the school at little league games, Girl Scout meetings, and other community events.

Getting Started

The training session was held on a Saturday and nine teachers and six parents attended. The three- hour session began with videos introducing the program. Parents and teachers participated in two activities and discussed the science behind each. An activity demonstrating how some groups are underrepresented in science was also included, along with a discussion of how important it is to encourage our children to pursue science, math, and other technical fields. We concluded with a meeting to plan the logistics of implementing the program-such as when and how often the parents would visit the classroom.

The session was so successful that a second training session was conducted soon after for another teacher and five additional parents. We decided to test the program in our second grade. After the training sessions, second grade teachers solicited parents to visit the class during science lessons.

The first lesson, Building with Wonderful Junk, involved attempting to build a structure with recycled materials and masking tape that could stand on its own,

demonstrating balance and mass. The other lesson, Mystery Bottles, required students to determine the ingredients of a "mystery" bottle containing colored water and vegetable oil and then make one of their own. The characteristics of solutions, mixtures, and suspensions were demonstrated and explored.

Parents participated in the classroom activities at various levels and offered a range of assistance to the teachers. At the assistant level, the parent received no prior training and assisted the teacher with noninstructional tasks upon request. Their main offering was to be role models, showing students that they were interested in what was going on in school and in science class.

Extracted from *Science and Children*. Volume 40, Number one.

Appendix D

Text in French

L'ESSOR : Quotidien National d'Information du Mali

Alpha Oumar Konaré, premier président de la Commission de l'Union Africaine.

Notre compatriote, seul candidat encore en lice, a été élu hier par les chefs d'Etat africain

au premier tour du scrutin. Le deuxième sommet des chefs d'Etat et de gouvernement de

l'Union africaine a élu hier en milieu d'après midi Alpha Oumar Konaré, a la présidence

de la commission. Notre compatriote, seul candidat en lice après le retrait de l'ivoirien

Amara Essy, a obtenu 35 voix sur 45 exprimées. Six pays ont voté contre lui et quatre se

sont abstenus. L'UA compte 53 Etats membres, mais seuls ceux qui sont à jour de leur

cotisations ou ne font pas l'objet de sanctions, ont le droit de voter. Alpa O. Konaré, pour

passer, devait réunir sur son nom au moins les 2/3 des votants. Les 35 voix récoltées

suffisaient donc largement. Alpha O. Konaré est élu pour quatre ans et devrait entrer en

fonction en septembre prochain.

Au sortir de la séance, a témoigné Salim Togola, notre envoyé spécial a Maputo,

le président Amadou Toumani Touré a été félicité par ses pairs et harcelé par la presse. Il

s'est abstenu de toute déclaration. « Attendez au moins que je vois mon élu » a-t-il

répondu à la meute impatiente des journalistes.

Discret durant une campagne qui fut intense, le président Touré l'est resté dans une

victoire pourtant éclatante pour lui même, pour notre diplomatie, notre peuplo et, bien

entendu, pour Alpha Oumar Konaré. Celui-ci figurait déjà dans l'histoire comme premier

président de la 3e République malienne, il sera désormais présenté aussi comme premier

président de la Commission de l'Union Africaine, l'exécutif de l'organisation africaine.

Un grand destin pour le fils d'un des directeurs d'école les plus connus du Mali, Dougoukolo Konaré, qui se destinait lui même a faire carrière dans l'école. Alpha Oumar Konaré sortit en 1969 major de sa promotion a l'EN secondaire et réédita cette performance a l'EN Sup. ou il avait été admis sur titre. Il enseigna l'histoire et la géographie successivement aux lycée de Markala et de Badalabougou avant de se tourner vers la recherche. Après un passage a l'Institut des Sciences Humaines, il ira soutenir sa thèse pour un doctorat d'archéologie a l'université de Varsovie en Pologne.

Entre 1978 et 1980, il accepte de devenir le Ministre de la jeunesse et des sports dans le gouvernement de Moussa Traoré et se signale notamment par le lancement de la Reforme sportive qui met sur pied 12 clubs omnisports nationaux. Mais le climat d'ouverture qui l'avait fait entrer dans les rouages du pouvoir se dissipa bien vite et les divergences d'analyses avec le chef de l'Etat s'approfondirent, notamment après la révolte scolaire de 1980. Alpha Oumar Konaré quitta le gouvernement non sans avoir fait un discours mémorable a l'ouverture de la biennale sportive et artistique de 1980.

Le chercheur, tout en poursuivant des activités politiques clandestines, s'avéra un pionnier de la communication. Il créa la coopérative Jamana, spécialisée dans la presse et l'édition. Dans cette structure, naissait en 1989 l'hebdomadaire les « Echos » qui allait se révéler comme un vrai journal de combat quand les revendications pour l'ouverture politique se précisèrent. Signataire de la « Lettre ouverte au Président de la République » qui réclamait l'instauration du multipartisme, personnalité marquante de l'Adema association qui vit le jour en 1990, Alpha Oumar Konaré est porte le 26 Mai 1991 a la présidence du parti ADEMA- PASJ, dont il fut le candidat a la présidence de la

République. Il remporta le 26 Avril 1992 les élections avec 69,01% des suffrages du second tour devançant Tioule Mamadou Konaté.

Le premier mandat du nouveau président fut celui des idéaux contraries. Le chef de l'Etat avait place son action sous le signe du changement, mais il dut très vite faire face a une floraison de conflits et de contestations : revendications corporatistes, troubles dans les écoles, réveil de la rébellion au Nord. L'apaisement ne vint en fait que vers la mi-1995, mais il fut, peu après, trouble par les polémiques sur l'organisation des élections générales de 1997. Néanmoins, la préservation de la stabilité nationale et la conclusion heureuse du conflit Nord Mali furent les grandes victoires du premier quinquennat. Le second fut place sous le signe de la lutte contre la pauvreté et l'exclusion. Mais la encore, les événements contrarièrent le projet présidentiel. La persistance de la crispation politique née du fiasco du 13 Avril 1997 et la résurgence des troubles scolaires le contraignirent a monter en première ligne plus qu'a son tour. Heureusement, ce mandat s'acheva sur le feu d'artifice de la CAN 2002, sur des élections qui se déroulèrent dans un climat serein puis sur une émouvante passation de relais avec Amadou Toumani Touré. Alpha Oumar Konaré avait incontestablement réussi sa sortie.

Unanimement apprécie sur la scène internationale, incarnation d'une nouvelle génération d'hommes d'Etat africains indépendants et intransigeants sur les principes, il était logique que son destin rebondisse sur un continent dont il est un militant chaleureux et engagé.

Extracted from « L'Essor, Quotidien National du Mali », July 10, from www.izf.net.

Appendix E

Institutional Review Board Approval

Oklahoma State University
Institutional Review Board

Protocol Expires: 7/31/2004

Date: Friday, August 01, 2003   IRB Application No   ED048

Proposal Title: THE METACOGNITIVE READING STRATEGIES OF BILINGUAL COLLEGE STUDENTS

Principal
Investigator(s):

Seydou Diallo   Margaret Scott
21 N University #11   233 Willard
Stillwater, OK 74075   Stillwater, OK 74078

Reviewed and
Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 415 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,

Carol Olson by David G. Thomer

Carol Olson, Chair
Institutional Review Board

VITA

Seydou Diallo

Candidate for the Degree of

Master of Science

Thesis: PERCEIVED AND ACTUAL READING STRATEGY USE BY SIX
MULTILINGUAL COLLEGE STUDENTS: A CASE STUDY

Major Field: Teaching, Learning and Leadership

Biographical:

    Personal Data: Born in Kolosso, Mali, January1, 1955, the son of Tiecoura
        DIALLO and Sorofing Diakite.

    Education: Received French "Maitrise" in English from Ecole Normale Superieure,
        Bamako in June 1984; received Certificate for experienced teachers in
        December 1991, Diploma of Advanced Studies in Education, Institute for
        English Language Education, Lancaster University, England in June 1992.
        Completed the requirements for the Master of Science degree at Oklahoma State
        University in December 2003.

    Professional Experience: Teacher of English, teacher training school San, Mali
        from October, 1986 to June, 1991. Teacher of English for Specific Purposes,
        Professional Training Institute, Fana, Mali from October, 1992 to January,
        1994. Teacher of English for Specific Purposes, Technical High School,
        Bamako, Mali from January,1994 to November, 1997. Technical Advisor of the
        Minister of Mines and Energy from November 1997 to September 2000.
        Teacher of English at the Professional Training Center from January 2001 to
        June 2001. Research assistant at Oklahoma State University, in the School of
        Teaching Curriculum and Leadership from January 2002 to June 2002. Member
        of the Kappa Delta Pi Chapter since April 2003.