A QUALITATIVE STUDY OF METACOGNITIVE CHARACTERISTICS

OF LOW-PERFORMING MIDDLE SCHOOL

READING STUDENTS

Presented to the Graduate Council of
Texas State University-San Marcos
In Partial Fulfillment
of the Requirements

for the Degree

Master of ARTS

by

Elisabeth V. McCulley, B.A.

San Marcos, Texas
May, 2010

A QUALITATIVE STUDY OF METACOGNITIVE CHARACTERISTICS

OF LOW-PERFORMING MIDDLE SCHOOL

READING STUDENTS

Committee Members Approved:

_____

Elizabeth Stephens, Chair

_____

Lori Czop Assaf

_____

Elizabeth Harrison

Approved:

_____

J. Michael Willoughby
Dean of the Graduate College

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

Page

LIST OF TABLES

CHAPTER I
INTRODUCTION

Statement of the Problem

Reading comprehension is a complex task that depends on many different

automatic and strategic cognitive processes (Cain, Oakhill, & Brant, 2004). Gone are the

days when reading was believed to be the application of isolated skills. Cognitive

science research has provided significant insight into the mental activities good readers

demonstrate in order to achieve comprehension (Dole et al., 1991). Research suggests

that the act of constructing meaning is interactive, involving not just the reader but also

the text, and that good readers have purposes for their reading and use a variety of

strategies and skills as they construct meaning (TEA, 2002). Finally, authors Dole et al.

(1991) add that good readers are adaptable, changing the strategies they use as they read,

depending on the type of text or purpose for reading.

Knowledge of reading strategies.

Crucial to reading comprehension is the reader's ability to utilize strategies to

make meaning. Paris, Wasik and Turner (1996) describe reading strategies as "tactics

that readers use to engage and comprehend text." Strong readers actively construct

meaning by using different activities such as visualizing, connecting textual information with previous knowledge, making inferences such as predictions, identifying the main idea, formulating questions, and solving unfamiliar words. Visualizing involves a reader's ability to make mental images of a text as a way to understand processes or events they come upon during reading. Research suggests that readers who have the ability to visualize what they read are better able to recall what they have read than those readers who do not create such mental images (Pressley, 1976).

Cognitive research such as that conducted by Anderson and Pearson (1984) and Anderson et al. (1977) found that good readers continually connect their background knowledge to the new knowledge they encounter in text. Another reading strategy demonstrated by good readers involves readers asking themselves questions throughout the reading of a text. Being able to ask relevant questions enables good readers to extrapolate and focus on the most important information in a text, while making informed predictions enables a strong reader to infer what a text is going to be about or what is going to happen next (TEA, 2002). Finally, good readers are able to figure out unknown words (National Reading Panel, 2000).

According to Pressley (2006), the strategic nature of skillful, effective reading is fostered through quality instruction, while Simpson and Nist (1990) suggest teaching students to be strategic readers requires quality instruction and a substantial amount of time for learning. To put it simply, good readers are most often strategic readers, possessing a repertoire of strategies and the ability to fluidly use them interchangeably. It is through the self-regulation of strategy use that indicates metacognition occurs.

Metacognition.

Jacobs and Paris (1987) suggest that metacognition is the self-awareness of one's knowledge of task, topic, and thinking, and the conscious self-management of related cognitive responses. Researcher Eva-Wood (2008) suggests that metacognition is more complex than the traditional "thinking about thinking," while Flavell (1979) refers to metacognition in terms of both knowledge and regulation. Metacognitive knowledge means having a 'toolkit' of cognitive processes, while metacognitive regulation is the management of these processes (1979).

There is a positive correlation between metacognition and reading comprehension, with comprehension monitoring being a key aspect of metacognition. Wagoner (1983) describes comprehension monitoring as "an executive function, essential for competent reading, which directs reader's cognition process as he/she strives to make sense of incoming information." The development of comprehension monitoring appears to be critical during upper elementary school (Pazzaglia et al., 1999). According to Zimmerman and Martinez-Pons (1990), struggling readers demonstrate little self-monitoring or self-regulation of their text processing and are not particularly good at judging the quality of their reading performance. Such readers can be greatly aided by explicit instruction in general cognitive and self-regulatory strategies that can be applied in a variety of reading contexts (Rosenshine, 1995). Michalsky and Mevarech (2009) indicate that addressing metacognition before, during, and after instruction is a valid tool in increasing and enhancing reading performance.

Reading intervention classes.

In response to the No Child Left Behind Act (2002) and the resulting high-stakes testing in most states, an increasing number of secondary students are being placed in classes for reading intervention. By the time they reach middle school, a number of these students have an identifiable label to explain their reading difficulties, such as a learning disability or language barrier. These students have prescriptive modifications, and staff development is provided to regular education teachers in planning instruction for such students. Federal law/monies are affiliated with these services, and a great deal of effort is devoted to compliance.

Some secondary reading interventions students, however, do not fit standard criteria for ability labeling. These students exist in a kind of learning "no-man's land." Their difficulties could stem from a lack of strategic knowledge, an inability to self-monitor comprehension, a lack of motivation, a combination of these factors, or some unknown cause. There is limited information about what is most likely hindering these particular students' reading progress and their metacognitive processing beyond the elementary school level. Therefore, in spite of the NCLB dictum that all children succeed, many of the 'label-free' students are enrolled in reading intervention classes with teachers at a loss as to what they can do to help. A better understanding of the metacognitive reading processes of these students may enable teachers to help this particular set of students more effectively.

Purpose of Study

The purpose of the present study was to observe the metacognitive processes of struggling readers who are not English Language Learners (ELL) and have not been

identified as eligible for special education or Section 504 services. Examining the metacognitive strengths and weaknesses of these students may provide valuable information for further investigation and for identifying methods that will assist secondary teachers in their intervention efforts.

Research question.

What are the strategic reading behaviors demonstrated by two middle school struggling readers who are not being served through special education, Section 504, or English as a Second Language (ESL) instructional support systems?

Assumptions and Limitations

The results of this study should be interpreted with caution because of the small sample size of two participants and because students from only one, relatively small, rural school district were being observed. Furthermore, the number of impoverished middle school students, defined as those who qualify for free or reduced lunch, and who are enrolled in reading intervention classes is disproportionate to the general school population of the participating school. Hence, it is impossible to generalize the results of this study to a larger student population. In addition, there is the limitation of potential researcher bias, in that the participants were chosen from the researcher's reading classes. Finally, because the study participants were identified as struggling readers and were placed in a reading intervention class because of poor performance on the standardized state reading comprehension test, the researcher made a fundamental assumption that the participants' comprehension was limited. Because of this assumption, the researcher did not collect data measuring comprehension, and instead focused on observable reading strategies demonstrated by the participants.

Definitions of Terms

For the purpose of the present study, the following terms are defined:

1. *Metacognition* is the self-awareness of one's knowledge of task, topic, and thinking, and the conscious self-management of related cognitive responses (Jacobs & Paris, 1987).

2. *Reading strategies* are deliberate, goal-directed attempts to control and modify the reader's efforts to decode text, understand words, and construct meanings of text (Afflerbach, Pearson & Paris, 2008).

3. *Self-regulation* is the planning and monitoring of cognitive activities (Flavell, 1979); also referred to as metacognitive regulation.

4. *English Language Learners (ELL)* are students in prekindergarten through high school who speak or hear a language other than English in their home and who have difficulty in English (TEA, 2004).

5. *English as a Second Language (ESL)* is intensive English language instruction by teachers trained in recognizing and working with language differences (TEA, 2004).

6. *Section 504* students are those who have a mental or physical impairment that substantially limits one or more major life activities; have a record of such impairment; or are regarded as having such impairment, but do not meet the criteria for special education placement (Zirkel, 2009).

7. *Narrative text* is text which conveys a story or which relates events or dialogue, such as a novel.

8. *Expository text* is text written to explain and convey information about a specific topic, such as a textbook.

9.   *Struggling reader* is a student who has not mastered the skills required to fluently read and comprehend text which is written at a level that one could reasonably expect a student of that age to read; also referred to as low-achieving reader.

CHAPTER II
REVIEW OF LITERATURE

The literature on the importance of reading comprehension to academic success, the strategies to improve adolescent's reading comprehension in general, and the research on the role of strategic reading in metacognition were reviewed for this study.

Reading Comprehension and Academic Success

A student entering high school as a struggling reader faces serious challenges in receiving a diploma and advancing to postsecondary education or a fulfilling career. Increasing literacy demands are causing higher dropout rates at a time when schools most need to produce literate citizens prepared to compete in the global economy with the skills to pursue their own learning well beyond high school (Biancarosa & Snow, 2004). More than eight million students in grades 4 through 12 are struggling readers (Fisher & Ivey, 2006). According to the Nation's Report Card (2007), only 31 percent of eighth graders and 35 percent of twelfth graders scored at or above a proficient level on reading achievement tests. Reading comprehension is clearly a significant contributor to secondary academic success, and students who continue to struggle with reading into high school face daunting challenges. In short, if students do not develop efficient reading comprehension skills, history, mathematics, literature, and science become inaccessible (2007).

Bryant et al. (2000) conducted a four-month correlational study with a team of middle school teachers responsible for teaching the core disciplines. Of the students in the study sample, 14 had a reading disability, 17 were identified as low-achieving, and 29 were identified as average-achieving students. The researchers addressed three key reading skills: word identification, fluency, and content area comprehension. The authors concluded that, for struggling readers, comprehending on-level content texts will remain difficult without the provision of long-term, intensive, explicit reading instruction.

A correlational study conducted by Janssen, Braaksma and Rijlaarsdam (2006) examined the reading activities of tenth grade students who were known to be high achieving, and those of peers who were unsuccessful in literature classes. Researchers used short (500-1000 word) literary stories that invited multiple interpretations, so that thinking aloud would not take more than 20 minutes per story. The authors concluded that learning activities should be designed to stimulate weak readers to extend their repertoire of activities during reading and to move from reconstructing the text to a more varied, personal and subjective approach.

In another correlational study, Caldwell and Leslie (2004) examined whether proficient eighth grade readers could successfully comprehend high school level textbooks. The researchers asked participants to complete a think-aloud activity involving excerpts from high school textbooks. Students were assigned a score for explaining key concepts and retelling the content, and a coding system was used to score think-aloud responses. The study revealed major differences in the coherence of the retellings of narrative text as opposed to the history text $t(7) = 2.36$, $p < .0\ 18$, and

the science text t(7) = 2.36, p < .002. While there were no significant differences in coherence between the retellings of the history text compared to the science text, overall, participants were better able to comprehend the narrative text. This study illustrates the importance of addressing reading comprehension problems, particularly with expository text, because reading becomes a vehicle with which to learn other content areas such as social studies and science.

Reading is a covert process actively controlled by the reader. In the past, reading instruction involved teaching students isolated concepts, with little explicit instruction about strategies or the use of self-regulation in reading. Research over the past few decades has gleaned a substantial amount of information about how readers get meaning from what they read and about the kinds of instructional activities that best help students to become good readers (TEA, 2002). According to Afflerback, Pearson, and Paris (2008), it is the reader's deliberate control, goal-directedness, and awareness that define a strategic action.

Reading Strategies

Studying the reading behaviors of students with a high level of comprehension has provided a wealth of information about what successful readers actually do, and researchers have discovered that strong readers demonstrate specific, strategic behaviors as they read. Although a student's comprehension can show limited improvement through merely reading extensively, researchers have concluded that comprehension improves more if the reader is taught the strategies that good readers use. A review of current and seminal research reveals which specific reading behaviors and strategies are most associated with a high level of comprehension.

These strategies include visualizing, making predictions, identifying main idea, making connections, generating questions and solving unfamiliar words (Pressley, 2006).

Visualizing.

Zwiers (2004) suggested that visualization is the process of creating mental images and associations using previous knowledge. It is a skill that enables people to (a) form pictures in their minds representing the content of text, (b) organize and store information, and (c) explain what they understand to others by turning the picture or images back into words (as cited in Rader, 2009). Essentially, the reader constructs mental images that represent text content and then constructs graphic representations of the text. Numerous studies have indicated that the visualizing process significantly improves reading comprehension.

Eva-Wood (2008) conducted a study in which she found that students actually used strategies, such as mental imagery, that appeared to be driven by sensory and emotional responses rather than cognitive processes alone. Forty-one 11th graders participated in a four-week unit on reading and responding to poetry, jointly taught by the regular classroom teacher and the researcher. Students received instruction designed to highlight emotional and experiential facets of poetry reading. Teachers shared and modeled their own personal responses, after which students learned to verbalize their own thoughts and feelings aloud, in a stream-of-consciousness fashion. Classroom activities involved drawing pictures to represent images, verses, and even whole poems. This visualization drew on students' sensory memories. For example,

one student pictured the hands of a woman she knew as she imagined the "frail gesture" of the character featured in an e. e. cummings poem.

Students completed assessments before and after the unit, responding to one specific question that drew on their metacognitive knowledge: "What reading or comprehension strategies did you use to help you understand this poem?" The "think and feel aloud" activity resulted in students' reporting that they used several strategies that they did not acknowledge before the unit began, such as noting key words, drawing on life experiences, and referring to other texts.

Visualization is a key component for successfully retelling of a text, which in turn increases comprehension of said text. Rader (2009) developed a two-year pilot program to determine whether a set of nine key questions would help struggling readers increase the visualization and retell skills necessary for effective reading comprehension. The author selected a group of first grade students in a school that had not met adequate yearly progress under No Child Left Behind regulations for several years despite many programmatic, curricular, instructional, and personnel changes. Sixty-nine students participated in the program; 33 received the intervention, and 36 did not. All participants were identified as having a speech and language delay, being at risk for reading failure, or both. At-risk status was determined by students' kindergarten scores on an assessment, Concepts About Print (CAP).

Initially, the author created a test using a paragraph read to the students as pretest and posttest measures. She asked students to listen to the paragraph, make pictures in their minds about the story, and then tell the story back to her. Rader

noted the number of preselected concepts from the paragraph in the retell as well as the number of words in the retell. Using a rubric for scoring each item, the author then asked what the story was mostly about. For treatment, students were taught to use nine key questions to help them organize their verbal descriptions to explain to themselves and to someone else the message that they were verbally trying to convey. The questions were sequenced and systematically introduced to students in a gradual manner, allowing students time to practice using each of the questions as an isolated construct before using all nine to connect to the text.

Lessons were conducted on a weekly basis, delivered by the classroom teacher using a script, over a three month period of time. The results of this pilot program showed that students had a more detailed and complete retell of the paragraph when they received the visualization training. Additionally, treatment students made gains in their ability to verbalize a main idea of a spoken paragraph. A majority of students made gains on the Diagnostic Reading Assessment (DRA) as well. Most significant was the finding that in tracking the treatment students one year later, these students appeared to maintain their knowledge of the visualizing process and ability to transfer the information to new reading contexts (2009).

Making predictions.

Predicting involves readers' ability to connect their existing knowledge to new information from a text to get meaning from what they read (TEA, 2002) Before reading, readers can use what they know about an author or use cues such as the title to predict what a text will be about. Good readers continually predict as they read, revising their predictions as needed (2002).

Freeman (1982) conducted study to determine whether student interest in and comprehension of text could be improved through the use of predictions. Participants in the study included two fifth grade classes, a total of 45 children. Two stories were chosen for the study based on the likelihood that an outcome could be adequately guessed at a salient midpoint. In one class, subjects read the first story and predicted story content at the onset and outcome at midpoint; for the second story, subjects read the story with no predictions. In the second class, the prediction sequence was reversed.

The three factors considered were prediction, interest, and comprehension. Multiple regression procedures were used to analyze the components of the repeated measures design. Analysis of the scores indicated a direct relation between prediction and comprehension. There appeared to be no correlation between prediction and interest. Results provide support for the practice of predicting story content prior to reading and outcome at midpoint as ways to activate prior knowledge and appropriate schema.

Eilers and Pinkley (2006) initiated a study to assess the effectiveness of predicting as a strategy to improve comprehension in 24 first grade students. The teacher provided daily explicit instruction in both whole and small groups for a total of nine weeks, modeling how to make meaningful predictions. At the same time, students were taught to use various types of graphic organizers to facilitate their application of the comprehension strategy.

Data gathered included pretests and posttests using the Index of Reading Awareness to determine students' self-awareness of reading strategies and the

Diagnostic Reading Assessment (DRA) as a comprehension measure. Results indicated both test measures yielded significantly higher scores after the intervention. These data suggest that the explicit teaching of comprehension strategies, including the strategy of making meaningful predictions prior to reading and while reading text, is a viable means for improving comprehension.

Identifying the main idea.

Sjostrom and Hare (1984), suggest that a main idea of text is usually represented in sentence form and constitutes the most important statement written to explain the topic. Explicit main ideas are stated outright by the author and may occur at any point in a paragraph, in a single sentence or sometimes two coordinating sentences. Implicit main ideas must be inferred by determining the predominant relationship between the topic and subtopics of a paragraph. Identifying the main idea requires a reader to differentiate important textual information from supporting details and establish the overall meaning of text (1984).

Closely related to main idea is the formulation of a summary, which requires the reader not only to identify the main idea but also sift through information to include important supporting details without being redundant. According to the National Reading Panel (2000), instruction of summarization improves memory of what is read, both in terms of free recall and answering questions, indicating that summarizing is a good method of integrating ideas and generalizing from text information.

In a 1983 study, Winograd examined the possibility that difficulties with the task of summarizing may be linked to deficits in strategic skills. Participants in study

included 36 eighth grade poor readers, 39 eighth grade good readers, and 37 adult good readers. All of the adults were undergraduates, graduate students, or recent graduates of the University of Illinois. The adult readers were assumed to have competent reading skills; adult reading scores were examined with regard to good readers for commonalities in use of strategies. One focus of the study was the participants' ability to identify important elements in the text and transform the text into its gist. For the purpose of their study, the authors defined a poor reader having scored below the 50th percentile on the Reading Comprehension subtest of the Stanford Achievement Test; they defined a good reader as having scored above the 59th percentile on the same test.

Each of the eighth graders was randomly assigned to one of four equal sized groups with the restriction of having equal numbers of good and poor readers in each group. Each child was involved in approximately eight sessions which usually ran about 40 minutes in length. Participants were given pretests which consisted of interview questions designed to assess the subjects' knowledge about the task of summarization, passages followed by comprehension questions, and a word list to provide decoding measures. Next, participants read six passages and were instructed to write a sixty-word summary of the text. They were given access to the passage while writing the summary. Following the summary writing, subjects rated the relative importance of each sentence to the passage as a whole, and selected the five most important sentences in the whole passage. Six months later, final data were collected on the good and poor readers to obtain a measure of the long-term reliability of the children's importance ratings.

Results suggested that good readers, either eighth graders or adults, tend to be better judges of importance than poor readers, although interestingly the poor readers tended to consistently deem certain types of information as important. For example, importance appeared to be based on factors which captured their interest or were highly visual in detail. In contrast, strong readers tended to define importance more in terms of text, such as when a piece of text was marked with an asterisk. Furthermore, what poor readers determined to be important was not always reflected in their written summary of the text as shown in the sentences they claimed to be most important from the passage itself.

These data suggest that poor readers use two unrelated strategies: one for deciding what should be included in the summary and another for selecting which sentences are most important. Patterns of the good readers and adults suggest that they use their sensitivity to importance to guide them in both inclusion and selection tasks. Winograd's study is significant in that it indicated that the ability to identify important elements in a text is a strategic skill underlying both comprehension and summarization. However, the ability to reduce a passage into a summary did not relate significantly to the ability to comprehend that particular passage (1983).

In 1984, Sjostrom and Hare examined the efficacy of explicit instruction in identifying main idea. Two classes of ninth and tenth graders enrolled in a voluntary enrichment program were randomly assigned to treatment and control conditions, totaling 19 participants. The treatment group received one weekly 75 minute lesson, with information about main idea identification conveyed largely through direct explanation, along with teacher-created overhead transparencies and handouts. The

control group spent the same amount of time receiving vocabulary development. Several measures were employed to assess instructional effects on both groups. One measure was an experimenter-constructed, 13-item production test of main idea identification in paragraphs. Students were also asked to incorporate the main idea into a summary. Comprehension was measured using the Davis Reading Test.

Results indicated that systematic instruction improved the participants' ability to identify main idea. Treatment students were able to improve upon both explicit and implicit main idea identification over control students. However, there were no significant differences between the quality of the treatment and control groups' summaries, nor did the treatment group show gains in reading comprehension. The researchers' findings supported the Winograd (1983) earlier suggestion that many students possess insufficient skills in determining what is important in text and are unable to distinguish between supporting details versus nonessential details. Sjostrom and Hare concluded that that the act of making meaning from text involves more than merely mastering one isolated feature of reading (1984).

Therrien et al. (2006) conducted research to ascertain if Reread-Adapt and Answer-Comprehend (RAAC), a combined repeated reading and question generation intervention, was effective at improving reading achievement in secondary students. The question generation piece of RAAC asks the reader to strategically monitor his/her comprehension by self-generating and answering questions. Thirty students in fourth, fifth, seventh, and eighth grades with a learning disability or at risk for reading failure participated in the study. Original reading

passages were created and used to assess comprehension during intervention implementation, totaling 50 passages over a four month period.

The RAAC intervention consisted of the teacher following eight prescribed instructional steps that included having students reread a passage with corrective feedback, and the creation of both factual and inferential comprehension questions. Pre and post measures included the Woodcock-Johnson III. Results supported and extended previous findings from question generation literature bases, with treatment students showing gains in inferential comprehension on posttests and improvement in their ability to successfully adapt and answer story structure prompts.

Making connections.

Proficient learners spontaneously and purposefully recall their relevant, prior knowledge (schema) before, during, and after they read and learn (text to self connections). They use their schema to make sense of new information and to store that information with related information in memory (Harvey & Goudvis, 2000).

Additionally, Harvey and Goudvis suggest the important role of background knowledge in comprehension. Reading is a process of constructing meaning in which the reader connects prior knowledge with new information that is encountered in text. The broad base of research on the importance of accessing background knowledge suggests that it enhances reading comprehension (2000).

McKeown et al. (1990) conducted a study examining the effects of relevant background knowledge on text comprehension. Participants in the study included 48 fifth graders from a predominately middle-class elementary school in the northern

United States. All students received prepared instruction designed to provide relevant background knowledge for understanding a text.

One of the authors/researchers presented the knowledge unit using a script to students in his/her regular social studies classes. The content in the 35 minute knowledge unit was based on information identified as important background information that had been assumed by the textbook presentation. The material introduced major ideas and prerequisite concepts rather than a sequence of events. Study results indicated that background knowledge is most useful if the text is coherent enough to allow readers to see the connections between the text information and their existing knowledge so that this knowledge can be combined with the text information to create a meaningful representation.

Langer and Nicolich (1980) conducted a study whose purpose was to elicit prior knowledge using free association, to categorize this knowledge into broad levels, and to statistically examine the nature of the relationships between these assigned levels of prior knowledge and the organization of recall. Participants were 36 high school seniors from two classes at a middle class suburban school district in New York.

Subjects were asked to free associate with stimulus content words selected from two passages they would later be asked to recall. The students were given three content words separately and asked to write anything that came to mind when they heard the word. After this free association activity, students were given the passage to read silently, and then wrote everything they could remember about it afterward. The authors scored the prior knowledge and recall items separately. Findings

suggested that level of prior knowledge is strongly related to the recall of a passage. The authors concluded that accessing prior knowledge can be a useful tool for teachers in text selection (1980).

Generating questions.

Question generation, defined by The National Reading Panel (2000) as having students create questions during and after reading, has been associated with improved comprehension. Ezell et al. (1997) studied the impact of using Question Answer Relationship (QAR) taxonomy on comprehension. Participants included 23 third grade children who represented varying levels of achievement. All intervention sessions took place in the students' classroom during their regular 40 minute reading period four to five days per week for a total of 16 weeks. Following seven sessions of training on the different types of questions, children participated in daily practice sessions both with a partner and independently.

Reading passages were taken from various sources, including the regular third grade basal reader. Worksheets developed by project staff instructed the children to ask a specific number of questions for each question type. The four question types developed by Raphael (1986) included "Right There" (answer located in the text within a single sentence); "Think and Search", (answer located within the text in two or more sentences); "Author and You", (answer implied in the text but not explicitly stated); and 'On Your Own', (answer based solely on the reader's prior background knowledge).

Results indicated that low, average, and high achieving children all showed gains across both asking and answering questions and in general comprehension. The

greatest improvements were seen in children's question generation skills, with a positive correlation between question generation and comprehension. The authors concluded that students are able to learn QAR strategies to improve their reading comprehension skills.

Solving unfamiliar words.

According to the National Reading Panel (2000), there is a high correlation between vocabulary knowledge and reading comprehension. In particular, instruction in vocabulary in content areas may lead to a better reading and listening comprehension and to an improvement in course achievement.

Baumann et al. (2007) performed a formative experiment examining the impact of year-long word study instruction. The authors selected fifth graders at a racially and economically diverse elementary school. From September to April, the trained teacher integrated vocabulary lessons and activities in the reading and language arts block, social studies class, and several other periods during the day. The teacher provided students multiple experiences with new and interesting vocabulary. Activities included reading aloud regularly, allocating considerable time for self-selected independent reading, conducting literature discussion groups, and exploring word choice and usage through writing activities.

Students kept various records and logs of new or interesting words they identified as they read books. These words subsequently became a source for group discussion and word study. Participants also kept weekly dialogue journals through which they exchanged ideas about their reading. Additionally, the teacher provided lessons and activities that focused on specific words that connected reading, writing

and subject-matter study. The class kept a 'word wall' of interesting vocabulary, and utilized various graphic organizers and semantic maps to track word meanings. Furthermore, the teacher taught word learning strategies such as morphology and structural analysis, providing students tools with which to deal with unfamiliar words they encountered.

Quantitative results demonstrated that the students' word knowledge increased. A comparison of pretest and posttest results of the Expressive Vocabulary Test revealed that students' expressive vocabulary grew more than expected across the intervention time period. Results from the Peabody Picture Vocabulary Test, a measure of receptive or listening vocabulary, suggested that the students who were initially below average in vocabulary may have benefited the most. The authors concluded that by immersing students in a vocabulary-rich environment and providing them instruction in both words and word-learning strategies, they developed a deeper understanding of words (2007).

Bryant et al. (2000) examined a multi-component reading intervention that included word identification. Participants were 60 sixth grade students of varying ability levels at a middle school in a large metropolitan area. Students were taught to use a word identification strategy developed by Lenz et al. (1984) that uses a mnemonic, DISSECT, to help students remember a series of strategies: "*D*iscover the content, *I*solate the prefix, *S*eparate the suffix, *S*ay the stem, *E*xamine the stem, *C*heck with someone, and *T*ry the Dictionary." Teachers were provided extensive professional development and materials prior to the intervention, which took place during a 30 minute advisory period at the end of the school day over a span of four

months. They provided explicit instruction, modeling and practice for students in the use of these vocabulary strategies.

Pretest data collection procedures occurred in January prior to the onset of the project, and posttest data collection took place in May after the intervention concluded. Researchers administered individually the Word Identification Strategy Verbal Practice Checklist (WISVPC), a probe to determine students' ability to tell the meaning of the letters of the mnemonic, DISSECT. Students' performance on the WISVPC revealed that all achievement groups increased in their ability to explain the seven steps of the mnemonic. Results of an ANOVA indicated the highest word identification scores belonged to average achievers, followed by low achievers. The authors concluded that students can benefit from explicit strategy instruction in word solving (2000).

Strategic Reading and Metacognition

Flavell (1979) rejects the notion that metacognition is simply 'thinking about thinking'. While the term has been part of educational psychology vernacular for decades, there is some debate about what exactly metacognitive processes involve. Part of this confusion lies in the synonymous use of alternative terms (i.e. self-regulation, executive control). According to Flavell, metacognition consists of both metacognitive knowledge and metacognitive regulation. Metacognitive knowledge is associated with an individual's knowledge of his own learning processes as well as knowledge about strategies, while metacognitive regulation is associated with the planning and monitoring of cognitive activities (1979).

Several researchers have examined how metacognition relates to various measures of academic achievement. Everson and Tobias (1998) developed a means to assess students' knowledge monitoring ability (KMA), thought to be instrumental in metacognitive regulation. The researchers examined the differences between students' estimates of their knowledge in the verbal domain and their actual knowledge as determined by performance on a standardized verbal test. The greatest relationship existed between the KMA and students' end of course grade in English, followed by the humanities, and finally the students' overall grade point average (GPA). They also found that the KMA was a good predictor for success in college (1998).

Young and Fry (2008) used the Metacognitive Awareness Inventory (MAI) to assess metacognitive knowledge and metacognitive regulation. Using this instrument, the authors studied college students to determine how MAI relates to broad and single measures of academic achievement in college students. The MAI was chosen because it is easily administered to adults; it can be delivered in both face-to-face and online classes. Additionally, the MAI taps into the two component model of metacognition, metacognitive knowledge and metacognitive regulation. Further, the MAI can be used to analyze relationships between metacognitive skills and specific academic skills (i.e. scores on classroom tests or reading comprehension tests). Both undergraduate and graduate students at a small upper level institution were invited to take part in the study.

The MAI was offered in a total of 15 classes; two classes were administered in person, while the remaining classes were self-administered online. One hundred and

seventy eight students completed the MAI, of whom 25.3% were graduate students and 74.7% were undergraduate students. The MAI consists of 52 statements which students rate as being false or true on a five point Likert scale. Students were told that they could complete the MAI at any time during the semester, with no incentive such as extra points offered. Subsequently, each class had approximately a 50% response rate. Correlations were found between the MAI and cumulative GPA, as well as end of course grades.

In their quasi-experimental study, Houtveen and van de Grift (2007) provided cognitive strategy instruction to teachers at 11 Dutch elementary schools. Ten-year old students in an experimental group and a control group were tested for metacognitive abilities in reading comprehension before and after implementation of a treatment for the experimental group. The teachers in the experimental group were trained in cognitive strategy instruction and in optimizing teaching time for reading comprehension. In order to measure the extent to which teachers were working in compliance with the model for teaching metacognitive strategy in reading comprehension, the authors developed an observational instrument, using an 'event-sampling' procedure. The Test for Measuring Reading Comprehension was used to measure the students' performance in reading comprehension in the follow-up measurement.

Results showed only very minor differences between the experimental group and the control group on pre-measurement metacognitive knowledge scores. Additionally, data demonstrated that teachers in the experimental group provided better metacognitive strategy instruction, and in a follow-up study, the students in the

former experimental group performed significantly better on a reading comprehension measure than the former control group students.

Scharlach (2008) researched the effectiveness of a prescribed instructional framework designed to model and scaffold the use of metacognitive reading comprehension strategies. The study included five third grade classrooms randomly assigned to one of three groups: a control group engaged in normal reading activities with no intervention; a strategy-only (ST) group; and a Students and Teachers Actively Reading Texts (START) group. The ST and START group teachers modeled and scaffolded the use of metacognitive comprehension strategies during read-alouds prior to the student independent reading of self-selected texts.

In addition, the START groups were taught to complete the ART (Actively Reading Text) comprehension self-monitoring recording sheets during independent reading of self-selected texts to assist in the development of metacognition. A total of 40 sessions were completed over a five-month period. Students were pretested using the Gates-MacGinitie Reading Comprehension Test. Additionally, students in all groups completed a questionnaire to determine their use of metacognitive reading strategies.

Results were analyzed using an ANOVA. Students in the START groups made significantly higher gains than either of the other groups in reading comprehension on the Gates-McGinitie post-test. These data support the use of a self-monitoring sheet such as ART to facilitate metacognitive strategy use and increased reading comprehension. Scharlach concluded that instruction in

metacognitive strategies benefits not only struggling readers, but also students at or above grade level (2008).

Cleary et al. (2008) conducted a mixed-methods study to examine the efficacy of the Self-Regulated Empowerment Program (SREP), a comprehensive self-regulation training program designed to enhance the academic performance and self-regulatory skill of students in high school biology classes. The authors gathered both quantitative and qualitative data across multiple sources using various methods for both control and experimental groups.

The design of the study allowed the authors to assess quantitative changes in students' strategy use, motivation beliefs, and performance from pretest to posttest, supplementing these changes with data from qualitative assessment tools such as field notes and student self-reflections. Five test scores obtained prior to the training served as baseline data, and the biology teacher administered three classroom tests during the 11-week intervention with both the experimental and control groups. These three tests were averaged to represent a composite of test scores for students in both groups. All students also completed a final exam two weeks after the tutoring ended. The exam incorporated content that was taught over the previous semester, thus representing students' learning of several biology content units.

Test performance was examined using descriptive and normative analysis. Students in the experimental group experienced gains in all measures, in contrast to the comparison group which obtained scores that were substantially below class averages. Based on the data, the authors concluded that SREP is a promising intervention for improving academic and regulatory functioning of high school

students, further supporting other studies that demonstrate a positive correlation between metacognition and academic achievement (2008).

A study to determine the effectiveness of systematic direct instruction of multiple metacognitive strategies designed to assist students with comprehension was conducted by Boulware-Gooden et al. in 2007. Specifically, the researchers investigated the reading comprehension and vocabulary achievement of 119 third-grade students to determine whether instruction that incorporated metacognitive strategies led to an increase in the reading comprehension of expository text. In addition, the study was designed to determine the impact of metacognitive strategies on vocabulary.

Participants were drawn from six third-grade classrooms in two urban elementary schools that were deemed by the school district's research department to be demographically and academically equal. One school was selected to be the intervention school while the other was the comparison school. Students in both schools were pretested before the five-week study and posttested at the end of the study using the Gray Silent Reading Test. Intervention students were provided explicit instruction in reading and metacognitive strategies for 30 minutes a day for a total of 25 days. The intervention group improved significantly over the comparison group in vocabulary and comprehension gains were found to be greater as well.

In their 2009 exploratory study, Eilam et al. examined the role of self-regulated learning (SRL) in the relationship between SRL and science achievement in a sample of junior high school students. Participants included 52 ninth graders, selected because of reported findings that students of this age have already developed

initial SRL skills and have experienced short term collaborated science inquiries. Two ninth grade classes were randomly selected from a middle-class junior high school.

For an entire academic year, participants engaged in a weekly 3-hour science project as part of an inquiry-based project in ecology. Practice in self-regulation included the formation of weekly goals and the planning of strategies that would most effectively promote goal attainment. Students provided documentation of the completion of these steps in a weekly report. In particular, students were instructed to account for any discrepancies between planned goals and actually implemented goals and activities, and to suggest ways for closing these gaps to improve future learning. In addition, each student individually assessed the quality of his/her performance on a five-point Likert scale. The weekly SRL reports were collected and teachers provided regular feedback to students. Finally, students assessed their progress as compared to a teacher-created timeline for the project; this calendar provided the students a concrete visual perspective to help guide self reporting.

As initially hypothesized, SRL was significantly related to student attainment in specific learning contexts. The research showed a significant correlation with the science project grades as well as with student grade point averages, which supports self-regulatory learning as a viable means to positively impact student achievement.

Mason (2004) studied the effects of TWA (*T*hink before reading, think *W*hile reading, think *A*fter reading), a strategic approach to reading comprehension, with a group of 32 fifth grade students at two urban elementary schools, who had also received explicit training in a commonly used self-regulation strategy. While the

self-regulation strategy focuses primarily on either writing or on the reading of narrative text, TWA promotes students' ability to obtain meaning from expository text independently. The author chose students who were known to struggle with reading, defined as fifth graders decoding at a third grade level, with reading comprehension subtest scores between the 10th and 40th percentiles on the Comprehensive Tests of Basic Skills taken in the fourth grade. Of the 56 identified students, the researcher obtained permissions for 32 students.

TWA consists of nine reading comprehension strategies. Thinking before reading included accessing prior knowledge, thinking about the author's purpose and text structure, and an adaptation of the 'what I know, what do I want to learn, what I learned' (K-W-L) strategy. During reading, students were taught to think about their reading rate, about their knowledge and about rereading parts as needed. After reading, students were taught to think about the main idea and summarizing what they've read. Students participating in the TWA experimental group experienced improvement in expository reading comprehension performance as measured by five oral measures at posttest.

Summary

Strong reading competencies such as those identified by researchers Bryant et al. (2000) and Caldwell and Leslie (2004) are clearly essential to academic success. Similar research highlights a number of specific strategies utilized by proficient readers, and authors such as Therrien (2006) and Sjostrom and Hare (1984) validate the use of these strategies to facilitate comprehension. While teaching of isolated reading skills does not appear to transfer into overall improvements in

comprehension, integrative processes such as metacognition must be considered. As Paris, Wasik and Turner (1996) suggest, the key to comprehension seems to be the self-regulation of strategic knowledge.

Pressley, in an address to the International Reading Association's Reading Research Conference (2006) indicated that very effective readers actually use a repertoire of strategies. Successful readers make predictions, make inferential connections to ideas in text based on prior knowledge, construct mental images representing the ideas in text, ask questions and seek answers, reread and attempt to clarify when confused, and construct interpretive summaries of what they have read. Pressley concluded that we must produce students who "learn to use and do use the strategies in a self-regulated fashion."

CHAPTER III
STUDY DESIGN AND PROCEDURES

The purpose of the present study was to observe the metacognitive processes of struggling readers who are not English Language Learners (ELL) and are not eligible for special education or Section 504 services. The research question posed was What are the strategic reading behaviors demonstrated by two middle school struggling readers who are not being served through special education, Section 504, or English as a Second Language (ESL) instructional support systems?

Research Design

This exploratory study examined the metacognitive processes relative to the strategic reading behaviors of two students. The study was an attempt to contribute to the existing body of scholarly literature by providing information about the metacognitive characteristics of low-performing middle school readers. Because of school district constraints with regard to potential loss of instruction time, the researcher utilized her own eighth grade reading intervention classes for the study. This ensured that participants were able to participate in the study without being pulled from other classes or without interrupting before/after bus schedules.

Description of sample.

The participating school district has five middle schools, all of which offer intervention classes for students who struggle with reading. While the specific selection of students enrolled in intervention classes remains a campus-level decision, all of the

middle schools include students who have been unsuccessful on the previous year's

TAKS reading test. As indicated in Table 1, during the research period, within the five

middle schools, 320 students from grades six, seven, and eight were enrolled in a formal

reading class. Of these students, 181 were also being served through Special Education,

Section 504 or English as a Second Language.

Table 1

Middle School Reading Class Population

School	Total Number of Students	Number of Reading Students	ESL	Special Education	Section 504
A	712	63	6	20	5
B	638	55	15	9	1
C	697	29	4	0	3
D	440	135	19	68	5
E	705	38	12	0	6
Total	**3192**	**320**	**56**	**97**	**20**

As per campus policy at the middle school hosting this study, School A, students

are placed in an additional reading support class based on the previous year's reading

scale score of 2170 or below on the TAKS. On this assessment a scale score of 2100 is

considered passing. The enrollment in a reading course at School A included 16 sixth

grade students, 7 seventh grade students, and 40 eighth grade students. Of a total of 63

reading students, 31 were excluded from the study because of their participation in

Special Education, Section 504 or ESL in order to minimize the effects of other

prescriptive interventions, thus narrowing the pool to 32. Taking into consideration the

critical nature of the eighth grade year because it segues to high school and students may

be retained if they fail the math or reading TAKS after three test administrations, the

researcher further narrowed the population of this study to a final sample pool of 22

eligible eighth grade participants.

Of the students who qualified for this study, two students were randomly selected.

The random selection process consisted of assigning each eligible student a number, and

placing numbers in sealed envelopes in a basket. The researcher asked a teacher

colleague to draw envelopes, and the researcher contacted parents/guardians in the order

of selection. The first two students whose parents/guardians gave consent comprised the

sample for this study.

Instrumentation.

Due to the qualitative nature of this study, the research/teacher as instrument

raises questions about the research/teacher's influence on student responses. Data

obtained from semi-structured interviews, in particular, may have been affected by

researcher bias and the ongoing teacher/student relationship. On the other hand, in

reviewing written responses and creating interview questions, the researcher/teacher

could be assured that questions and terminology accurately reflected material that had

been covered in whole class instruction and discussion.

Another effect of researcher/teacher bias might have been pressure on the

researcher/teacher to elicit in every way possible the kinds of responses which most

nearly approximate materials likely to appear on critical tests such as the TAKS. For that

reason, precautions were taken to ensure consistency in question format, and all verbal

responses were recorded with fidelity. Responses were evaluated based on identified

criteria put forth in the scholarly literature. Additionally, it was the researcher/teacher

who facilitated communication and set the respondents at ease, which contributed to a therapeutic effect for the respondents because they received extra attention (Lincoln & Guba, 1985; Poggenpoel & Myburgh, 2005).

The study utilized data from four sources:

- Student Engagement Instrument (see Appendix A)

- Index of Reading Awareness (see Appendix B)

- Manifest content data from written reading responses

- Latent content data from semi-structured interviews following written reading responses (see Appendix C)

Data sources.

This research examined the characteristics of low-performing readers, with overlapping methods of data collection. As Table 2 indicates, the researcher collected both quantitative data, including the Student Engagement Instrument and the Index of Reading Awareness, and qualitative data, including the follow-up interviews to written reading responses.

Table 2

Data Collection Methods

Data Source	Description of Source	Description of Data Yielded
Student Engagement Instrument	20 questions; Likert scale responses included 1 (strongly disagree), 2 (disagree), 3 (agree), or 4 (strongly agree)	Student self-report responses to questions related to control and relevance of school work
Index of Reading Awareness	20 multiple choice questions categorized as Evaluation, Planning, Regulation, and Conditional Knowledge	Student self-report category totals classified as no significant weakness, instructional support needed, or significant weakness
Written Reading Responses	Student written work sample	Written responses to a variety of texts, including a self-selected novel, a novel assigned in class, and an excerpt from a history textbook
Interviews	Semi-structured interview questions to probe strategy use	Teacher notes recording student responses

Because the district was selected for a two-year study through the Meadows Center for Preventing Educational Risk, all reading intervention students at the participating middle school were participants in an experimental research project that examined the efficacy of a family of reading strategies collectively referred to as Collaborative Strategic Reading (CSR). As part of the CSR study, all eighth-grade reading students were administered a battery of pretests; the results of one of these measures (the Student Engagement Instrument) were examined as a component of this study.

The Student Engagement Instrument, administered through the CSR study, is a self-report instrument designed to measure two sub-types of student engagement with school: cognitive and psychological engagement (Appleton et al., 2006). The instrument correlates six factors with expected educational outcomes. For the purpose of the current study, the researcher considered student responses to questions categorized as Control and Relevance of Schoolwork. Literature suggests that cognitive and psychological engagement indicators are associated with positive learning outcomes, are related to motivation, and increase in response to specific teaching strategies. Hence, data obtained through this instrument provided critical information on case study participants' perceptions of these factors (2006).

The second source of data was the Index of Reading Awareness, an instrument routinely administered by the researcher/teacher to all reading students as a diagnostic tool. The Index of Reading Awareness helps ascertain how readers adapt their reading for different purposes (Jacobs & Paris, 1987). Proficient readers can differentiate among different purposes for reading and can adapt their strategies to accomplish those purposes. Struggling readers, on the other hand, tend to view reading through a narrower lens, focusing on decoding and pronouncing words correctly.

The Index of Reading Awareness, a self-report, multiple-choice instrument, is composed of four subtests with five items each. These subtests include questions regarding evaluation, planning, regulation, and conditional knowledge. Each student earns a score for each of these subtests; no composite score is computed. Once the subtest scores are determined, a scale can be used to identify significant weaknesses and level of instructional support needed per subtest area. For the purposes of this study,

participants took this questionnaire to add to the researcher's understanding of the participants' awareness and use of reading strategies.

The final data collected for this study were obtained through written work samples and follow-up, semi-structured interviews. Research on the reading behaviors exhibited by skilled versus struggling readers suggests that skilled readers engage with the text in various ways such as visualizing while reading, making valid predictions, distinguishing important from unimportant information, making connections to and within text, and asking questions. The researcher/teacher, as part of a regular class assignment, required participants to write weekly responses to various texts. Their responses were examined utilizing the Lincoln and Guba (1985) naturalistic approach to determining manifest content. These written samples, or manifest data, reflected the reader's use of the aforementioned reading behaviors (for example, "In my mind, I could see…" *see* being categorized as manifest data indicating the act of visualizing).

In order to determine latent content, or underlying meaning, the researcher/teacher conducted individual, weekly, semi-structured, follow-up interviews with the selected students, in reference to the same written reading responses. According to Housand and Reis (2008), the interview process can help establish reading strategies the reader might be utilizing that are not reflected his or her written responses.

Procedures

Confidentiality of data was strictly maintained, preserving the anonymity of informants through the use of pseudonyms (i.e. Michael and John), and research was used for the intended purposes only. Permission to conduct the study was granted through the Texas State University Institutional Review Board. The participating middle school

principal approved the study, and the researcher submitted a written proposal (see

Appendix D) through the district's Director of Professional Development, who in turn

received approval through the district's leadership team. Documentation of campus and

district-level approval is included in Appendix E. The parents and or guardians of the

involved students were required to sign a letter of consent (see Appendix F). This letter

assured that participation in this study was voluntary and confidential and that all results

would be kept in a locked environment. Furthermore, the researcher obtained permission

from the Meadows Center for Preventing Educational Risk to access results of the

Student Engagement Instrument that was administered previously to all of the

participating middle school's reading intervention students (see Appendix G).

Data collection occurred during a four-week period beginning in February, 2010.

Questionnaires, written responses and follow-up interviews took place during the

researcher/teacher's reading classes throughout the regular school day.

The researcher/teacher collected five samples (approximately two per week) of

student work in the form of written reading responses to regularly incorporated classroom

activities. Reading responses included a variety of materials and genres, including a

teacher-assigned class novel, a self-selected novel, and an expository excerpt taken from

a history textbook. The two selected students received no specialized treatment or

instruction.

The researcher/teacher examined participants' written reading responses for

manifest content in the areas of visualizing, predicting, identifying the main idea, making

connections, generating questions and solving unfamiliar words. In follow-up, semi-

structured, one-on-one interviews, the researcher/teacher more closely probed the

students' reading behaviors less evident in the written sample, including inquiry about the five aforementioned strategies and additional factors, such as the student's ability to determine a reasonable meaning for unfamiliar words.

CHAPTER IV
RESULTS AND DISCUSSION

Results

The purpose of the present study was to observe the metacognitive processes of

struggling readers who are not English Language Learners (ELL) and have not been

identified as eligible for special education or Section 504 services. Specifically, the

research question posed was: What are the strategic reading behaviors demonstrated by

two middle school struggling readers who are not being served through special education,

Section 504, or English as a Second Language (ESL) instructional support systems? Data

sources were the Student Engagement Instrument, the Index of Reading Awareness,

written work samples, and semi-structured interviews. For the purpose of clarity, results

are presented according to each source.

Student Engagement Instrument.

Results of the Student Engagement Instrument subtests, Control and Relevance of

Schoolwork categories, indicate that both study participants believe that their school

grades accurately gauge what they are able to do (score of 3, agree, or 4, strongly agree),

and that the tests they take at school do a good job of measuring their skills. Both also

perceived that they do well in school because they work hard. Each student indicated that

he checks to make sure he is understanding schoolwork, suggesting the presence of some

comprehension monitoring.

Index of Reading Awareness.

This self-report instrument provides summative information in the areas of evaluation, planning, regulation, and conditional knowledge. Students earn a score of 0, 1 or 2 per question, which are totaled for the subtests; no composite score is computed. Although no composite score is provided, total scores on each area are classified as No Significant Weakness, Instructional Support Needed, or Significant Weakness. Both students showed a need for instructional support in several areas. Overall, Michael's subtest totals indicated a need for instructional support in the areas of Evaluation, Planning, Regulation and Conditional Knowledge, while John's subtest totals indicated a need for instructional support in the areas of Evaluation, Planning and Regulation.

The Evaluation subtest of the instrument addresses what, if any, challenges a student might experience with the reading process. Included are questions such as "What is the hardest part of reading for you?" and "What would help you become a better reader?" Both John and Michael scored a 2 on the initial questions about their general awareness of their reading difficulties. The next three questions specifically probe a reader's ability to distinguish important from unimportant information, including questions such as "What is special about the first sentence or two in a story?" and "How can you tell which sentences are the most important ones in a story?" The ability to utilize text structure and extrapolate important information versus supporting or unimportant information is central to identifying main idea (summarizing), thus to making meaning of text. Both John and Michael scored either a 0 or a 1 on these questions, indicating a need for further instructional support.

The Planning subtest includes questions that probe a student's ability to establish a purpose for reading. Both students showed no significant weakness in understanding what skills are necessary to retelling the plot of a story or finding main parts of a story. However, in answer to the question "Before you start to read, what kind of plans do you make to help you read better?" both answered "choose a comfortable place" (score 1) over "think about why you are reading" (score 2).

The Regulation subtest explores students' knowledge and use of reading strategies. Neither subject showed a significant weakness in understanding how to figure out the meaning of unfamiliar words or why rereading is used as a comprehension strategy. However, on the question "What things do you read faster than others?", Michael answered "Books that have a lot of pictures" (score 0) rather than the 2-point answer "When you've read the story before". On the question inquiring what, if any, parts of a story does the reader skip as he reads, John scored a 0, suggesting that he believes that he never skips anything.

The Conditional Knowledge subtest is comprised of five "If…what would you do" questions which further probe a student's use of reading strategies. John scored a 2 on the question "If you are reading a story for fun, what would you do?" indicating that he could imagine the story like a movie in his mind, while Michael indicated that he would merely look at the pictures. Because visualizing is a reading strategy recognized to enhance comprehension, Michael's response indicated the need for instructional support in better mastering this strategy, while for John it appears to be a strategy he believes he understands and utilizes. Another strategy John reports that he is aware of and uses is question generation, as indicated by his response to the question about how a

reader can best remember something he has read for science or social studies. Michael, however, did not indicate he would ask himself questions about the important ideas but would choose to "concentrate and try hard to remember it."

Additionally, when asked "If you are reading for a test, which would help the most?", John indicated he would "say the sentences over and over" (score 0), while Michael answered that he would "talk about it with somebody to make sure you understand it (score 2)." These data suggest that while John understands and has the perception that he utilizes a strategy for content-specific reading, he does not necessarily use the strategy when preparing for a test.

Written responses.

Another source of data collected for this study was a collection of written work samples. The teacher/researcher, as part of a regular class assignment, asked participants to write reading responses to various texts, and then examined the data for key words and patterns (manifest data) that the literature suggests indicates interaction with text (visualizing while reading, making predictions based on text, identifying main ideas, connecting the text to prior knowledge, asking questions, and solving unfamiliar words).

The researcher collected a total of five written work samples for each participant. Throughout the school year, as part of the regular reading curriculum, the researcher/teacher had provided extensive instruction of various strategies exhibited by good readers to the entire class, and all students had written numerous reading responses that demonstrated knowledge of these specific strategies. For the purpose of this study, however, the researcher did not ask that any particular strategy be reflected within the response; rather, participants were encouraged to "recreate" their reading process on

paper. The study participants responded to three different texts: a historical fiction novel

assigned in class, a self-selected novel, and a textbook passage detailing the causes of the

Civil War. The researcher instructed the participants to write a response that most

closely reflected what the student perceived he was thinking as he read.

John's reading responses indicated he believes that he frequently visualizes as he

reads, with very little mention of other reading strategies. John reported the use of

visualizing in four of his five reading responses. He wrote that in his self-selected

chapter book he "was thinking or picturizing [sic] what they called 'the backtimes',

which I think is now because he says back then everybody was rich and had everything

they wanted." In his written response about the assigned novel, he wrote:

> One of [my] many mind pictures is the outhouse. I imagine it being tall and
> narrow, the outside would be wooden not good polished wood but like splintered
> wood. The inside would have a ripped up cushion, no lid, no flusher. There
> might be toilet paper or just a Sears catalog. Also really hot inside and no vents
> like a port-o-potty.

While John appeared to rely heavily on his ability to picture text and named his

use of this strategy within his written responses, he also made connections as an

extension of his visualizing. For example, in one written response, John connected an

image of a whirlpool in his mind with his background knowledge about the mythological

Hercules. He wrote, "I picture the creature to kind of look [like] Hercules that's bulky

with no face that's very big body and tall. When he grabs Byron and takes him off the

edge of the bank I picture the 'wool pooh' grab his leg and push him up and down like a

plunger." In his response to the passage outlining causes of the Civil War, John focused

on the section that most lent itself to visualization, the Underground Railroad, while

connecting his mind's picture of this topic to real railroads: "I picture the 'railroad' to be

a trail that people would take by the help of a 'conductor'; a conductor is a person who shows you how to get through the railroad."

In one response, John preceded the description of his mental pictures with a few introductory sentences that provided context, suggesting an effort to extrapolate important information from the text. He wrote, "In my book, Spaz gives Billy the gummies [sic] stuff. And then Billy figures out by looking at his eyes that he's not telling the truth about all the stuff he took." In another reading response, John identified a prediction based on what he had read: "I predict that Byron will end up using the bathroom in the woods instead of the 'hole'." John's use of the word 'predict' suggested that he understands how to infer a valid prediction through the use of textual evidence (i.e., the outhouse was so disgusting that the character would choose to use the restroom in the woods instead).

None of John's written responses indicated the use of questioning or word solving. His responses were chiefly a description of the mental pictures he created as he read, with occasional connections to other pictures and only one prediction.

Michael's reading responses were almost exclusively retells of what he had read. He wrote five fairly long (¾ -1 page on average) responses that closely resembled the original text, even quoting the text at times. While Michael's written responses suggested that he is fairly adept at covering the breadth of text, they did not show evidence suggesting in-depth interaction with text. In one response, Michael included two predictions:

> I think after a couple weeks of staying in Alabama he [Byron] is going to start liking it and when it is time to come home he's not going to leave. I also think since they are going to sleep in their car one night at a rest stop and that they are going to wake up with some trouble.

Michael's second prediction indicated an understanding of the text (the family was sleeping at a rest stop and therefore could run into some trouble upon waking); however, he did not provide textual support of his first prediction. Therefore, it is questionable whether Michael had a deep understanding of the character (Byron) or of the family's destination (Alabama).

Interview responses.

The final data collected for this study were obtained through follow-up, semi-structured interviews in which the researcher/teacher asked the participants to further elaborate on their written reading responses. These interviews examined latent content not revealed in written samples. This kind of questioning enabled the researcher to discover any reading strategies the participants might have utilized not reflected in their written responses. Furthermore, the data provided information about the student's self-awareness of his strategy use.

In the interviews, the researcher asked the participants to explain their perceived use of visualizing, predicting, identifying the main idea, making connections, questioning, and word solving as they read the text and wrote their responses. Throughout the interview, the researcher asked the participants to delineate between what they thought after reading the text and what they were thinking as they read it.

During the interview process, it became clear that John understood how frequently he cited mental imagery as a means to comprehend text. He was able to readily reiterate what he saw in his mind, expanding on his written response with apparent ease. When asked about whether he had a feeling about what was going to happen next or later in the passage (predict), John responded more vaguely, saying things

like, "Yeah, in a way…" John admitted that at times his prediction was based more on class discussion about the novel rather than what he had read so far. In one interview, John responded to the question about prediction by reverting back to his mental image of the text. He said, "I kind of did [have a feeling about how it was going to turn out]. It's talking about what a conductor is, what a station is…I'm thinking about a railroad and what it looks like."

When asked what, if anything he wondered as he read, John generated a few questions, such as "I wondered how long it was going to take the family to get there," and "I was wondering where the parents were while all of this was going on." However, again reverting to visualization, he stated, "I was wondering what Grandma Sands [a character in the novel] would look like."

None of John's interview responses indicated he perceived the text was difficult or that there were any words he did not know. In four of the five interviews, he claimed what he wrote said what he meant to say, except for one time when he felt he didn't have time to write more.

On the other hand, Michael's interviews were markedly different from his written responses. While his written responses were limited primarily to summaries or retells, his interviews suggested that he does not rely on a single strategy such as visualization. Thus, getting his verbal feedback on his written responses was exceptionally important to better understand his perceived strategy use.

When asked what he could see in his mind as he was reading and writing the response, frequently Michael described something key from the text: "I pictured Byron hating the trip so far…him sitting in the car staring out the window, mad…", [a chapter in

the novel in which a main event in that day's reading was the family's car trip.] While Michael's written response over that section of reading provided two predictions, in the interview Michael said that the picture of Byron in his mind occurred as he was reading as well. Another description of a mental image Michael experienced described the main character of the novel hiding behind a couch: "I could picture Kenny behind the couch, sleeping back there. It looks like it is tight, squished." In his written response, Michael simply told the facts: "Kenny stayed behind the couch all the time." On most occasions, Michael claimed that he was picturing these images during reading and was not manufacturing them for the purpose of the interview.

When asked about whether he predicted while reading, Michael often replied, "I didn't really," "I don't' think so," or "I can't remember." Two times when he did claim to have had a feeling about what was going to happen in the text his predictions had to do with the title: "I thought the book might be about mountains because of its title [Peak], but the kid's name is Peak" and "I thought the passage, 'The Road to the Civil War', was going to be about how the war started." One prediction Michael made was based not on textual evidence but "just a feeling." He stated, "I thought after a couple of weeks of By's thing with Grandma, he would start liking it and he wouldn't want to go home. He would not want to leave."

Michael was able to articulate the main idea of what he read most of the time. His verbal responses showed a more in-depth understanding of the characters and events than were reflected in his written responses. For example, in the chapter of the novel where the character is hiding behind the couch, Michael's written response was a dry retell while his verbal explanation of the main idea was more revealing: "[The main idea] was

about the pet hospital behind the couch, because Kenny was behind it for awhile to see…that's usually where the animals would go when they were hurt to see if they'd get better, and Kenny wanted to see if he could get better too." Regarding the expository piece about the Civil War, Michael was able to articulate that the main idea was how the war started, how it ended, and the people who led the war.

While Michael was able to verbalize ways in which he connected to the text, he admitted that most of the connections occurred to him at the time of the interview, not during his reading. Every connection he made with the text had to do with a personal family member (his younger sister, his older brother, his grandfather who fought in the war).

Michael reported one instance in which he was unable to understand a word in his reading. In his self-selected novel, he came across the word "chaotically." He said that the text became confusing for him, because he could not figure out the meaning of the word, nor could he "sound it out." In the interview, the researcher asked Michael what, if any, strategies he used to help himself understand the word. Michael replied that he tried re-reading at first, but it didn't help, and he also recognized the smaller word 'chaos' within the larger word, but again he could not quite get it. He said, "I know what chaos means, but I can't remember." He recognized that in the expository selection, often a difficult word such as "sectionalism" was followed by the definition, so while there were many words in that passage that he did not know, he could find the meaning for all of them.

Michael's claimed that what he wrote said what he meant to say and that it showed his comprehension of the text, usually because he felt he successfully

summarized the passage. He appeared to equate comprehension with summarizing or getting all of the information into the retell.

Discussion

In general, there appears to be somewhat of a discrepancy between the participants' perceptions of what they do and what is actually happening during the reading process. On the Student Engagement Instrument, for example, the boys reported an overall sense of fairness about school, assessments and grades; however, while both reported that they check for understanding as they go, they also claimed not to check for accuracy. This discrepancy between perception and reality extended to the reading process, as evidenced by their apparent conflicting responses on the Index of Reading Awareness as compared to their written and verbal responses. John's answers on the instrument suggest he uses question generation to aid in the comprehension of content area text such as science or social studies. However, within his written responses, including the response over social studies text, he made no mention of asking questions as he read and demonstrated only limited reference to the strategy in his interviews. Thus, John may think that he is using some strategies, but the use of these strategies is not evident in his written or verbal responses.

John's primary strategy was visualizing. However, he did not always create mental pictures of the most important sections of text; rather, he tended to declare information was important if it was easily visualized. Furthermore, his reliance on visualizing limited his comprehension of expository text, evidenced by his ignoring, in both his written and interview responses, nearly three-fourths of the passage about Civil War. John's ability to extrapolate important information appears to be a challenge; he

relied on whatever information was most easily pictured, and frequently the main idea he verbalized in an interview was not what was indicated in his corresponding written response. This reinforced the researcher's observation that John struggles with recognizing important information within text, and that frequently John believes the main idea is actually the information most conveniently visualized.

Also, John appeared unaware that he used more than visualizing while reading. In an interview, he said, "Sometimes I do connections, but mainly I just visualize, no matter what kind of text." However, in interviews about specific texts, he frequently envisioned a scene while connecting the mental image to another picture in his mind; he did not recognize that he was actually making a connection and visualizing simultaneously. At the same time, he did distinguish his use of mental imagery in narrative versus expository text: "I picture the surroundings of fiction but in expository text I picture the main thing with nothing around it."

John demonstrated a lack of awareness that the strategy of visualizing and comprehension are related. When asked if the written response showed that he comprehended the text, he answered that it did; however, when asked to explain how it showed comprehension, he reverted to rote description of his mental image. John seems to have not made the connection that the use of strategies facilitates the making meaning of text.

Michael's default strategy was summarizing, which is primarily an after-reading strategy. Because to summarize effectively requires the identification of main idea and important supporting details, Michael's ability to summarize suggests he is using more strategies than he can articulate or is perhaps even aware of. One weakness in his written

responses, however, was that they included too many details; he regurgitated every detail so that it was difficult to determine what he felt was important. While Michael's responses seemed limited to retelling or summarizing, he did demonstrate the ability to paraphrase information. For example, he wrote, "Kenny started crying a lot and Byron stayed in there with him until he stopped", which accurately sums up a two-page incident from the novel. Michael appeared to synthesize large amounts of information rather than just copying words out of the book at random here. Additionally, Michael's interview responses suggest a greater extent of strategy use than evidenced through his written summaries.

Michael reported that that the expository text "felt much harder" for him because of all the information, which is in keeping with his efforts to sum up all of the text he reads. He appeared to be somewhat adept at word solving; in his written response, he was able to recognize what words were difficult for him, and in his interview he articulated multiple strategies in trying to determine word meaning. He also showed text awareness evidenced by his recognition that unfamiliar vocabulary in expository text is frequently defined within the text.

Michael's responses, both written and verbal, were very slow and labored. He had great difficulty articulating his thoughts in the written reading responses as well as the interviews. This suggests that, while it could be easy to assume that Michael struggles in fluency, in fact he does not have trouble decoding words; rather, he processes slowly and is very deliberate in his written assignments and is quite cautious in his verbal communication.

In general, both participants demonstrated a strong ability to use strategies "on demand", but there was less evidence to suggest fluidity of strategy use during the reading process. A short list of strategies was evident through written responses and interviews; while they could both formulate an answer that demonstrates a strategy, they admitted that they do not use many of these strategies while reading. Rather, they just came up with a prediction, question, etc. upon being asked in the interview, but these strategies are not reflective of what was happening during the reading process. For example, both students on request could ask questions after they read, but neither showed use of this strategy in his written or verbal responses. Neither seemed to have much awareness of what they were doing as they read.

Additionally, both students relied heavily on one primary strategy, with occasional use of others. Michael's strategy (summarizing) seemed more effective in aiding with comprehension than John's (visualizing), because sometimes John focused on picturing less-important information and therefore missed a main idea entirely. Michael, on the other hand, had to synthesize information and pull out main ideas to include in his summary.

Finally, both students treated the Civil War expository text as though it were pleasure reading. While they each said that expository text was more difficult to understand, their reported strategy use was no different than with narrative pieces.

CHAPTER V
SUMMARY AND CONCLUSIONS

Summary

  The purpose of the present study was to observe the metacognitive processes of struggling readers who are not English Language Learners (ELL) and are not eligible for special education or Section 504 services. Examining these students' awareness of strategies and their self-regulation of strategy use can provide valuable insight to teachers, particularly teachers of intervention classes. Research examining the strategic and regulatory behaviors of good readers has provided a better understanding of how comprehension occurs (TEA, 2002; Pressley, 2006). Because there appears to be a positive correlation between flexible strategy use and comprehension (Mason, 2004; Pressley, 2006; Scharlach, 2008), learning more about strategy use in struggling readers can inform subsequent instruction. Therefore, the research question posed by this study was What are the strategic reading behaviors demonstrated by two middle school struggling readers who are not being served through special education, Section 504, or English as a Second Language (ESL) instructional support systems?

  The study utilized a case study approach to explore the reading behaviors of two randomly selected eighth grade students enrolled in a reading intervention class. Data sources were the Student Engagement Instrument, the Index of Reading Awareness, five written reading responses, and semi-structured follow-up interviews. Data collection took

place over a three-week period through the researcher/teacher's reading classes. Students read and wrote responses to several texts, including an in-class assigned novel, a novel of their choosing, and an excerpt from a social studies textbook. The researcher then probed for additional information through structured interviews, specifically noting patterns in reading strategy use.

Results of the Student Engagement Instrument indicated that both students have positive views of school in terms of fairness and relevance. Overall, Index of Reading Awareness results suggested a need for instructional support among the areas of Evaluation, Planning, Regulation, and Conditional Knowledge. The researcher noted a difference between what the students wrote and what they revealed through the follow-up interviews. Students' written responses reflected each student's strong preference for a particular strategy, used repeatedly in multiple written samples, while the follow-up interviews showed an apparent disparity between the students' perception of their reading processes and the reality of what they are really doing while reading.

Conclusions

Study results indicated that both study participants resort to a favorite, or 'default' strategy when reading text. For John, this default strategy is visualizing, while for Michael it is pulling out main ideas to retell and/or summarize. Comprehension difficulties may occur with the overuse of a single strategy to the exclusion of other, possibly more effective ones. Because the reading of different texts requires the use of different strategies, the practice of relying heavily on one strategy may be particularly problematic when the default strategy is more effective with one type of text; for example, visualizing assists in constructing meaning of narrative text, while it is less

helpful with expository text such as scientific or informational reading. John was able to report rich mental images of narrative text, but he had almost no recollection of the social studies passage.

Michael's default strategy seemed to help him in a more generalized way; he was successful at making meaning of text regardless of the genre. It appears that teachers, particularly intervention teachers, should consider more thorough diagnostics to discover which, if any, strategies their students are already utilizing, and leverage that information to facilitate a broader use of multiple strategies. Typical data such as TAKS scores do not provide specific information about a student's reading processes, yet to remediate reading deficiencies a teacher needs specific information.

Additionally, other than the aforementioned favorite strategy, both participants seemed unaware of what they were doing as they read, reinforcing the findings of previous studies by Dole (1991), and Cantrell and Carter (2009). This suggests incongruence in awareness of reading strategies and performance of reading tasks. Sometimes the participants thought they were using a particular strategy, when actually they were using another. Other times, they did not recognize use of any strategy at all, when in fact they were skillfully using a strategy. The students could explain most strategies in isolation, but in practice they again resorted to their usual response and either did not seem to know how to incorporate other strategies, or failed to recognize when they did. As the literature indicates, metacognition involves both knowledge and regulation. In these struggling readers, the strategic knowledge is not sufficient. They must first begin to realize when comprehension is faltering, then utilize a multitude of strategies to make sense of the text.

As one might have expected in a qualitative study, the researcher as research instrument appeared to have a positive effect on the participants' comfort level and self-awareness of strategy use. For example, whereas John did not clearly articulate visualizing as his stock strategy in the beginning, after data collection was complete and he was asked to write a reading response as part of a regular class assignment, he jokingly told the researcher/teacher, "I bet I will write about what I visualized!" Michael added with a grin, "Time for me to summarize."

Implications for Further Research

In light of the results of the present study, the following is recommended:

1. Replication of the study utilizing a larger, more diverse sample.

2. Research utilizing a longitudinal approach, including additional sources of data such as greater variation of text types.

3. Research incorporating both qualitative and quantitative data, such as pre and post testing using standardized instruments.

4. Replication of the study including a more immediate sampling of strategy use, such as the Think Aloud technique, with a comprehension component.

5. Further investigation of the effects of researcher as research instrument on student awareness and identification of student strategy use.

6. Further investigation of students' reading behaviors with regard to factors such as motivation, socio-economic status and gender.

APPENDIX A

Student Engagement
Instrument

Name:
_____

Date:
_____

Teacher:
_____

Period:
_____

School:
_____

Student Engagement Instrument

Columns: Strongly Disagree (1), Disagree (2), Agree (3), Strongly Agree (4)

1. My family/guardian(s) are there for me when I need them. ① ② ③ ④
2. After finishing my schoolwork I check it over to see if it's correct. ① ② ③ ④
3. My teachers are there for me when I need them. ① ② ③ ④
4. Other students here like me the way I am. ① ② ③ ④
5. Adults at my school listen to the students. ① ② ③ ④
6. Other students at school care about me. ① ② ③ ④
7. Students at my school are there for me when I need them. ① ② ③ ④
8. My education will create many future opportunities for me. ① ② ③ ④
9. Most of what is important to know you learn in school. ① ② ③ ④
10. The school rules are fair. ① ② ③ ④
11. Going to school after high school is important. ① ② ③ ④
12. When something good happens at school, my family/guardian(s) want to know about it. ① ② ③ ④
13. Most teachers at my school are interested in me as a person, not just as a student. ① ② ③ ④
14. Students here respect what I have to say. ① ② ③ ④
15. When I do schoolwork I check to see whether I understand what I'm doing. ① ② ③ ④
16. Overall, my teachers are open and honest with me. ① ② ③ ④
17. I plan to continue my education following high school. ① ② ③ ④
18. I'll learn, but only if the teacher gives me a reward. ① ② ③ ④
19. School is important for achieving my future goals. ① ② ③ ④
20. When I have problems at school my family/guardian(s) are willing to help me. ① ② ③ ④

Please Turn Over ☞

	Strongly Disagree	Disagree	Agree	Strongly Agree
21. Overall, adults at my school treat students fairly.	①	②	③	④
22. I enjoy talking to the teachers here.	①	②	③	④
23. I enjoy talking to the students here.	①	②	③	④
24. I have some friends at school.	①	②	③	④
25. When I do well in school it's because I work hard.	①	②	③	④
26. The tests in my classes do a good job of measuring what I'm able to do.	①	②	③	④
27. I feel safe at school.	①	②	③	④
28. I feel like I have a say about what happens to me at school.	①	②	③	④
29. My family/guardian(s) want me to keep trying when things are tough at school.	①	②	③	④
30. I am hopeful about my future.	①	②	③	④
31. At my school, teachers care about students.	①	②	③	④
32. I'll learn, but only if my family/guardian(s) give me a reward.	①	②	③	④
33. Learning is fun because I get better at something.	①	②	③	④
34. What I'm learning in my classes will be important in my future.	①	②	③	④
35. The grades in my classes do a good job of measuring what I'm able to do.	①	②	③	④

APPENDIX B

FORM 8.3

Index of Reading Awareness

Administration and Scoring

Because of its multiple-choice format, the Index of Reading Awareness may be administered in a group setting. If significant decoding deficits are suspected, it may be wise to read each item aloud to the students (both stem and choices).

The instrument comprises four subtests of five items each. These are Evaluation, Planning, Regulation, and Conditional Knowledge. Each student earns a score for each of these subtests. No composite score is computed. The subtest scores are computed by using the following key. The response to each item receives 0, 1, or 2 points. The subtest score is simply the sum of these points for the five items of that subtest.

Once the subtest scores are determined, the following scale can be used to interpret them:

Subtest score	Interpretation
8–10	No significant weakness.
6–7	Some instructional support needed.
0–5	Serious need for instruction in this area.

Name _____

1. What is the hardest part about reading for you?
   a. Sounding out the hard words.
   b. When you don't understand the story.
   c. Nothing is hard about reading for you.

2. What would help you become a better reader?
   a. If more people would help you when you read.
   b. Reading easier books with shorter words.
   c. Checking to make sure you understand what you read.

3. What is special about the first sentence or two in a story?
   a. They always begin with "Once upon a time . . . "
   b. The first sentences are the most interesting.
   c. They often tell what the story is about.

4. How are the last sentences of a story special?
   a. They are the exciting action sentences.
   b. They tell you what happened.
   c. They are harder to read.

(continued)

From Jacobs and Paris (1987). Copyright 1987 by the American Psychological Association. Reprinted by permission.

Index of Reading Awareness *(page 2 of 6)*

5. How can you tell which sentences are the most important ones in a story?
   a. They're the ones that tell the most about the characters and what happens.
   b. They're the most interesting ones.
   c. All of them are important.

6. If you could only read some of the sentences in the story because you were in a hurry, which ones would you read?
   a. Read the sentences in the middle of the story.
   b. Read the sentences that tell you the most about the story.
   c. Read the interesting, exciting sentences.

7. When you tell other people about what you read, what do you tell them?
   a. What happened in the story.
   b. The number of pages in the book.
   c. Who the characters are.

8. If the teacher told you to read a story to remember the general meaning, what would you do?
   a. Skim through the story to find the main parts.
   b. Read all of the story and try to remember everything.
   c. Read the story and remember all of the words.

9. Before you start to read, what kind of plans do you make to help you read better?
   a. You don't make any plans. You just start reading.
   b. You choose a comfortable place.
   c. You think about why you are reading.

10. If you had to read very fast and could only read some words, which ones would you try to read?
    a. Read the new vocabulary words because they are important.
    b. Read the words that you could pronounce.
    c. Read the words that tell the most about the story.

11. What things do you read faster than others?
    a. Books that are easy to read.
    b. When you've read the story before.
    c. Books that have a lot of pictures.

12. Why do you go back and read things over again?
    a. Because it is good practice.
    b. Because you didn't understand it.
    c. Because you forgot some words.

Index of Reading Awareness *(page 3 of 6)*

13. What do you do if you come to a word and you don't know what it means?
    a.   Use the words around it to figure it out.
    b.   Ask someone else.
    c.   Go on to the next word.

14. What do you do if you don't know what a whole sentence means?
    a.   Read it again.
    b.   Sound out all the words.
    c.   Think about the other sentences in the paragraph.

15. What parts of the story do you skip as you read?
    a.   The hard words and parts you don't understand.
    b.   The unimportant parts that don't mean anything for the story.
    c.   You never skip anything.

16. If you are reading a story for fun, what would you do?
    a.   Look at the pictures to get the meaning.
    b.   Read the story as fast as you can.
    c.   Imagine the story like a movie in your mind.

17. If you are reading for science or social studies, what would you do to remember the information?
    a.   Ask yourself questions about the important ideas.
    b.   Skip the parts you don't understand.
    c.   Concentrate and try hard to remember it.

18. If you are reading for a test, which would help the most?
    a.   Read the story as many times as possible.
    b.   Talk about it with somebody to make sure you understand it.
    c.   Say the sentences over and over.

19. If you are reading a library book to write a report, which would help you the most?
    a.   Sound out words you don't know.
    b.   Write it down in your own words.
    c.   Skip the parts you don't understand.

20. Which of these is the best way to remember a story?
    a.   Say every word over and over.
    b.   Think about remembering it.
    c.   Write it down in your own words.

Index of Reading Awareness *(page 4 of 6)*

SCORING GUIDE

EVALUATION

1. What is the hardest part about reading for you?

1   a.   Sounding out the hard words.

2   b.   When you don't understand the story.

0   c.   Nothing is hard about reading for you.

2. What would help you become a better reader?

1   a.   If more people would help you when you read.

0   b.   Reading easier books with shorter words.

2   c.   Checking to make sure you understand what you read.

3. What is special about the first sentence or two in a story?

1   a.   They always begin with "Once upon a time . . . "

0   b.   The first sentences are the most interesting.

2   c.   They often tell what the story is about.

4. How are the last sentences of a story special?

1   a.   They are the exciting action sentences.

2   b.   They tell you what happened.

0   c.   They are harder to read.

5. How can you tell which sentences are the most important ones in a story?

2   a.   They're the ones that tell the most about the characters and what happens.

1   b.   They're the most interesting ones.

0   c.   All of them are important.

PLANNING

6. If you could only read some of the sentences in the story because you **were** in a hurry, which ones would you read?

0   a.   Read the sentences in the middle of the story.

2   b.   Read the sentences that tell you the most about the story.

1   c.   Read the interesting, exciting sentences.

Index of Reading Awareness *(page 5 of 6)*

7. When you tell other people about what you read, what do you tell them?
2   a.   What happened in the story.
0   b.   The number of pages in the book.
1   c.   Who the characters are.

8. If the teacher told you to read a story to remember the general meaning, what would you do?
2   a.   Skim through the story to find the main parts.
1   b.   Read all of the story and try to remember everything.
0   c.   Read the story and remember all of the words.

9. Before you start to read, what kind of plans do you make to help you read better?
0   a.   You don't make any plans. You just start reading.
1   b.   You choose a comfortable place.
2   c.   You think about why you are reading.

10. If you had to read very fast and could only read some words, which ones would you try to read?
1   a.   Read the new vocabulary words because they are important.
0   b.   Read the words that you could pronounce.
2   c.   Read the words that tell the most about the story.

REGULATION

11. What things do you read faster than others?
1   a.   Books that are easy to read.
2   b.   When you've read the story before.
0   c.   Books that have a lot of pictures.

12. Why do you go back and read things over again?
1   a.   Because it is good practice.
2   b.   Because you didn't understand it.
0   c.   Because you forgot some words.

13. What do you do if you come to a word and you don't know what it means?
2   a.   Use the words around it to figure it out.
1   b.   Ask someone else.
0   c.   Go on to the next word.

(continued)

Index of Reading Awareness *(page 6 of 6)*

14. What do you do if you don't know what a whole sentence means?
1   a. Read it again.
0   b. Sound out all the words.
2   c. Think about the other sentences in the paragraph.

15. What parts of the story do you skip as you read?
1   a. The hard words and parts you don't understand.
2   b. The unimportant parts that don't mean anything for the story.
0   c. You never skip anything.

CONDITIONAL KNOWLEDGE

16. If you are reading a story for fun, what would you do?
1   a. Look at the pictures to get the meaning.
0   b. Read the story as fast as you can.
2   c. Imagine the story like a movie in your mind.

17. If you are reading for science or social studies, what would you do to remember the information?
2   a. Ask yourself questions about the important ideas.
0   b. Skip the parts you don't understand.
1   c. Concentrate and try hard to remember it.

18. If you are reading for a test, which would help the most?
1   a. Read the story as many times as possible.
2   b. Talk about it with somebody to make sure you understand it.
0   c. Say the sentences over and over.

19. If you are reading a library book to write a report, which would help you the most?
1   a. Sound out words you don't know.
2   b. Write it down in your own words.
0   c. Skip the parts you don't understand.

20. Which of these is the best way to remember a story?
0   a. Say every word over and over.
1   b. Think about remembering it.
2   c. Write it down in your own words.

APPENDIX C

Follow-up Written Work Probe

Name of Student:
Date of Interview:
Date Sample Taken:
Title of Text:

[Visualizing]

1. As you wrote this, what could you see in your mind? Describe how it looked.

_____
_____
_____
_____

[Predicting]

2. When you were writing this, did you have a feeling about how [the story] was going to turn out? Explain why or why not.

_____
_____
_____
_____

[Identifying Main Idea]

3. What was the most important thing about what you read or heard? Where is this in what you wrote?

_____
_____
_____
_____

[Making Connections]

4. Did anything you read remind you of something or someone else? Explain.

_____
_____
_____
_____

[Questioning]

5. When you were writing this, what, if anything, were you wondering?

_____
_____

_____
_____

[Word Solving]

    6. Did you run across any unfamiliar words in the text?

_____
_____
_____
_____

    7. *Do you feel that what you wrote says what you meant to say? Why or why not? Give me an example.

_____
_____
_____
_____

    8. *Do you feel that what you wrote shows what you understand about what you read? Why or why not?

_____
_____
_____
_____

    9. *Was any part of the reading passage difficult for you? If so, what did you do to help yourself understand?

_____
_____
_____
_____

APPENDIX D

HAYS CISD RESEARCH STUDY REQUEST

Name: Lisa McCulley   **Date:** 11/18/09
Address: 304 Mary Cove
                Kyle, Texas 78640
Phone: 512-268-8008
Fax: 512-268-1610
E-Mail: mcculleyl@hayscisd.net

1. **Study Title:** A Case Study of the Metacognitive Characteristics
     of Two Low-Performing Middle School Reading Students

2. **Summary of Research to be conducted:**
    I will use a variety of instruments to collect data for this study. I will collect both quantitative and qualitative data, compare the results, and use these findings to see whether they validate each other. The study will examine four types of data:
    - Results of a student engagement survey
    - Results of Index of Reading Awareness questionnaire (attached)
    - Analyzed data from written reading responses
      - Analyzed data through semi-structured interviews following written reading responses (attached)

    I will collect data during a 4-6 week period of time (anticipated start date January, 2010). Questionnaires, written responses and follow-up interviews will take place during my reading class periods throughout the school day.

    I will examine study participants' responses to the Student Engagement Survey, which measures student affect with regard to school and home support. I will also elicit students' responses to a reading skills questionnaire, looking for patterns in student responses indicating strengths and weaknesses in evaluation, planning, regulation and conditional knowledge (attached).

I will collect six samples (approximately one per week) of student work in the form of written reading responses to regularly incorporated classroom activities. Reading responses will include a variety of materials and genres, including a self-selected novel or chapter book, a teacher-assigned class novel on audiotape, a novel read aloud in class by the teacher, and expository text taken from various sources.   The selected students will receive no specialized treatment or instruction.

I will examine student written reading responses using content analysis relative to manifest content (visualizing, predicting, identifying the main idea, making connections, and questioning), and latent content as noted through a one-on-one, follow-up probe.   In the follow-up probe (attached), I will more deeply examine the students' reading behaviors not necessarily evidenced through the written sample, including inquiry about the five aforementioned strategies and additional probing, such as the student's ability to determine a reasonable meaning for unfamiliar words.

3. **Major hypotheses or questions to be tested:**
    Metacognition is defined by Harris and Hodges (1995) as "the awareness individuals have of their own mental processes and the subsequent ability to monitor, regulate, and direct themselves to a desired end."   Researchers such as Eva-Wood (2008) and Lawrence et. al (2009) suggest that metacognition is more complex than the traditional "thinking about thinking". Authors, including Michalsky and Mevarech (2009) also indicate that addressing metacognition before, during and after instruction is a valid tool in increasing and enhancing reading performance.

    The question I will ask is: what are some of the metacognitive characteristics of low-achieving middle school reading students? To try and answer this question, I will examine previous quantitative data, collect information about students' reading awareness and work samples, and will conduct semi-structured interviews.

4. **Attached:** Student Engagement Instrument, Index of Reading Awareness, Follow-up Written Work Probe, Parent/Student Consent Form

5. **Describe the district population and the data to be collected (professionals, students, schools, etc.)**
    This case study will investigate the metacognitive processes of two low-achieving students. I will select students through purposive sampling, using a homogeneous sample based on students enrolled in eighth-grade reading intervention classes at R. C. Barton Middle School. Students at Barton are placed in an additional reading support class based upon a previous year's scale score of 2170 or below on the Texas Assessment of Knowledge and Skills (a scale score of 2100 is considered passing). For the 2009-2010

academic year, 40 eighth grade students met this criteria and are enrolled in a reading intervention class. Hays CISD was selected for a two-year study through the Meadows Center for Preventing Educational Risk, and therefore all reading intervention students at Barton Middle School are also participants in a research project that examines the efficacy of a collection of reading strategies, referred to as Collaborative Strategic Reading (CSR). As part of my study, I will examine data from a Student Engagement Instrument administered as part of the CSR study.

For the purpose of my study, students currently being served through programs such as Special Education, Section 504, and English as a Second Language are excluded from the sample pool to minimize the effects of other prescriptive interventions. Therefore, of the initial pool of 40 possible eighth grade students, I will select two participants for my study who meet the above criterion of exclusion. A low TAKS score is the only obvious commonality among the participants in my study. I will examine the metacognitive characteristics of these low-performing middle school readers to gain some insight into how to best scaffold their learning.

APPENDIX E

Division of Curriculum and Instruction
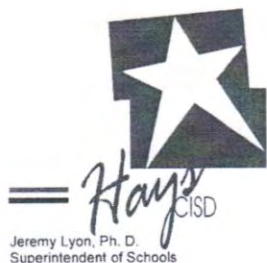
Jeremy Lyon, Ph. D.
Superintendent of Schools

Dina Webb, M. Ed.
Executive Director Curriculum & Instruction

December 11, 2009

Dear Mrs. McCulley,

You have submitted a request to conduct a qualitative case study examining the metacognitive characteristics of two low performing reading students at Barton Middle School. On behalf of the Hays CISD leadership team, I am pleased to grant you permission to pursue this research.

We look forward to supporting you in your academic goals, and wish you the best of luck with your thesis.

Sincerely,

Dina Webb
Executive Director Curriculum & Instruction
Hays CISD
ph: 512-268-2141
fax:512-268-2147

21003 IH 35
Kyle, TX 78640
512-268-2141
512-268-2147 fax
www.hayscisd.net

APPENDIX F

Consent Form

Dear Parent, Guardian and Student:

My name is Ms. Lisa McCulley, and I am your student's eighth grade reading teacher at Barton Middle School, 4950 Jack C. Hays Trail, Texas, 78610. I can be reached at (512)268-1472 extension 6409. As part of my graduate studies at Texas State University, I am conducting a research project entitled, "A Case Study of the Metacognitive Characteristics of Two Low-Performing Middle School Reading Students", IRB # 2009A6341. My faculty research supervisor at Texas State is Dr. Liz Stephens, Director of Office of Educator Preparation and Professor of Educational Technology, Department of Curriculum & Instruction, Texas State University, (512)245-3102.

The purpose of my research is to examine the reading skills, use of reading strategies, and attitude toward reading of selected students not being served by other special programs such as special education or ESL.

Your child was randomly selected to participate in this study. He/she was selected from a group of eighth grade students who are enrolled in the reading intervention class and who meet the criteria for inclusion in this research. Your child will not be removed from class, thus will not miss any critical instruction. I will be collecting his/her written and oral responses during regular class time over a six week period, beginning February 1, 2010. Specifically, I will do the following:

- Review his/her previous test scores;
- Collect and examine his/her responses to the *Index of Reading Awareness*. Items on this questionnaire include "What is the hardest part about reading for you?" and "What would help you become a better reader?"
- Examine his/her written responses to selected regular class assignments;

-
- Individually interview him/her regarding these written assignments, based on established criteria which indicate reading strategies. Interviews will include questions such as "What was the most important thing about what you read or heard? Where is this in what you wrote?" and "As you wrote this, what could you see in your mind? Describe how it looked."

Your child's participation is completely voluntary, and in no way will affect your child's academic standing, placement, or grades. In addition, he/she may refuse to answer any question at any time. To ensure confidentiality, all data from this research, including the name and other identifying information of your child, will be accessible only to this researcher and the Texas State supervisory faculty. The researcher will hold this information in a locked file cabinet in her home office for five years, after which it will be destroyed.

This research represents minimal or no risk to your child. It will benefit you and your child in that it will help you and him/her to have a better understanding of his/her reading strengths or weaknesses. Additionally, it will provide the researcher a clearer picture of those strengths/weaknesses in order to better address them through instruction.

If you have questions about this research, research participants' rights, and/or research-related injuries to participants, please contact the Texas State University Institution Review Board chairperson, Dr. Jon Lasser (512) 245-3413, lasser@txstate.edu, or to Ms. Becky Northcut, Compliance Specialist (512) 245-2102.

By May 15, 2010, I will contact you and your child to discuss the results of this research study.

Please do the following:
- Review and discuss with your child the information about this study
- You and your child sign the last page
- Return the last page with both signatures to me at your earliest convenience (upon receipt, I will mail a copy of the consent form back to you)

Thank you in advance for you and your child's participation.

Sincerely yours,

Lisa McCulley
Reading Enrichment Teacher
Barton Middle School
268-1472 ext. 6409

Consent Form

Parent or Guardian Consent:

I do ___/ do not___ give permission for my child's work to be collected and analyzed as part of this project. I understand that these may be used as examples in publications and reports on the project, but that students will not be identified by name.

Parent/ Guardian signature_____ Date _____

Researcher's signature _____ Date _____

Student Consent:

I have read your letter regarding my participation in your study that will be conducted during the spring, 2010 semester.

I do___/ do not___ give my permission for you to collect samples of my written work, and to interview me about my reading skills. I understand that these may be used as examples in publications and reports on the project, but that I will not be identified by name.

Student signature_____ Date_____

APPENDIX G

The Meadows Center
FOR PREVENTING EDUCATIONAL RISK

College of Education SZB 228 · The University of Texas at Austin
1 University Station D4900B · Austin, Texas 78712
Phone (512) 232-2320 · Fax (512) 232-2322

December 7, 2009

Dear Mrs. McCulley,

Congratulations on such a thoughtful thesis. We look forward to supporting your work.

You have requested access to results of the Student Engagement Instrument administered to your students as part of the CSR study. We are pleased to provide you with the data.

Good luck with your endeavors.

Sincerely,

Elizabeth Swanson, Ph.D.
Project Director
MCPER

LITERATURE CITED

Afflerbach, P., Pearson, P. D., & Paris, S. G. (2008). Clarifying differences between reading skills and reading strategies. *Reading Teacher, 61*(5), 364-373.

Anderson, R. C., Illinois Univ, Urbana Center for the Study,of Reading, Bolt, Beranek and Newman, Inc.,Cambridge, M.A., & Others, A. (1977). *Schemata as scaffolding for the representation of information in connected discourse (Technical Report No. 24).* Retrieved from http://www.eric.ed.gov.libproxy.txstate.edu/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/36/62/65.pdf

Anderson, R. C., & Pearson, P. D., Illinois Univ, Urbana Center for the Study of Reading, & Bolt, Beranek and Newman, Inc.,Cambridge, M.A. (1984). *A schema-theoretic view of basic processes in reading comprehension (Technical Report No. 306).* Retrieved from http://www.eric.ed.gov.libproxy.txstate.edu/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/31/fe/37.pdf

Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the student engagement instrument. *Journal of School Psychology, 44*(5), 427-445.

Baumann, J. F., Ware, D., & Edwards, E. C. (2007). "Bumping into spicy, tasty words that catch your tongue": A formative experiment on vocabulary instruction. *Reading Teacher, 61*(2), 108-122.

Biancarosa, G., & Snow, C. (2004). *Reading net: A vision for action and research in middle and high school literacy—A report to Carnegie Corporation of New York.* Retrieved from http://www.all4ed.org/files/ReadingNext.pdf

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

Bryant, D. P., Vaughn, S., Linan-Thompson, S., Ugel, N., Hamff, A., & Hougen, M. (2000). Reading outcomes for students with and without reading disabilities in general education middle-school content area classes. *Learning Disability Quarterly, 23*(4), 238.

Cain, K., Oakhill, J., & Bryant, P. (2004). Children's reading comprehension ability: Concurrent prediction by working memory, verbal ability, and component skills. *Journal of Educational Psychology, 96*(1), 31-42.

Caldwell, J., & Leslie, L. (2004). Does proficiency in middle school reading assure proficiency in high school reading? the possible role of think-alouds. *Journal of Adolescent & Adult Literacy, 47*(4), 324.

Cantrell, S. C., & Carter, J. C. (2009). Relationships among learner characteristics and adolescents' perceptions about reading strategy use. *Reading Psychology, 30*(3), 195-224.

Cleary, T. J., Platten, P., & Nelson, A. (2008). Effectiveness of the self-regulation empowerment program with urban high school students. *Journal of Advanced Academics, 20*(1), 70-107.

Dole, J. A., & Others, (1991). Moving from the old to the new: Research on reading comprehension instruction. *Review of Educational Research, 61*(2), 239-64.

Eilam, B., Zeidner, M., & Aharon, I. (2009). Student conscientiousness, self-regulated learning, and science achievement: An explorative field study. *Psychology in the Schools, 46*(5), 420-432.

Eilers, L. H., & Pinkley, C. (2006). Metacognitive strategies help students to comprehend all text. *Reading Improvement, 43*(1), 13-29.

Eva-Wood, A. (2008). Does feeling come first? how poetry can help readers broaden their understanding of metacognition. *Journal of Adolescent & Adult Literacy, 51*(7), 564-576.

Everson, H. T., & Tobias, S. (1998). The ability to estimate knowledge and performance in college: A metacognitive analysis. *Instructional Science, 26*, 65-79.

Ezell, H. K., Hunsicker, S. A., & Quinque, M. M. (1997). Comparison of two strategies for teaching reading comprehension skills. *Education and Treatment of Children, 20*(4), 365-82.

Fisher, D., & Ivey, G. (2006). Evaluating the interventions for struggling adolescent readers. *Journal of Adolescent & Adult Literacy, 50*(3), 180-189.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist, 34*(10), 906-911.

Freeman, R. (1982, April). *Improving the Comprehension of Stories Using Predictive Strategies.* Paper presented at the Annual Meeting of the International Reading Association, Chicago, IL. Retrieved from ERIC database.

Harvey, S., & Goudvis, A. (2000). *Strategies that work: Teaching comprehension to enhance understanding.* Portland, ME: Stenhouse.

Houtveen, A. A. M., & van, d. G. (2007). Effects of metacognitive strategy instruction and instruction time on reading comprehension. *School Effectiveness and School Improvement, 18*(2), 173-190.

Jacobs, J. E. & Paris, S. G. (1987). Children's metacognition about reading: Issues in definition, measurement, and instruction. *Educational Psychologist, 22*(3-4), 255-278.

Janssen, T., Braaksma, M., & Rijlaarsdam, G. (2006). Literary reading activities of good and weak students: A think aloud study. *European Journal of Psychology of Education, 21*(1), 35-52.

Langer, J. A., & Nicolich, M. (1980, May). *Prior knowledge and its effect on comprehension.* Paper presented at Annual Meeting of the International Reading Association, St. Louis, MO. Retrieved from http://www.eric.ed.gov.libproxy.txstate.edu/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/34/2f/92.pdf

Lenz, B. K., Schumaker, J. B., Deshler, D. D., & Beals, V. L. (1984). *The word identification strategy* (Learning Startegies Curriculum). Lawrence: University of Kansas.

Lincoln, Y.S. & Guba, E.G. (1985). Naturalistic inquiry. Beverly Hills: Sage.

Mason, L. H. (2004). Explicit self-regulated strategy development versus reciprocal questioning: Effects on expository reading comprehension among struggling readers. *Journal of Educational Psychology, 96*(2), 283-296.

McKeown, M. G., Pittsburgh Univ, PA Learning Research and, Development Center, & Others, A. (1990). *The relative contribution of prior knowledge and coherent text to comprehension.* Retrieved from http://www.eric.ed.gov.libproxy.txstate.edu/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/22/e1/d3.pdf

Michalsky, T., Mevarech, Z. R., & Haibi, L. (2009). Elementary school children reading scientific texts: Effects of metacognitive instruction. *Journal of Educational Research, 102*(5), 363-376.

National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.

No Child Left Behind Act of 2002. H.R. 1, 107th Cong., Report 107 -334 (2002).

Paris, S. G., Wasik, B. A. & Turner, J. C. (1996). The development of strategic readers. In R. Barr, M. I., Kamil, P. B. Mosenthal & P. D. Pearson (Eds.), *Handbook of reading research* (vol. 2, pp. 609-640). Mahwah, NJ: LEA.

Pazzaglia, F., De Beni, R. & Caccio, L. (1999). The role of working memory and metacognition in reading comprehension difficulties. In T. E. Scruggs & M. A. Mastropieri (Eds.) *Advances in learning and behavioral disabilities (*vol. 13, pp. 115-134). Greenwich, CT: JAI Press.

Poggenpoel, M., & Myburgh, C. (2005). Obstacles in Qualitative Research: Possible Solutions. *Education*, *126*(2), 304-311. Retrieved from ERIC database.

Pressley, G. M. (1976, April). *Mental imagery helps eight-year-olds remember what they read*. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA. Retrieved from http://www.eric.ed.gov.libproxy.txstate.edu/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/32/64/c4.pdf

Pressley, M. (2006). *Reading instruction that works: The case for balanced teaching (3rd ed.)*. New York: The Guilford Press.

Rehabilitation Act of 1973, PUB. L. 93-112

Rader, L. A. (2009). Teaching students to visualize: Nine key questions for success. *Preventing School Failure, 54*(2), 126-132.

Raphael, T. E. (1986). Teaching question answer relationships, revisited. *Reading Teacher, 39*(6), 516-22.

Rosenshine, B. (1995). Advances in research on instruction. *Journal of Educational Research, 88*(5), 262-68.

Scharlach, T. D. (2008). START comprehending: Students and teachers actively reading text. *Reading Teacher, 62*(1), 20-31.

Simpson, M. L., & Nist, S. L. (1990, April). *The effects of PLAE upon students' executive control, self-regulation, and test performance* Paper presented at the Annual Meeting of the American Educational Research Association, Boston, MA. Retrieved from http://www.eric.ed.gov.libproxy.txstate.edu/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/20/2f/7c.pdf

Sjostrom, C. L., & Hare, V. C. (1984). Teaching high school students to identify main ideas in expository text. *Journal of Educational Research, 78*, 114-18.

Texas Education Agency (2002). *Comprehension instruction: Components of a research-based reading program.* Retrieved from http://www.netxv.net/pm_attach/67/TRI-Comprehension_Instr.pdf

Texas Education Agency (2004). *English as a second language (ESL) programs: benefits for your child*. Retrieved from http://ritter.tea.state.tx.us/curriculum/biling/ESLBrochEng.pdf

The Nation's Report Card (2007). Retrieved February 15, 2010, from The National Assessment of Educational Progress: http://nationsreportcard.gov/

Therrien, W. J., Wickstrom, K., & Jones, K. (2006). Effect of a combined repeated reading and question generation intervention on reading achievement. *Learning Disabilities Research & Practice, 21*(2), 89-97.

Wagoner, S. A. (1983). Comprehension monitoring: What it is and what we know about it. *Reading Research Quarterly, 18*(3), 328-46.

Winograd, P. N., Illinois Univ, Urbana Center for the Study,of Reading, & Bolt, Beranek and Newman, Inc.,Cambridge, M.A. (1983). *Strategic difficulties in summarizing texts (Technical Report No. 274).* Retrieved from http://www.eric.ed.gov.libproxy.txstate.edu/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/2d/f0/50.pdf

Young, A., & Fry, J. D. (2008). Metacognitive awareness and academic achievement in college students. *Journal of the Scholarship of Teaching and Learning, 8*(2), 1-10.

Zimmerman, B. J., & Martinez-Pons, M. (1990). Student differences in self-regulated learning: Relating grade, sex, and giftedness to self-efficacy and strategy use. *Journal of Educational Psychology, 82*(1), 51-59.

Zirkel, P. A. (2009). What does the law say? new section 504 student eligibility standards. *TEACHING Exceptional Children, 41*(4), 68-71.

Zwiers, J. (2004). Developing academic thinking skills in Grades 6–12: A handbook of multiple intelligence activities. Newark, DE: International Reading Association.

VITA

Elisabeth V. McCulley was born in Corpus Christi, Texas, the daughter of Betty Dodd, Byron Dodd and stepmother Nancy Dodd. Elisabeth graduated from high school in 1984, and entered Texas State University-San Marcos in 1986 after first attending Del Mar College. She graduated from Texas State in 1989, receiving a Bachelor of Arts in English with a secondary teaching certificate. Elisabeth taught in the Austin, Hays and San Marcos school districts for 21 years, entering the Graduate College of Texas State in 2008. During her teaching career, Elisabeth contributed to many professional activities, including campus leadership, program development and grant writing. Her interests include struggling secondary readers and Response to Intervention.

Permanent Address: 304 Mary Cove

Kyle, Texas 78640

This thesis was typed by Elisabeth V. McCulley