THE EFFECTS OF SUMMARIZATION INSTRUCTION ON THE
COMPREHENSION AND METACOGNITIVE ABILITIES OF
SIXTH GRADE STUDENTS IN A
TITLE I MIDDLE SCHOOL

by

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DEDICATION

This research project is dedicated to my father and grandfathers. May you all rest in peace. Even though you all are not here with me, your warm spirits continue to linger.

To My Daddy

If I stumbled you were there to catch me
telling me how proud you were that I'd taken the first step.

If I made a mistake you were there to comfort me
telling me how proud you were that I'd learned from it.

If I didn't think I could do it you were there to encourage me
telling me how proud you were that I had tried.

If I succeeded you were always the first to congratulate me
telling me how proud you were that I had persevered.

Now that you are gone, I hear you
telling me, "job well done."

I love you Daddy.
LIST OF ABBREVIATIONS AND SYMBOLS

ANOVA  Analysis of variance (univariate)

α     Cronbach’s index of internal consistency

F     Fisher’s $F$ ratio

M     Mean (arithmetic average)

p     Probability

SD    Standard deviation

t     Computed value of $t$ test
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ABSTRACT

The purpose of this mixed method study was to compare the reading achievement and metacognitive strategies use of sixth grade students from low SES backgrounds who were explicitly taught to summarize text to those sixth grade students of similar backgrounds who did not receive explicit summarization instruction. Additionally, this study examined how students' summary writing emerged throughout the instructional intervention.

This study was conducted over 3 ½ weeks. The participants were ninety-four 6th grade students drawn from four intact reading classes of mixed abilities. Two of the four classes served as the experimental instruction condition (summarization instruction) and the remaining two classes served as the control condition (traditional basal reading instruction).

The Gates-MacGinitie Reading Test was used to measure students' reading achievement and the Metacognitive Awareness of Reading Strategies Inventory was used to measure students' metacognitive strategies use. Students’ scores from pretest to posttest on both the GMRT and MARS I showed that the experimental group’s scores were significantly higher than the control group’s.

A focal group consisting of 12 students was used to provide insight as to the strategies varied readers used to comprehend text. This group participated in a think
aloud assessment and a strategy interview. The analysis of the data showed that there were differences in students' reported and actual metacognitive strategies use.

The results of the study suggest that summarization can improve students' comprehension and metacognitive abilities. However, to sustain students' comprehension and metacognitive strategies use, comprehension strategy instruction should be taught over an extended period of time. In addition, to facilitate students' production of adequate or mature summaries, instruction in main idea identification should precede summarization training.
CHAPTER 1

INTRODUCTION

"A child who can read is not guaranteed to be a success in elementary school, but a child who cannot is guaranteed to be a failure" (Slavin, 2003, p.81).

Background to the Study

The number of students who lack literacy skills is staggering. According to the National Assessment of Educational Progress (2003), nearly 9 million students between fourth and 12th grade read below grade level. Another alarming statistic is that nearly 70 percent of eighth-graders read below the proficient level, and 25 percent fail to read at the most basic level. More recently the 2005 NAEP results indicated that the percentage of students in Alabama scoring at or above the proficient level in reading has not changed significantly from the results in 2003. In 2003, both fourth and eighth grade students scored at the twentieth percentile and these scores remained the same in 2005.

The Achievement Gap

Income, race, language background and other demographic variables are often used to predict academic achievement (Tracey & Sedlacek, 1985). When studying achievement, the race gap in standardized test scores is one of the most pressing concerns in America's public education today. This gap is usually studied as the difference between African American and European American students' achievement scores. The
2005 NAEP reading results showed at both fourth and eighth grade, European American and Asian/Pacific Islander students scored higher than African American, Hispanic, and American Indian/Alaska Native students. These results were similar in Alabama. African American students had an average score that was 32 points lower than that of their European American counterparts. Gaps also existed for low income students. Students who were eligible for free/reduced priced school meals, an indicator of poverty, had an average score that was 27 points lower than that of students who were not eligible for free/reduced priced school meals (NCES, 2005).

The 2005 NAEP results for Alabama further indicated that minority students, students of poverty, and male students were most in need of quality reading instruction and intervention. Stanford Achievement Test, 10th Edition (SAT-10) scores remained low for these groups of students. African American students scored at the thirtieth percentile; socio-economically disadvantaged students scored at the thirtieth percentile for both the 2003 and 2005 years, increasing one percentile from their 2003 performance, and male students continued to score at the forty-third percentile in reading for both years as measured by the SAT-10. It is these statistics that raise doubts about schools' ability to meet the reading goals called for by the No Child Left Behind Act of 2001 (NCLB).

A wide range of factors have been posited to explain the racial differences in student achievement test scores (e.g., Cook & Evans, 2000; Ferguson, 1998; Herenstein & Murray, 1994). Research of this kind has begun to examine when these gaps occur and how they develop. This research shows that the achievement gap between children of African American and European American backgrounds (NAEP, 2005) arises sometime in the early grades and widens by the end of high school. However research in this area is
often conflicting, possibly due to the fact that many studies used different measurement tools and span different time periods. For instance, national studies showed mixed results regarding when the African American and European American achievement gaps arise with some indicating a kindergarten onset (Caldas & Bankston, 1997; Crane, 1996; Lynn, 2002), and others an early elementary grade onset (Fryer & Levitt, 2003; Phillips, 1998).

These academic achievement lags and failures have long been associated with income, race and language background. Policies and mandates at the federal and state levels have not been able to eliminate the achievement gaps associated with these variables. These mandates may generate or inspire action, but mandates alone are likely to be insufficient. If all children are to meet challenging academic goals and standards, there must be changes in instruction.

Closing the Gap

Kucan and Beck (1997) asserted that educators must figure out how to ensure that every student moves beyond the basic literacy skills of the early elementary grades, to more challenging literacy instruction of middle and high school years. Inevitably, this will require, for many of those students, teaching them new literacy skills; how to read purposefully, how to select materials that are of interest, how to figure out the meanings of unfamiliar words, how to integrate new information with information previously known, how to resolve conflicting content in different types of text, and how to recognize perspectives of the writer- in short, they must be taught how to comprehend (Alvermann, 2002; Beers, 2004).

The most effective readers are aware of their processes for making meaning from text and, more importantly, they know when their comprehension breaks down (August,
Flavell, & Clift, 1984; Baker & Brown, 1984). In contrast, poor readers often lack these metacognitive skills that help aid in comprehension. Teaching students metacognitive strategies that will enable them to become proficient readers is the goal of strategy instruction. Strategy instruction that is provided within the context of content area subject matter has been shown to improve reading achievement (Malone & Mastropieri, 1991; Rinehart, Stahl, & Erickson, 1986; Taylor & Beach, 1984). More specifically, research showed that explicit teaching techniques are particularly effective for comprehension strategy instruction. Direct explanation, teacher modeling, guided practice, and application of the strategies are important features of explicit comprehension strategy instruction (Put Reading First, 2000). Pressley (1998) added that providing comprehension strategies instruction empowered readers to independently increase their understanding of text.

Explicit strategy instruction of single strategies (Hansen & Pearson, 1983; Taylor & Beach, 1984) and multiple strategies (Dole, Brown & Trathen, 1996; Palinscar & Brown, 1984) with good readers (Brown, Pressley, Van Meter, & Schuder, 1996; Davey & McBride, 1986) and poor readers (Armbruster, Anderson & Ostertag, 1987; Loxterman, Beck, & McKeown, 1994) at myriad grade levels (Block, 1993; Malone & Mastropieri, 1991; Winograd, 1984) have been shown to be effective in improving reading comprehension abilities of readers. However, the research is limited on the effectiveness of this type of instruction on the reading comprehension abilities and achievement of African American middle school students from low SES backgrounds. It is for these reasons I explored the effectiveness of summarization training through explicit teaching of a reading comprehension strategy with this population of students.
A theoretical account of how summarizing information fostered deep comprehension and learning was provided by Kintsch and van Dijk’s (1978) model of discourse comprehension. Specifically, summarizing contributed to the goal of constructing a solid foundation of factual and conceptual knowledge because it served to reinforce the memory representation of the content beyond that achieved through reading. Writing a summary requires much more conscious thought, judgment and effort. Ideally, the summary writer not only selects the important ideas from the text, but also reconstructs the meaning in a more succinct, generalized form (van Dijk & Kintsch, 1983).

Summarization strategy training is particularly effective as it has transfer effects to a variety of measures (Baumann, 1984; Bean & Steenwyk, 1984; Taylor & Beach, 1984) not just standardized measures of reading comprehension that were used in a number of other strategy studies (e.g., Block, 1993; Dole, Brown, & Trathen, 1996). There are several factors that may have contributed to these transfer effects. First, “summarization training made children more aware of the structure of ideas within text and of how individual ideas relate to each other” (Rinehart, Stahl & Erickson, 1986, p. 423). Second, summarization training encouraged students to attend to text and improved metacognitive control of the reading processes. This was especially important for poor readers since they tend to be less attentive than good readers (Allington, 1991; Pressley, 1998). Lastly, summarization required students to use other cognitive strategies (e.g. questioning, predicting, rereading, verifying, and activation of prior knowledge) that are essential to good comprehension (Brown & Day, 1983; Brown, Day, & Jones, 1983).
The Researcher's Perspective

Researchers recognize the impact that their background imposes on their analytical interpretations. Thus, during research they readily acknowledge how their interpretations are influenced by their own personal, cultural and historical experiences. Having experienced a comparable socioeconomic environment as well as being of a cultural background similar to the participants in this study, I felt a compelling need to help my students achieve despite their low socioeconomic status and cultural backgrounds. Ten years of experience as a middle school teacher of students of diverse backgrounds accompanied me as I initiated this study. I have taught students who, based on their SAT or other state mandated test scores, have not demonstrated a level of academic progress that exceeded or met those of their European American counterparts and low SES backgrounds. My desire to conduct a sound study with these students was vital if I wanted to change the "at-risk" label that has been attached to them.

With years of experience as secondary literacy coach and sixth grade teacher, before me was an opportunity to explore the process of improving the reading comprehension abilities of the students I served. My professional teaching experience was limited to math and science, thus it was very difficult to employ comprehension strategies instruction to increase reading achievement. Specifically, I found it difficult to introduce and teach students reading strategies in science and math classes. Using different types of genres (i.e folktales, fairy tales, plays, poetry) as suggested by research in an effort to motivate and sustain students’ use of the strategies taught, seemed to be most effective when they are first introduced and taught in a reading class. For example, in my science classes, students were primarily instructed using expository texts that were
often difficult to read and comprehend. And because of this difficulty, the strategies they learned did not transfer into my math classes.

As I became more knowledgeable about comprehension strategy instruction through academic course work and reading research, my interest in providing students with a different type of strategy instruction blossomed. It is my belief that teaching the strategies in reading classes, where there was more flexibility, would sustain students' use of the strategies. This in turn, would prompt them to use the strategies in other content areas when comprehension becomes difficult.

Having taught reading intervention classes for five years, and after reviewing the research on comprehension instruction, I came to a realization that I was not adhering to the most effective practices for improving students reading comprehension abilities. The needs of struggling readers' and the instruction I provided were quite the contrary. Acknowledging such warranted a pertinent need to give these students the type of instruction they were in most dire need of receiving. This urgent need focused my attention to summarization instruction.

Since research has supported the effectiveness of summarization instruction (Rinehart, Stahl, & Erickson, 1986; Taylor & Beach, 1984; Winograd, 1984), the challenge was to investigate its effects on the comprehension and metacognitive abilities of sixth grade students in my school. Although a plethora of information existed on the effectiveness of summarization instruction, there is limited research on its effectiveness of students from low SES and diverse backgrounds. Therefore, I attempted to train sixth grade students in two experimental groups to summarize narrative texts using the framework of the Rinehart et al.'s 1986 study.
Statement of the Problem

Students from low socioeconomic environments often experience a difficult time in school. Socioeconomic status and race are variables that have consistently been found to be positively correlated with achievement and are one of the most important predictors of academic achievement in public schools. According to NAEP results, minorities and low income students are performing lower in reading when compared to European American students and those who are not of low income backgrounds. Despite being in the era of the No Child Left Behind Act, these gaps in reading persist and minority students from low SES backgrounds continue to be left behind.

The data clearly show the need to provide minority and low income students with high quality reading instruction. Reading comprehension strategy instruction has been shown to be very effective in improving students’ reading achievement. Since reading text with comprehension is the ultimate goal of reading instruction, it is imperative that teachers teach students how to build comprehension of text through explicit instruction of comprehension strategies (Block, 1999). In turn, students must master these strategies in order to improve their comprehension of text.

However the degree of effectiveness of comprehension strategies instruction can be influenced by a variety of factors including student characteristics (e.g., SES, gender, and language background), duration of instruction, grade level and ability level (Alvermann & Moore, 1991). Yet none of these factors have been routinely investigated, and the studies reviewed supported the effectiveness of reading comprehension strategies instruction on students’ comprehension and metacognitive abilities under limited conditions. Therefore, the focus of this study was the effectiveness of summarization
training through explicit teaching on the reading comprehension and metacognitive abilities of sixth grade students in an urban Title I middle school.

_Purpose of the Study_

The purpose of this study was to compare the reading achievement and metacognitive strategies use of sixth grade minority students from low SES backgrounds who were explicitly taught to summarize text to those sixth grade students of similar backgrounds who did not receive explicit summarization instruction.

_Research Hypotheses and Questions_

The hypotheses for the quantitative questions in this mixed method study were stated in the null form.

1. There is no statistically significant difference in the reading comprehension achievement of sixth grade students who received summarization instruction and those who did not as measured by the Gates-MacGinitie Reading Test.

2. There is no statistically significant difference in the metacognitive strategies use of sixth grade students who received summarization instruction and those who did not as measured by the Metacognitive Awareness of Reading Inventory.

To further explore the problem, the following qualitative research questions were posed:

1. To what extent did students actually use the strategies they reported using on the Metacognitive Awareness of Reading Strategies Inventory?

2. What instructional modifications were needed to motivate and support students use of summarization strategy?
3. How did students' ability to summarize develop throughout the intervention?

Scores on the reading comprehension test, metacognitive strategies inventory and think aloud assessment were the dependent variables. The independent variable was the grouping (experimental and control). The Gates-MacGinitie Reading Test was given to students as a pretest, posttest, and delayed posttest to assess reading comprehension achievement. The Metacognitive Awareness of Reading Strategies Inventory was also given to students as a pretest, posttest, and delayed posttest to assess metacognitive strategies use. The think aloud assessment and strategies interviews were used to provide insight into the summarization training.

Methodology

The participants for this mixed-method study were ninety-four 6th grade students drawn from four intact reading classes of mixed abilities. Two of the four classes served as the experimental instruction condition (summarization instruction) and the remaining two classes served as the control condition (traditional basal reader instruction). The four groups were similar in abilities.

Participants were from a school district located in North Alabama. The middle school is an Alabama Reading Initiative site and a Title I school with nearly 86% of the student body receiving free or reduced priced school meals. At the end of 2004-2005, the school was placed on the need improvement list for failure to meet adequate yearly progress (AYP) as measured by the Alabama Reading and Mathematics Test and required by the No Child Left Behind Act of 2001.
The student population of 479 consists of sixth- seventh- and eighth grades with 94% African American, 2.3% Hispanic, 1.6% Caucasian, .63% Asian, and .42% Indian. The special education population was approximately 13% and the gifted population was approximately 15%. There were 36 certified teachers, 2 counselors, one media specialist, one reading coach and two administrators. The average pupil-teacher ratio was 22:1.

I have 10 years of teaching experience which has included experience as the district's secondary literacy coach; middle school reading intervention, math and science teacher; and adjunct professor at a local university. I also hold an Educational Specialist Degree in elementary education.

Significance of the Study

In the era of the No Child Left Behind Act, Title I schools in particular, must continue to meet adequate yearly progress (AYP) or face state sanctions. The middle school in this study was classified as Title I in a North Alabama school district and was in need of improving students’ reading achievement scores as measured by the Alabama Reading and Mathematics Test. The pressure from national, state and local officials to increase these reading scores have school leaders, administrators, curriculum specialists, literacy coaches and teachers in this North Alabama school district scurrying for ways to improve the reading achievement of diverse learners who have an array of reading difficulties and backgrounds.

The need for effective literacy instruction for students in high poverty schools is critical as is the need for instructional strategies that diminish the gap between African Americans and European Americans. Studies have shown comprehension strategies
instruction to be effective, but with a limited population of readers (e.g. Block, 1993; Palinscar & Brown, 1984; Taylor & Beach, 1984). Few studies have addressed the effects of strategies instruction on the comprehension abilities of sixth grade students in high poverty schools. Struggling readers from minority backgrounds with low SES must be given the opportunity to increase their reading abilities by providing them with effective literacy instruction that will assist them in becoming proficient readers.

Several groups may benefit from this study. First, the information gained from this study may be useful to the Alabama State Department of Education in its continuous efforts to improve the reading achievement in Title I middle schools and narrowing the gap between groups. Second, it may be useful to Alabama school districts with large numbers of students of low SES when considering effective and meaningful literacy programs and professional development. Finally, because the expertise of the classroom teacher is the key to overcoming the literacy achievement gap, this study is especially significant to colleges and universities that offer preservice programs in order to promote the literacy learning of students with diverse backgrounds.

Definition of Terms

For the purpose of this study, the terms with specific operational definitions were defined as follows:

Adolescents

Adolescents are students at the middle and high school level (Alvermann, 2002).
Adolescent literacy

Adolescent literacy refers to the set of skills and abilities that middle and high school students need to read, write, and think about the text materials they encounter (Alvermann, 2002).

Class

A class consists of a large group of people who occupy a similar economic position in the wider society based on income, wealth, property ownership, education, skills or authority in the economic system (Demett, 1996).

Comprehension

Comprehension is “a cognitive process that integrates complex skills and cannot be understood without examining the critical roles of vocabulary learning and instruction on its development” (National Reading Panel, 2000, p. 4).

Comprehension monitoring

Comprehension monitoring is the ability to detect and respond to breakdowns in one’s understanding of language (Baker & Brown, 1984).

Explicit instruction

Explicit instruction is direct instruction in reading strategies and processes that can be applied to other reading situations with little teacher support to help readers understand what they read (Tierney & Readence, 2005). Possible approaches include comprehension strategy; comprehension monitoring; metacognition instruction; teacher modeling through the use of think alouds; and scaffolding instruction.
**Metacognition**

Metacognition literally means thinking about what one’s thinking. This term is also known as meta-comprehension, which refers to being strategic and reflective about what one is reading (Baker & Brown, 1984).

**Middle schools**

Middle schools are operationally any public schools containing any combination of grades six through eight.

**Motivation**

Motivation is an individual’s activation and degree of persistence in undertaking goal directed behavior (Ames, 1992).

**No Child Left Behind Act of 2001**

NCLB is a landmark education reform designed to improve student achievement and change the culture of America’s schools by emphasizing four pillars of reform: (a) accountability for results, (b) reading research that is scientifically based, (c) expansion of parental options, and (d) local control and flexibility (U.S. Department of Education, 2003).

**Race**

Race is a group of people classified together on the basis of common history, nationality, or geographic distribution (Davis, 1983).

**Reading comprehension strategies**

Reading comprehension strategies are specific, learned procedures such as predicting and question generating, which foster active, competent, self-regulated, and intentional reading (Trabasso & Buchard, 2000).
Students of diverse backgrounds

Students of diverse backgrounds are described as students who differ from the mainstream in ethnicity, primary language, and social class (Au & Raphael, 2000).

Summarizing

Summarizing is restating the meaning of what one read in one’s own words. These statements were different words from those used in the original text (Taylor & Beach, 1984).

Think-Aloud

A think aloud is a series of stops and starts while reading where “the examiner instructs the subject to express verbally all thoughts that come to mind while performing the task” (Ward & Traweek, 1993, p. 474).

Title I

Title I of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6301 et seq.) is a federal entitlement program to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging State academic standards and assessments (U.S. Department of Education, 2001).

Organization of the Study

This study is organized into five chapters. Chapter One presents a background to the study, statement of the problem, purpose of the study, research hypotheses, significance of the study, definitions of terms, and limitations of the study. Chapter Two includes a review of the literature that focused on students of diverse backgrounds,
comprehension monitoring and metacognition, comprehension strategy instruction, summary writing, summarization and think aloud studies and motivation. Chapter Three describes the methodology that was used in collecting and analyzing the data that tested the research hypotheses and answered the research questions that drove this study. Chapter Four presents the data analysis for each of the research hypothesis and related research questions. Finally, Chapter Five displays the findings of this study along with implications for classroom practice and recommendations for further study.
The student population in United States schools is more diverse, both culturally and linguistically, than it has been at any time since the early decades of the 20th Century. Students of diverse backgrounds are distinguished from their mainstream peers by three characteristics: socioeconomic status, ethnicity and primary language (Au, 1998). In the United States, these students are generally African American, Asian American, Latino/a, or Native American in ethnicity; speak a home language other than standard American English; and come from poor or working class families. These children face unique challenges in schools where learning and teaching generally, and literacy specifically, are grounded in mainstream assumptions regarding background experiences with the world and with language (Au, 1998; Delpit, 1992; Gay, 2001; Rogoff, 2003).

Schools have not been successful in bringing students of diverse backgrounds to the same levels of achievement as their mainstream peers. Historically, children from culturally and linguistically diverse backgrounds have not experienced high levels of academic success because their unique literacy needs often were not addressed as they were encouraged to assimilate into the mainstream. Current empirical research supports these observations, noting that there is a discrepancy in academic achievement between European Americans and African Americans (e.g., Delpit, 1995; Ladson-Billings, 1994), acknowledging that ethnicity, social class and primary language are cultural variables that
are related to schools’ difficulties in bringing students to high levels of literacy (e.g., Darling-Hammonds, 1995; Ladson-Billings, 1994; Nieto, 2003). To narrow this gap, teachers need tools and strategies they can use to increase reading achievement for all students.

The theory and research that supported this study were categorized into three essential themes. To begin, the focus is on students of diverse backgrounds and struggling adolescent readers. In the second part of this literature review, issues related to comprehension of text are explored. Finally, this review focuses on the explicit teaching of comprehension strategies instruction for improving struggling readers’ comprehension and metacognitive abilities.

Diversity and Struggling Readers

Students of Diverse Backgrounds

Darling-Hammond (1995) maintained that much of the lower achievement of African American students is attributable to limited access to highly qualified teachers and instruction. Districts with a large number of students of diverse backgrounds tend to have the largest numbers of poorly prepared teachers (Darling-Hammond, 1990; Pascal, 1987). These teachers are often not abreast of the latest trends and research-based practices for dealing with struggling readers. Students in such districts continue to progress from grade to grade experiencing instruction from inexperienced and unqualified teachers, which can cause a devastating cumulative effect on their reading achievement. These students also continue to be underserved especially when they are concentrated in the poorest urban school districts (Wong, 1994).
Nieto (2003) asserted that because ethnic and cultural diversity in U.S. society is not sufficiently reflected in educational decisions and practices, schools frequently become out of sync with the populations that they are supposed to serve. This discontinuity exists most often when schools are controlled by individuals from the dominant culture who use only their standards to guide or teach students of less dominant cultures (Delpit, 1992; Gay, 1998; Nieto, 2003). These cultural incompatibilities are often mistaken for intellectual inabilities, and pedagogical decisions are made accordingly.

For example, Ramirez, Yuen, and Ramey (1991) conducted a longitudinal evaluation that examined the language use and instruction that occurred in three types of programs serving predominantly low-income Spanish speakers: early-exit transitional bilingual education, a 3 to 4 year program in which children typically receive Spanish and English instruction until they are capable of performing in English; structured immersion of a 3 to 4 year program in which children are moved to English by a teacher who knows Spanish; and late exit transitional bilingual education: a 5 to 6 year program similar to the early exit program, except that children are moved into English instruction at a slower pace and often continue to receive instruction in Spanish throughout the program. The study revealed that teachers in all three types of programs employed a passive instructional style which resulted in limited opportunities for student development of complex language and higher order thinking skills.

Other researchers (e.g., Gay, 2001; Good & Brophy, 1994; Oakes, 1985) have also found strong correlations among the quality of education students received, their race and class, and teachers' social attitudes toward and expectations of them. For example, teachers tend to perceive European- and some Asian-Americans in regular and
special education to have higher intelligence and academic abilities, and less disciplinary
problems than African-, Native, and Latino Americans (Delpit, 1995).

Cultural variances in behavioral styles cause students of diverse backgrounds to be stereotyped. The frequency and intensity with which some African-Americans interject motion, emotional energy into their thinking, communication and social relations may be misdiagnosed as hyperactivity, attention deficit, irritability, attention-seeking, disruption, and being quarrelsome (Gay, 2001). According to Rogoff (2003), the reluctance of some Latino students to engage in individual, competitive learning activities may be perceived as a lack of motivation and aspiration instead of a possible indication of their cultural socialization toward cooperative group tasks. Asian-American children who do not engage readily in conversations and activities with teachers and other students may be considered exhibiting the social-disability traits of being unfriendly, withdrawn and insecure (Au, 1998; Nieto, 2003; Raphael & Au, 2000).

In addition, Native American students who frequently learn by observation and task demonstration until mastery is assured may be diagnosed as lacking motivation and interest in learning, and not having adequate strategies for accomplishing academic tasks (Au, 1998). Furthermore, speakers of what mainstream U.S. society perceives as low social status dialects such as African American English or Ebonics, and accents such as Spanish, Mexican and Vietnamese are sometimes perceived to have linguistic deficits in phonology, syntax, and semantics as opposed to different rule-regulated cultural communication systems (Delpit, 1992). Thus, these faulty educational practices arise as a result of teachers’ failure to understand the cultural characteristics of their ethnically, racially and linguistically diverse students (Delpit, 1992; Ladson-Billings, 1994).
The diversity of students in today’s classrooms requires curricula, teaching strategies, and policies that help all students succeed in school. Darling-Hammonds (1995) proposed that knowing who those students are and how they learn is one of the most critical factors emerging as we become a global society. No matter how difficult the challenges of diversity, every student in school has a right to a teacher who understands his or her needs and knows how to move them along the pathway of learning (Allington, 1991).

*Characteristics of Struggling Adolescent Readers*

In recent years, the nation’s schools have made significant improvements in early reading instruction using research-based programs to help students master the mechanics of reading by the time they complete third grade (Allington, 1994; Morris & Slavin, 2003; National Center for Education Statistics, 2001). However, evidence also indicates that schools must do a better job of providing strong literacy instruction throughout the middle and high school years as well (Alvermann & Guthrie, 1993; Anderson & Roit, 1993; Block, 2000; Dole, Brown & Trathen, 1996). The instruction should not only focus on skill worksheets but also on vocabulary, reading comprehension and writing. Moore, Bean, Birdyshaw, and Rycik (1999) pointed out that few of the nation’s schools make a concerted effort to provide these kinds of ongoing support with the tragic result of millions of adolescents losing whatever momentum they had gained in kindergarten through grade three (Alvermann & Guthrie, 1993; Mizelle, 2005).

Low literacy adolescents are faced with a number of issues. In general, they have undeveloped phonological awareness skills, poor fluency rates, and they are less strategic when attempting to comprehend text than their good reader peers (Alvermann & Moore,
Although signs of reading difficulties begin to emerge early in the primary grades, it is not until third or fourth grade when struggling readers are first identified (Spear-Spearling & Sternberg, 1999). Research shows that students who struggle with reading in first grade will continue to struggle throughout their school careers (Torgesen, 1998). However, by the time they enter fourth grade, they may have experienced reading difficulties stemming from poor vocabulary, insufficient background knowledge, or a lack of motivation to read and thus simply less practice (Alvermann & Moore, 1991; International Reading Association, 1999; Tovani, 2000).

If younger struggling readers are not identified early in their school years, as adolescents they may end up in remedial programs that focus on phonological awareness and word attack skills (Alvermann & Moore, 1991; Alvermann, Moore & Conley, 1987). As a result of such faulty instruction in these remedial reading programs, they continue to experience problems no matter what they read (Allington, 2001; Beers, 2003; Tovani, 2000). And the grim reality is they usually drop out or graduate from high school with limited literacy skills. Poor literacy skills that continue into adolescence and adulthood have many serious implications for society beyond those directly associated with education (Alvermann, 2002). The relationship between poor literacy skills and social exclusions are of concerns to politicians and business professionals as well.

*Reading Comprehension Processes*

*Metacognition*

With respect to reading, metacognition refers to the reading awareness of comprehension of a text while reading it and to the reader’s regulation of the processes
that leads to comprehension (Wagoner, 1983). Metacognitive readers have the ability to mentally step outside of themselves and view themselves as learners faced with particular learning tasks. In addition, these readers have metacognitive knowledge about themselves, the reading tasks they face, and the strategies they can employ in completing these tasks (Garner, 1987). Virtually all reading authorities agree that being metacognitive is extremely important to becoming a proficient reader (e.g., Allington, 2001; Baker & Brown, 1991; Pressley, 1998; Wade, 1990).

It is equally important to note that The National Reading Panel: Teaching Children to Read (2000) identifies 16 aspects of text comprehension instruction that have a solid scientific basis including: comprehension monitoring (self-regulation), cooperative learning (reciprocal teaching), use of graphic and semantic organizers (transactional strategy instruction), question generation and providing answers about various aspects of a passage (QAR), story structure (text structure analysis), and summarization (SQ3R). All of these strategies fall under the broader concepts of metacognition. Garner (1987) has used the term “meta-comprehension” to refer to being strategic and reflective about what is read. Strategic readers consciously plan for their reading, monitor for meaning, and evaluate how well they understand the text (Zabrucky & Ratner, 1992). Moreover, a sense of competence and control seems to be necessary for strategic readers to create a sense of self-efficacy and have success with metacognitive and cognitive strategies (Nist & Simpson, 1994; Paris & Winograd, 1990).

Comprehension Monitoring

Baker and Brown (1984) define comprehension monitoring as that dimension of metacognition which involves a reader’s use of self-regulation in receptive language
processing (listening and reading). Although definitions of comprehension monitoring during reading vary (August, Flavell, & Clift, 1984; Baker & Brown, 1984), most include two kinds of metacognitive knowledge: (a) a reader’s awareness of whether or not comprehension is occurring, and (b) a reader’s conscious application of one or more strategies to correct comprehension (Baker & Brown, 1984). In short, comprehension monitoring concerns a reader’s ability to evaluate his or her ongoing comprehension processes while reading, and to use fix-up strategies when these processes break down (Bereiter & Bird, 1985). Active awareness of one’s comprehension while reading and the ability to use effective fix-up strategies when comprehension breaks down are absolutely essential tools for becoming an effective reader; and lack of such metacognitive skills is a particularly debilitating characteristic of poor readers (Allington, 1991).

These metacognitive skills differentiate successful readers from less successful ones (August, Flavell & Clift, 1994). Skilled readers, according to Snow, Burns and Griffin (1998) comprehend well. They are different from readers who struggle in their use of general world knowledge to comprehend text literally as well as to draw valid inferences from texts, in their comprehension of words, and in their use of comprehension monitoring and repair strategies. In essence, they make use of cognitive skills. A good reader proceeds smoothly and quickly as long as understanding of the material is complete. These students who do this well are fluent, word identification is automatic and accurate, thus enabling them to understand the meaning of the text (Allington, 2001). The ultimate goal is to bring as many students as possible to the point where they can and will make the effort to think metacognitively.
On the other hand, less skilled readers are not as adept as skilled readers in engaging in planned activities either to make cognitive progress or to monitor it (Garner, 1987). Poor readers, unlike good readers, have little awareness that they must attempt to make sense of the text (Baker & Brown, 1991). Poor readers are less likely to demonstrate that they notice major blocks to comprehension (Garner & Reis, 1981). Oakhill and Patel (1991) have shown that poor readers do not make inferences from text and do not integrate ideas from different parts of texts in order to create accurate representations. Similarly, Bos and Vaughn (1994) demonstrated that even poor readers were able to decode words correctly, they typically do not attend to the meaning of the passage, relate what is being read to their previous knowledge, or monitor their own comprehension.

**Influence of Text on Comprehension**

Well structured text enhances recall and comprehension of those students who have acquired sensitivity to structure (Pearson & Dole, 1987). “There is strong empirical evidence that readers’ awareness of text is highly related to text comprehension” (Dickson, Simmons & Kameenui, 1998, p. 251). In addition, studies (e.g. Duke, 2000; Graesser, Golding, & Long, 1991; Smolkin & Donovan, 2002) have shown that instruction that is designed to teach students to recognize the underlying structure of text also improves comprehension. This instruction typically involves teaching students to identify the important structural elements of a particular type of text and then to memorize a list of generic questions that cue a search for those important elements. However, Pearson and Duke (2002) maintained that such instruction should use “a
combination of explicit instruction, modeling, and discussion to teach comprehension strategies” (p.254).

**Narrative text.** Different types of text are organized in different ways. Narrative text typically follows a single general structural pattern, often called story grammar (Englert & Hiebert, 1984; Mandler & Johnson, 1977; Stein & Glen, 1979). In contrast, expository text comes in a variety of patterns; for example, compare-contrast, cause-effect, description, sequence, and problem solution (Meyer & Rice, 1984; Englert & Thomas, 1987).

Narrative text is the most familiar and most widely studied (Graesser, Golding & Long, 1991). Richgels, McGee, Lomax and Sheard (1987) asserted that children develop sensitivity to narrative structure early and use it to comprehend simple stories before they even enter school. They note the setting, main character, the conflicts and the story resolution as they read. This flow of narrative text is called story grammar, and it captures the important properties of stories and guides comprehension. It also helps to highlight the hierarchical structure and provide a framework for the placement of elements and episodes within the structure (Montague, Maddux & Dereshiwsky, 1990). Narratives typically involve animate beings as characters with goals and motives; a problem or goal faced by the main character that initiates the major goal; and plots that eventually resolve the conflict.

**Expository text.** While narrative text structure primarily entertains, expository texts primarily convey factual information (Weaver & Kintsch, 1991). This type of text generally contains more unfamiliar vocabulary and concepts and fewer ideas related to personal experience as well as a variety of structures. Too often, students are not familiar
with the types of text structure that are found in their content area textbooks. Kucan and Beck (1997) maintain that expository text is generally more difficult to comprehend than narrative text due to the variety of structure and unfamiliar content.

Both narrative and expository texts have been found to have differential effects on reading comprehension, with narrative appearing easier to comprehend and monitor than expository text (Kucan & Beck, 1997). For both good and poor readers, text type affects recall and comprehension monitoring (Zabrucky & Ratner, 1992). Although well-organized text structure appears to be important to reading comprehension, it may not be sufficient to facilitate comprehension (Graesser, Golding, & Long, 1991). Teaching students to recognize the underlying structure of text (Englert & Thomas, 1987; Gurney, Gersten, Dimino, & Carnine, 1990; Meyer & Freedle, 1984) using text they can read and understand (Fountas & Pinnell, 1999) improves text comprehension (Pressley, 1998).

**Leveled text.** In too many schools when accelerating reading development is the goal, students seem to be routinely placed in texts that are too difficult (O'Connor et al., 2002). A common practice in these schools is to conduct whole group instruction using one text. The result is reduced learning for the students with books they cannot read. Richard Allington (2001) holds that struggling readers need to read materials that are interesting and at an instructionally appropriate reading level. Providing readers with books that offer just the right amount of support and challenge to allow them to successfully problem-solve during reading is an important part of any positive reading experience for all ages. Children at different developmental levels of reading approach a book in different ways and use different strategies and clues and illustrations from text to make meaning, and often read for different purposes (Fountas & Pinnell, 1999).
Instruction with text matched to students reading levels help build background knowledge needed for understanding the content targeted for that particular grade (Allington, 2001; O'Connor et al., 2002). Children develop successful processing strategies as they learn to read for meaning. Chall and Conard (1991) found that when children are reading a book that they can read, they are able to use many different strategies and sources of information from the text that aid in comprehension. In addition, when teachers use leveled texts to teach students skills and strategies for reading comprehension, students are better able to apply those same skills and strategies to other content materials (Allington, 2003; Keene & Zimmerman, 1997).

O’Connor and her colleagues (2002) also demonstrated support for appropriately leveled text in reading comprehension. They assigned intermediate grade struggling readers to two types of expert tutorial support. One group was tutored using texts from the regular education classroom and the other group used texts matched to students’ reading levels. The lowest achieving readers in the tutoring group using the matched texts performed better than the poorest readers using the classroom text on measures of word reading, fluency and comprehension. The authors concluded that students need to have instructional texts that they can read accurately, fluently and with good comprehension.

Reading Comprehension Strategy Instruction

Comprehension strategies are specific, learned procedures that foster active, competent, self-regulated, and intentional reading (Trabasso & Buchard, 2002). This definition emphasizes the importance of providing students with instruction that explicitly gives them strategies that aid in comprehending a wide variety of text. Reading
comprehension strategies acquired while students negotiate meaning can improve comprehension (Block, 1999; Block, Gambrell, & Pressley, 2002; Dole, Duffy, Roehler & Pearson, 1991). Often adolescents who experience reading difficulties lack both the metacognitive skills to monitor their reading comprehension and the “fix up” strategies to repair comprehension when it breaks down (Brown, 1978; Keene & Zimmerman, 1997; Torgesen, 1998).

Several studies have identified strategies attended to in the teaching of reading comprehension (Collins, 1991; Palinscar & Brown, 1983; Pearson & Dole, 1987). For instance, Dole, Duffy, Roehler and Pearson (1991) identified five strategies (determining importance or main idea, summarizing information, drawing inferences, generating questions and monitoring comprehension) from cognitively focused reading research based on three criteria: (a) consistency with a cognitive based view of reading; (b) differentiation between skilled and novice readers; and (c) instructional flexibility.

Although somewhat different terminology is used, many of the aforementioned strategies were also identified in the National Reading Panel’s Report (2002). The Panel identified comprehension monitoring, graphic and semantic organizers, answering questions, generating questions, using text structure, summarizing, and cooperative learning as effective comprehension strategies. Cooperative learning has been viewed as an instructional medium by some researchers (Dole, Duffy, Roehler, & Person, 1991) rather than a comprehension strategy, and therefore has not been included in many comprehension strategies studies.

Research conducted in the 1970s and 1980s produced evidence that students could benefit from strategies instruction to use a number of cognitive strategies aimed at
improving comprehension of text (Day, 1980; Palinscar & Brown, 1984; Pearson & Dole, 1987). Initially, there were a number of studies that focused on teaching strategies individually to students (Dole, et al., 1991; Pearson & Dole, 1987; Pearson & Fielding, 1991). In these treatment-control group type studies, the treatment group was taught to use a particular strategy during reading while the control group used their existing knowledge or strategies to process text. The strategy instruction was usually followed by some form of reading comprehension test. In these studies, the strategy-trained group typically outperformed the control group.

No student can learn all of the strategies described above over a short period of time. For this reason, strategy instruction needs to be extended over a number of years (Pressley, 1983). Strategy instruction is explicit and extensive, with a great deal of scaffolding and feedback. It requires that teachers consistently remind students about when and how strategies can be applied to new situations. Allington (2001) asserts that teachers should select a few strategies particularly relevant to the students and make a commitment to teach those strategies well. And whether students come to value and continue to use these strategies after instruction ends depends on the students’ recognizing that their performance improved because they used the strategies that were taught. Students’ recognition of gains due to the use of strategies is a critical determinant of continued strategy use (Borokowski, Carr, Rellinger, & Pressley, 1987).

Explicit Teaching of Reading Comprehension

It was not until the 1970s and early 1980s that researchers explored the instructional characteristics of effective reading comprehension instruction. The question that guided their explorations was: Can students be made aware of reading
comprehension strategies that they can use independently? Researchers (Brown, Campione, & Day, 1981; Day, 1980; Hansen & Pearson, 1983; Palinscar & Brown, 1983) explored different procedures for teaching selected reading comprehension strategies (e.g. summarizing, inferencing, self-questioning, relating background knowledge, and finding the main idea). As a result, several recommendations for instruction emerged and came to be known as explicit teaching (Pearson & Leys, 1984; Pressley et al., 1992).

Tierney and Readeance (2005) argued that explicit teaching of reading comprehension provides a framework for developing reading comprehension skills and strategies that readers use to make meaning of text without teacher support. The most salient features of explicit teaching according to Pearson and Leys (1984) include:

(1) **Relevance**: students are made aware of the purpose of the skill or strategy, the why, when, how and where of the strategy.

(2) **Definition**: students are informed as to how to apply the skills by making public the skill or strategy, modeling its use, discussing its range of utility and illustrating what it is not.

(3) **Guided practice**: students are given feedback on their own use of the strategy.

(4) **Self-regulation**: students are given opportunities to try out the strategy for themselves and develop ways to monitor their own use of the strategy.

(5) **Gradual release of responsibility**: the teacher initially models and directs the students’ learning; as the lesson progresses, the teacher gradually gives more responsibility to the student.
(6) Application: students are given the opportunity to try the strategies independently.

Not only does the aforementioned approach improve reading comprehension, it also facilitates the processes that proficient readers use to understand text (Palinscar & Brown, 1984; Pearson & Dole, 1987; Pressley, 2000). Several research studies (Baumann & Ivey, 1997; Brown, Pressley, Van Meter & Schuder, 1996; Hansen & Pearson, 1983; Pressley & McCormick, 1995) that employed the explicit instruction approach for teaching students comprehension strategies have demonstrated positive results.

For example, Baumann and Ivey (1997) conducted a year long qualitative case study to explore the nature of a combined literature, strategy-based instruction program on second graders’ reading and writing development. Baumann, as a teacher, emphasized integrating strategy and skill instruction within the context of literature, reading, writing and discussion. The researchers measured students’ progress in literacy learning and attitudes through examination of teacher and student reflections, students’ work samples, videotapes of classroom literacy activities and other assessments, including anecdotal records, grades, progress reports and an informal reading inventory. A content analysis of the data revealed that students improved in overall reading performance. The students demonstrated high levels of engagement with books and developed skills in word identification, fluency, and comprehension.

Even given much success, the method of explicit teaching, however, should not be readily accepted without questioning. The results of experiments in which explicit teaching was used were not well sustained beyond the course of the experiment (Tierney & Readence, 2005). For instance, Dole, Brown and Trathen (1996) conducted a 5-week
study in which students comprehension abilities were compared to students who received strategy instruction and story content instruction. They taught 67 fifth- and sixth grade at-risk students a strategy they can use to activate their own prior knowledge independently before they read. The investigators called this type of strategy instruction story content instruction.

Although the results of the study showed that the strategy instructed group made significant gains over the story content group, data from students' interviews revealed that higher achieving students found the strategy instruction to be unhelpful and self-initiated their own strategies. Investigators speculated that the reason strategy instruction was not helpful for high achieving students was because such strategy instruction emphasized isolated skills rather than whole and meaningful academic tasks (Dole, Brown & Trathen, 1996). The problems facing explicit teaching are compounded by problems in describing why readers actually do use some of the strategies that may be taught (Tierney & Pearson, 1983).

**Transactional Strategy Instruction**

To compensate for some of the concerns with explicit teaching, the National Reading Panel (2002) suggested a Transactional Strategy Instruction (TSI) approach to reading comprehension instruction. As contrasted with explicit teaching, in which the emphasis seems to be on the teachers' ability to provide direct explanations of strategies, TSI requires teachers to engage students in discussion in which students form collaborative interpretations of text and discuss the explicit mental processes involved in comprehending the text (Pressley & Afflerbach, 1995). Effective strategy instruction that increases reading comprehension depends largely on diagnosing what it is that students
do not understand, followed by explanation focusing on points of difficulty and re-
explanations appropriate to the level of understanding of the students (Dole, Duffy,
Roehler, & Pearson, 1991; Pressley, 2002).

Palinscar and Brown (1984) conducted the most prominent strategies instruction
study based on TSI. Their reciprocal teaching model is an instructional strategy approach
based on modeling and guided practice. More specifically, reciprocal teaching consists of
three essential elements: (1) the teaching and learning of specific reading comprehension
strategies; (2) the dialogue between the instructor and students where the instructor
models why, when and where to use reading comprehension strategies, and (3) the
appropriating of the role of the instructor by the students, that is, students begin to model
the reading comprehension strategies for other students. The goals of reciprocal teaching
are for students to learn the reading comprehension strategies, learn how and when to use
the strategies, and become self-regulated in the use of strategies (Pressley, Brown, El-

The benefits of transactional strategies instruction have been observed repeatedly.
Some of the strongest evidence supporting the use of comprehension strategies
instruction to improve reading comprehension came from a quasi experimental study by
Brown, Pressley, Van Meter and Schuder (1996). Their study investigated the effects of a
year long transactional strategies instruction on second grade students’ reading.

Transactional strategies instruction was embedded in a program developed by
researchers and teachers called Students Achieving Independent Learning (SAIL). Ten
classrooms of second grade students reading below grade level participated in the study.
Five classrooms participated in the experimental group and 5 classrooms participated in
the control group. The instruction in the control group incorporated a balance of whole language, phonics-based and skills-based instruction to reading instruction, and in the experimental group, SAIL teachers encouraged students to think-aloud as they attempted to apply strategies to make sense of the text. The students were instructed to predict upcoming events, make personal responses to the text, activate prior knowledge, summarize periodically and focus on important information. In addition to these strategies, students were taught “fix-up” strategies (e.g. skipping difficult words; substituting a known word for an unknown word; or looking at the pictures on the page) to deal with difficult texts. Students were provided with information about the benefits of the strategies as they were introduced to them.

Several measures were used during the intervention. Participants were asked to respond to five open-ended questions to tap their reported awareness of reading strategies. The following questions were presented in a different order to each of the participants:

1. What do good readers do? What makes someone a good reader?
2. What things do you do before you start to read a story?
3. What do you think about before you read a new story?
4. What do you do when you come to a word you do not know?
5. What do you do when you read something that does not make sense?

In addition to the strategies interview students also participated in a think aloud to determine if students actually used the strategies they reported during the strategies interviews. Stanford Achievement Test subtests were administered to students at the beginning and end of the intervention to determine if there were differences between the intervention group and the control group. At the beginning of the year these groups did
not differ on standardized measures of reading comprehension and word attack skills. However, at the end of the year, the transactional strategies instruction classroom outperformed the control classroom on standardized tests of reading comprehension and word level skills.

In a similar study, Collins (1991) improved comprehension of fifth- and sixth grade students by teaching them to predict, seek clarification, look for patterns, analyze decision making, problem solve, summarize, make connections to the text, and negotiate interpretations of texts in groups. There were no differences in the strategy instructed group and the control group before the intervention. However, on the posttest of reading comprehension, there was a large effect for the treatment group; a 3-standard deviation difference between the group.

Transactional strategies instruction has been proven to be effective with students identified with learning disabilities as well. For instance, Valerie Anderson (1992) conducted a 3-month experimental investigation of the effects of transactional strategies instruction on reading disabled students in grades 6 through 11. Students were taught comprehension strategies in small groups. There were 9 groups of transactional strategies students and 7 control groups. Although both strategies-instructed and control students made gains on standardized comprehension measures after the study, the gains were greater in the trained group than in the control condition. Anderson (1992) also collected a variety of qualitative data supporting the conclusions that reading for meaning improved in the strategies-instructed condition. As a result of the strategies instruction, students' willingness to read difficult material increased in comparison to those students who did not receive the experimental instruction.
In summary, studies involving elementary and secondary students have supported TSI as beneficial for improving reading comprehension (Anderson, 1992; Collins, 1991; Palinscar, 1984; Palinscar & Brown, 1984; Brown, Pressley, Van Meter & Schuder, 1996). Researchers have demonstrated that all levels of students including those with disabilities and students at risk of school failure can improve comprehension strategies and decoding skills when actively involved with text. Pressley and Afflerbach (1995) contended that TSI is flexible, leads to the development of a variety of comprehension strategies, and promotes the interaction with the text for primary and secondary students. However, studies of TSI have not been conducted with middle schools students of economically disadvantaged backgrounds. Therefore, there is less certainty of TSI's effect on the reading achievement of students of diverse backgrounds.

**Effects of Summarization on Comprehension**

Summarization is an intervention for teachers and has been shown to improve reading comprehension (Anderson & Armbruster, 1984; Pearson & Fielding, 1991; Rinehart, Stahl, & Erickson, 1986). Much of the research on teaching summarization is based on the model of text comprehension developed by Brown and Day (1983) and Kintsch and van Dijk (1978). These models specify three types of operations that occur during reading: (1) the meaning elements are organized into a coherent whole; (2) the full meaning of the text is compressed into its gist; and (3) the gist is used to modify one’s previously constructed elements and to influence those yet to be constructed. In other words, readers engage in the comprehension process by constructing a text-based representation of the selection they are reading; they process the individual elements and
integrate them for inter-sentence consistency; they mentally summarize all of the
elements into a gist; and they construct a situation model of the text. Constructing a
situation model is necessary for the generation of causal inferences and text
comprehension (Zwann & Brown, 1996).

Kintsch and van Dijk’s (1978) model of text comprehension as the basis for teaching
summarization was put into practice by other researchers (e.g., Brown & Day, 1983; Hare
& Borchardt, 1984). In these studies the practical application utilizes explicit instruction.
The students are taught how and why to summarize and to understand that the component
skills are essential comprehension operations (Brown, 1985; Brown, Day & Jones, 1983).
Brown and Day (1983) developed an instructional model whereby readers followed a set
of rules as the basis for constructing summaries. These rules include: (1) Delete
unnecessary information; (2) delete redundant information; (3) compose a word to
replace a list of items; (4) compose a word to replace the individual parts of an action; (5)
select a topic sentence; and (6) invent a topic sentence if one is not available.

Rinehart, Stahl and Erickson (1986) used a similar method to train sixth graders of
various socioeconomic statuses to produce summaries that included main ideas with
supporting information so that the summary reflected the organization of the original text.
The instruction was based on two of Brown and Day’s (1983) rules – delete unnecessary
information and delete redundant information; and another summarization technique,
relate main idea to supporting information (Taylor & Beach, 1982). Rinehart et al.’s
instruction was provided over the course of five 45-50 minute sessions.

First the teacher defined a summary as “the important information from a reading”
(p. 429) and explained how it is used in reading and studying. The teacher modeled how
to write down only main ideas and supporting information by “talking through” four sample paragraphs and having individual students to do similar “talk-throughs.” Next the teacher modeled the use of the following checklist to be used by the students during the first three lessons:

1. Have I found the overall idea that the paragraph or group of paragraphs is about?
2. Have I found the most important information that tells more about the overall idea?
3. Have I used any information that is not directly about the overall idea?
4. Have I used any information more than once?

During the second lesson, students practiced summarizing single paragraphs while the teacher provided individual and class feedback. The third lesson consisted of summarizing groups of paragraphs and then to summarize the summaries. Again, teacher modeling and discussion was followed by guided student practice. The fourth step involved summarization of passages of several paragraphs without first summarizing individual paragraphs. The students were instructed to write the overall ideas for the passage, and then to add the most important supporting ideas from the passage in as few sentences as possible. The final lesson included practice of the passage length version of the summarization strategy. Students practiced writing summaries of each section of a textbook chapter. Summarization training improved students’ recall of main ideas from passages.

In a related study, Bean and Steenwyk (1984) successfully taught sixth graders how to write an effect summary by teaching to students the six rules stated above and
how to apply these rules to single paragraphs. With the teaching of six rules, students were shown one sentence from a paragraph and asked to retell the information using 15 words or less. Next, the teacher presented two more sentences from a paragraph and asked the students to write a 15 word sentence that summarized these two sentences. The teacher repeated this process gradually increasing the amount of text to be summarized until students were able to summarize entire paragraphs. The results of the study showed that students’ production of summaries improved.

An alternative method for teaching summarization is the generation of summaries using the reader’s own words rather than following a model or formula that relies on the words from the text (Wittrock, 1988; Wittrock & Alesandrini, 1990). By either means, studies indicate that summarizing can improve comprehension.

One hypothesis for explaining the relationship between summarization and comprehension is that summarizing fosters active reading and minimizes passive reading, which affects comprehension (Rinehart, Stahl & Erickson, 1986). Active readers are engaged in processing and manipulating information. They use their schema, or mental semantic network, to organize incoming information, retrieve stored information and focus attention on key concepts (Pearson & Fielding, 1991). Summarization is thought to promote active learning because the reader becomes engaged in the cognitive processes of selecting important information and organizing it. Summarizing allows the reader to distinguish key ideas from supporting or unimportant ideas and to construct logical connections between those key and supporting concepts. While summarizing, readers combine and rearrange information and see how it all fits together, as well as see how the propositions in the text relate to their own knowledge (Baker & Brown, 1984; Brown &
Day, 1983; Palinscar & Brown, 1984). Summarizing is viewed as an activity that permits orderly memory searches from a mental semantic network, help readers impose a structure of organization on what appears to be disassociated facts and help them retrieve information from their mental network (Wittrock & Alesandrini, 1990).

Other researchers (e.g., Baker & Brown, 1984; Brown & Day, 1983; Garner, 1987; Palinscar & Brown, 1984) have hypothesized that the deeper processing of the text during the construction of a summary allows the reader to self-test the level of his or her comprehension. Self-testing, a form of monitoring, signals breaks in comprehension which helps the reader to assess what he or she understands or does not yet understand, which in turn prompts the use of fix up strategies. However, in order to select information to include in a summary, students must be able to determine which ideas are important and which are not so important. Making this determination can reveal a break down in comprehension, which warrants the student to “make a repair for lack of comprehension” (Winne & Hadwin, 1998, p. 295).

Although summarization instruction improves students’ recall of what they read compared to students who are taught using traditional reading comprehension instruction (Armbruster, Anderson, & Ostertag, 1987; Taylor & Beach, 1984), there are several cautionary notes that should be added to this positive evaluation. First, research has not been conducted on summarization training with students of diverse backgrounds in high-poverty schools. There has also been little research on how much training time is required to teach summarization. Most studies provided at least six hours of instruction, suggesting that students be given ample opportunity for practice with feedback to master the strategy.
Factors influencing production of summaries. According to Garner (1982), there are three different explanations that can be offered for students’ production of inadequate summary statements: (1) students’ reading level, (2) students’ lack of awareness of what is important or unimportant in a passage, or (3) students’ lack of prior knowledge of a topic.

Just as students who are not skilled at decoding can be overwhelmed by the task of reading comprehension, it would seem that students for whom local comprehension is difficult may use all their cognitive capacity for building microstructure (Kintsch, 1988). A similar strain of cognitive capacity may occur when mature readers encounter unfamiliar or difficult text. Schnotz, Ballstaed and Mandl (1981) found in their German study that when students attempted to summarize challenging text immediately after reading, their summaries included elaborations and irrelevant information. On a second attempt the summaries were improved. The text base developed during the first reading freed cognitive capacity for the summarization task during the second reading.

Elementary age students and poor readers make very idiosyncratic, personalized judgments of what is important in text (Hidi & Anderson, 1986). These problems can be understood in terms of knowledge of task demands. Summarizers must know how they are expected to write what is important to the author, not what is important to the reader. When that distinction is made, the number of idiosyncratic responses declines, although the readers with poor reading skills may still have trouble identifying cues to the author’s perspective. This identification depends on prior knowledge of text conventions, content, and strategies (Hidi & Anderson, 1986).
Prior knowledge is also a difficulty in summary writing. Knowledge of text conventions (structural knowledge) may be important for summarization (Johnston & Afflerbach, 1985). If knowledge of relational terms, genre expectations, and other discourse conventions is automatic, more cognitive capacity is available for building macrostructure; the need to search for these elements diverts working memory (Kintsch, 1988). Knowledge of the content domain is necessary in order to recognize elements of the same category or ideas that entail the same idea. Content knowledge must be rich enough in concepts and vocabulary for the student to be able to name the categories once they have been identified. Knowledge of strategies may also be needed by unskilled readers in order to summarize. However, just having knowledge of the strategy is not enough alone to sustain students' use of the strategy (Palinscar & Brown, 1984). They need to be taught when, where and how to use a strategy to produce summaries (Brown, El-Dinary, & Afflerbach, 1995; Palinscar, 1986; Palinscar & Brown, 1984). More importantly they need to know the strategies they employ will help them better understand texts in order to produce a concise summary.

**Summaries of good and poor readers.** Not all students are equally adept at uncovering instances where comprehension has failed. Comprehension, comprehension monitoring, and the benefits of summarizing differ between good and poor readers. Research provides evidence that good readers and poor readers differ not only at higher order processing levels, but even at basic levels (Baker & Brown, 1984; Palinscar & Brown, 1984). For example, Sabatini (2002) found that low ability readers (students from adult literacy programs) are both slower and less accurate in basic reading and comprehension processes than higher ability readers (students enrolled in college
programs). More specifically, high ability readers possess rapid, efficient word-recognition skills; average ability readers possess accurate but non-automatic processing skills; and low-ability readers struggle with both accuracy and efficiency in basic word recognition and decoding skills. Sabatini suggests that this constant struggle may be caused by limited working memory resources. Managing the resources limits metacognitive processes such as self-monitoring as well, creating a situation where “the slow, laborious effort to decode or recognize a word” (p. 292) diminishes learning efficiency.

One of the biggest differences between good and poor readers is the ability to identify important information in text (Baumann, 1984). In fact, the ability to extract the main idea is a particular problem for poor readers. What poor readers recall from reading a text is not clearly related to variation in importance, whereas good readers recall ideas that are thematically important (Winograd & Bridge, 1986). In a study of 8th graders, Winograd and Bridge found that sensitivity to importance is a crucial difference between good and poor readers. When they asked third and fourth grade students to write summaries of narrative texts, the poor readers included information regarding actions and events, but seldom included inferences about cause and effect relationships among ideas or about characters’ motivations. Glenberg and Matthews (1992) would say these poor readers were bound by the words of the text itself and unable to represent the events and processes described by the text. Garner (1985) also found differences in summaries written by good and poor readers. The information that was thought to be important did not always appear in the poor reader’s summaries.
Identifying main idea. Summarization is clearly a sophisticated process which requires several prerequisite skills, the most important of which is the skill of main idea identification. Brown and DeLoach provide evidence that the ability to differentiate between important ideas and less important ideas is needed for effective summary writing.

Garner (1985) demonstrated the necessity of main idea identification for efficient summary writing. She investigated the summary writing skills of participants at three grade levels (ninth grade, eleventh grade and college students). She found that ninth and eleventh grade students demonstrated "... moderate awareness of the need to include important ideas in their short summaries, but major production deficiency in doing so" (p. 588). On the other hand, college students were both aware of the importance of including the main idea and able to produce these ideas in their summaries. Garner strongly recommends that main idea identification instruction precede summary writing instruction.

Similarly, Stevens and Weinberg (1985) suggest systematic instruction in main idea identification before summary writing. After instruction they found that the two groups of learning disabled students did not differ in the inclusion of main ideas in their summary statements. The researchers attributed these findings to their subjects' lack of prerequisite summarization skills, primarily the skill of main idea identification.

Use of graphic organizers. One way of helping students identify main idea has been through the use of graphic organizers. Graphic organizers are hierarchical representations of concepts that reflect both the content and the structure of a person's knowledge in a given domain (Novak & Gowin, 1984). Brozo and Simpson (1999)
maintain that graphic organizers enable students to look holistically at learning by making connections among the parts and forming new networks or modifying existing networks as they see relationships among concepts rather than isolated facts. Moreover, Griffin and Tulbert (1995) found that students were able to connect prior knowledge to new information by organizing concepts through the creation of graphic organizers. In a related study, Millet (2000) examined the effects of graphic organizers on the reading comprehension of second grade students. The results of the study suggested that graphic organizers instruction improved students' reading comprehension abilities and knowledge of important information.

Effects of Think-Aloud Protocol on Comprehension

The think-aloud protocol was developed as a procedure to investigate on-line cognitive processing. It has been used to explore the nature of reading, reading comprehension processes, reading strategies use and reading comprehension instruction (Kucan & Beck, 1996). In the early 1980s, it was used to deal both with problem detection and use of strategies in the area of comprehension monitoring (Kucan & Beck, 1997; Wagoner, 1983). The rationale for using it in comprehension monitoring research is that thinking aloud during reading not only reflects comprehension monitoring but also represents a form of comprehension monitoring itself (Baumann, Jones, & Kessell, 1993; Garner, 1987).

Additionally, think-aloud protocols produce concurrent verbalization about an activity that is temporarily interrupted to report students' thinking (Garner, 1987). Readers cease reading periodically to say aloud what they are processing, what they
understand and the reading strategies they are using (Wade, 1990; Wilhelm, 2001). The verbalizations, typically recorded on audiotape for analysis, require transcribing and categorizing. Irrelevant information in protocols is usually discarded (Garner, 1987).

Think aloud instruction also helps students acquire a variety of metacognitive comprehension strategies such as evaluating understanding, predicting and verifying, and self-questioning before, during and after reading (Bauman, Jones & Kessell, 1993; Pressley, 1998; Wade, 1990). Several scholars have theorized about why student think aloud is effective at improving comprehension. One popular theory is that getting students to think aloud decreases their impulsivity (Wade, 1990). Rather than jumping to conclusions about text meaning or moving ahead in the text without having sufficiently understood what had already been read, think aloud may lead to more thoughtful, strategic reading (Wilhelm, 2001).

The focus on the progression of thinking aloud has shifted from inquiry to instruction. In a seminal study, Bereiter and Bird (1985, Study 1) investigated the use of think-alouds in identifying and teaching reading comprehension strategies. They analyzed protocols of adults' think-alouds during reading and identified four strategies that readers used when comprehension breaks down: (a) restatement (phrasing and summarizing), (b) backtracking (looking back and rereading), (c) demanding relationships (self-questioning and inferring unstated information), and (d) problem formulation (hypothesizing and predicting). These four strategies have been identified in other research (e.g. Collins, 1991; Palinscar & Brown, 1983) as strategies that can be taught to increase comprehension abilities in adult learners via think-alouds (Block, 1993; Palinscar & Brown, 1983; Pressley & Afflerbach, 1995).
To determine the use of thinking aloud as an instructional vehicle for the teachability of reading strategies, Bereiter and Bird (1985, Study 2) taught seventh- and eighth-grade students the four strategies identified in Study 1 in nine 40-minute sessions over three weeks. Students were assigned to one of four groups: (a) modeling plus explanation—students were taught the four think-aloud reading strategies through verbal explanation and modeling by the teacher; (b) modeling only—identical to the preceding treatment except the teacher provided no verbal explanation; (c) exercise—students were provided oral and written exercises requiring them to engage in the four strategies, but they were provided no explanation or modeling of those abilities; or (d) uninstructed control—students participated in pre- and posttesting only. Following the intervention, two posttests were administered to all subjects. The Nelson-Denny Reading Test was administered to assess silent reading comprehension. Strategy use and oral comprehension were assessed by having the students think-aloud while reading six passages from the comprehension portion of the Metropolitan Achievement Test and then respond orally to the comprehension questions. Results of the study revealed that comprehension scores on both the Nelson-Denny Reading Test and the Metropolitan Achievement Test were significantly higher for the modeling-plus-explanation group compared to the other three groups, which did not differ significantly from one another. Analyses of the think-aloud protocols for the Metropolitan Achievement Test passages showed that students in the modeling-plus-explanation group produced more think-alouds of any kind (target strategies plus others) than control group subjects. From these findings, Bereiter and Bird (1985) concluded that students will not readily acquire
cognitive strategies simply by imitating models, but they need direct, explicit instruction in the strategies.

A study conducted with 66 fourth grade students from a rural Midwestern elementary school provided some empirical support for this theory. Baumann, Seifert-Kessell and Jones (1992) used this paradigm to develop an instructional program to help students learn to monitor their reading comprehension and to use various strategies to deal with comprehension breakdowns. Students were randomly assigned to one of the three experimental groups: (1) Think-Aloud (TA), in which students were taught various comprehension monitoring strategies for reading stories (e.g., self-questioning, prediction, retelling, rereading; (2) Directed Reading-Thinking Activity (DRTA), in which students were taught a predict-verify strategy for reading and responding to stories or (3) a Directed Reading Activity, an instructed control group in which students engaged in a noninteractive, guided reading of stories. Baumann and his colleagues found that training in think aloud improved children’s ability to monitor their comprehension while reading. Fourth grade students who were trained to think aloud as they used several comprehension strategies were better than a comparison group at detecting errors in passages, responding to a questionnaire about comprehension monitoring, and completing cloze items.

Other studies have examined the possible role of think aloud as an instructional strategy to improve comprehension. For example, Silven and Vauras (1992) demonstrated that poor and averaged sixth grade students who were prompted to think aloud as part of their comprehension training were better at summarizing information in a text than students whose training did not include think aloud. The findings of Kucan and
Beck's 1996 study further supported the use of think-alouds as an instructional medium for increasing comprehension using different types of texts. The findings showed that students increased the amount of time they spent hypothesizing, elaborating, inferencing, predicting, summarizing and interpreting.

One problem with studies that teach think-alouds to increase comprehension is that they often do not consider the possible effect of text difficulty. Studies of this type typically used either difficult or easy text without making a comparison of the two. Loxterman, Beck and McKeown (1994) conducted one of the few studies that directly examined the relationship between text difficulty and think alouds. Like Baumann, Seifert-Kessell and Jones (1992), Loxterman, Beck and McKeown hypothesized that using think alouds as a method for teaching students reading comprehension strategies increases students' comprehension abilities. Using eighty-eight grade 6 students from two schools they compared the effects of both content text and active engagement on students' comprehension by assigning students to one of four conditions based on their scores from the Metropolitan Achievement Test: students reading the original text silently; students reading the original text with thinking aloud; students reading the text silently that was revised by the first author; and students reading the revised text with thinking aloud. The revised text addressed the problems of the original passage through operations such as clarifying, elaborating, and explaining content, and making connections explicit, thus creating a more coherent version of the original passage. The grade level of the original text was 5.7, and the revised text was 9.1 based on the Flesch Reading Ease formula. The results as measured by an open-ended instrument showed that
all students' recall performance gradually increased across the continuum, and the
difference among the conditions was significant.

Although there have been a number of studies (e.g. Baumann, Seifert-Kessell &
Jones, 1992; Loxterman, Beck & McKeown, 1984) to support the use of the think aloud
protocol as a means of identifying the reading processes of skilled and unskilled readers,
there are several drawbacks to thinking aloud while reading. According to Bereiter and
Bird (1985), think aloud slows down the reading processes of students and may impact
their reading comprehension abilities. Another drawback is that think aloud protocols
taken during reading are relatively impoverished compared to those obtained in more
deliberative activities. Consequently, they probably reveal only certain elements of the
strategic activity going on during reading, perhaps only those that students may exhibit
when comprehension is fragmented (Bereiter & Bird, 1985).

The think aloud protocol has contributed greatly to an understanding of the mental
processes in which readers engage when constructing meaning from text (Afflerbach,
2003; Wade, 1990). As a method of inquiry, thinking aloud revealed the reading
processes of expert readers. As a method of instruction, thinking aloud was first used to
model the processes of reading to comprehend text. Although the facilitating effects of
thinking aloud on students' reading comprehension abilities were demonstrated
(Baumann, Seifert-Kessell, & Jones, 1992; Kucan & Beck, 1996; Silven & Vauras, 1992)
with elementary students in suburban schools, few studies have trained teachers to
implement think aloud strategies in urban middle schools with a large number of students
in poverty.
Reading Engagement and Motivation

Ames (1992) defines motivation as an individual’s activation and degree of persistence in undertaking goal directed behavior. Research supports the notion that literacy learning is influenced by a variety of motivational factors (Deci & Ryan, 1994; Eccles, Wigfield & Schiefele, 1998). Since reading is an effortful activity that often involves choice, motivation is crucial to reading engagement. Guthrie, Van Meter, McCann, Wigfield, Anderson and Alao (1998) described engagement in reading as the “motivated use of strategies students use to gain conceptual knowledge during reading” (p.261). Those who have a low motivation to read tend to exhibit inconsistent behaviors, have poor reading comprehension skills (Alvermann & Moore, 1991; Pressley, 1998), low self-efficacy (Bandura, 1997; Paris & Winograd, 1990; Schunk, 1991; Schunk & Rice, 1993) and are work-avoidant (Meece, Blumenfeld, & Hoyle, 1988). On the other hand, those who have a high motivation to read, return to and continue to work on tasks (Alvermann, 2002; Bandura & Locke, 2003; Pressley & McCormick, 1995).

Engagement is strongly linked to reading achievement. Campbell, Voelkl and Donahue (1997) investigated engagement and reading achievement of students in three different age groups (9, 13, and 17). The data from their study revealed that engaged readers showed higher achievement than less engaged readers. The data also showed that engaged readers from low income families achieved at a higher level than did engaged readers from high income families.

In a similar study, Guthrie, McGough, Bennett and Rice (1996) found that engaged readers are motivated to read frequently for different reasons. They are strategic and actively use knowledge to construct meaning from text. Based on their work from the
National Reading Research Center, Guthrie and Alvermann (1999) asserted that engaged readers use multiple strategies that enable them to read independently and comprehend what they read. They use prior knowledge to gain new information from text (Pressley & McCormick, 1995). They also have the ability to transfer and apply acquired strategies to new context (Baker & Wigfield, 1999).

Competency beliefs are one of the first indicators to emerge of young children’s motivation (Eccels et al., 1998). Gottfried (1990) argued that young children who experience early task mastery should have higher perceptions of competence, which leads to greater motivation. Guthrie and Wigfield (2000) made a similar point; they identified goals and beliefs about reading as the motivation for reading.

“Increasing competence is motivating, and increasing motivation leads to more reading. Motivation is the link between frequent reading and reading achievement. This link sustains the upward (and downward) spiral of achievement. In this perspective, motivation is the foundational process for reading engagement and is a major contributor, when things go awry, to disengagement from reading” (p.405).

McKenna, Kear, and Ellsworth (1995) add that competency beliefs lead to the extent of active participation in which the individual is willing to engage. The more willing a participant is to engage in the act of reading, the better the comprehension. Beliefs about the outcomes of reading, and specific reading experiences influence the motivation to read or to not to read (Pressley & McCormick, 1995). If a child believes that, in general the more he or she reads, the better his or her reading skills will become, it is likely that a child’s attitude toward reading will be elevated (Baker & Wigfield, 1999; Wigfield & Eccles, 2002; Wigfield, Eccles & Rodriquez, 1998).

According to Pressley and McCormick (1995), low motivation is often blamed on the students despite the fact that “increasing recognition that low student motivation
usually is the result of structural failures of schools rather than some inherent deficiency in students” (p. 116). Motivation may be negative or positively influenced by instructional practices (Guthrie & Wigfield, 2000). Practices that focus on social comparison between children, excessive competition, and little or no attempt to use materials that spark children’s interests can lead to declines in students’ beliefs about their efficacy to achieve (Borokowski et al., 1987). Bandura and Locke (2003) asserted that “among the mechanisms of human energy, none is more central or pervasive than beliefs in personal efficacy” (p. 87). Children who feel efficacious about a particular task typically demonstrate more positive behaviors and better achievement in that task than children who do not feel efficacious about the task (Schunk, 1991). In essence, self-efficacy is a constituent of reading motivation (Guthrie, Wigfield, Metsala & Cox, 2000). Schunk and Rice (1993) define self-efficacy as “people’s judgments of their capabilities to organize and execute course of action required to attain designated types of performances” (p. 391). Children’s self-efficacy is highly related to their academic performance (Schunk, 1991). Training students to be more efficacious and to believe they are more efficacious can improve their achievement in different subject areas (Schunk, 1991; Schunk & Rice, 1993)

Motivation is important not only because motivated students are more likely to be engaged in meaningful learning in the classroom, but because motivation is an important outcome of instruction (Schunk, 1991). Students who have low efficacy beliefs tend to be less engaged in reading tasks and have a low motivation to read (De La Paz & Graham, 2002). When students have some control over the instructional activities within the classroom and feel competent, and successful in the performance of these activities, they
are more likely to participate (Wigfield, 1997). Changing beliefs about the self as a learner can have a profound effect on reading engagement (Borokowski et al., 1987).

Summary

Chapter Two discussed the literacy needs of students from diverse backgrounds. A detailed description and overview of explicit teaching of reading comprehension strategies and its impact on students' comprehension and metacognitive abilities was also reviewed. Summarization and think aloud studies that further aided the effectiveness of comprehension strategies instruction were also discussed. This chapter concluded with a review of research on motivation and engagement and its impact on literacy instruction and reading comprehension.
CHAPTER 3
Methodology

Introduction

This chapter includes a brief description of the design of the study, context and participants, instructional materials and intervention procedures, assessment instruments, data collection and analysis procedures. It concludes with a summary.

Studies have shown that the long term benefits of summarization training provides a well connected memory representation that enables a learner to do something more with the material than simply reproduce it (Kintsch & Kintsch, 1997; Mannes & Kintsch, 1987). Although a plethora of information exists on the effectiveness of summarization instruction, there is limited research on its effectiveness of students from low SES and diverse backgrounds. Therefore, my goal was to compare the reading achievement and metacognitive strategies use of sixth grade minority students from low SES backgrounds who were explicitly taught to summarize text to those sixth grade students of similar backgrounds who did not receive explicit summarization instruction.

Research Hypotheses and Questions

The hypotheses for this mixed method study were stated in the null form.

1. There is no statistically significant difference in the reading comprehension achievement of sixth grade students who received summarization instruction and
those who did not as measured by the Gates-MacGinitie Reading Test.

2. There is no statistically significant difference in the metacognitive strategies use of sixth grade students who received summarization instruction and those who did not as measured by the Metacognitive Awareness of Reading Strategies Inventory.

To further explore the problem, the following research questions were posed:

1. To what extent did students actually use the strategies they reported using on the Metacognitive Awareness of Reading Strategies Inventory?

2. What instructional modifications were needed to motivate and support students’ use of summarization strategy?

3. How did students’ summary writing develop throughout the intervention?

**Research Design**

The research design chosen for this study was a mixed method design consisting of both qualitative and quantitative measures of reading comprehension achievement growth and reading comprehension strategy use following an instructional intervention. Quantitative research is the collection of numerical data to explain, predict, and/or control phenomena of interest (Creswell, 2004). Quantitatively, this study compared the reading comprehension achievement and metacognitive strategies use of economically disadvantaged sixth grade students who were taught how to summarize narrative text to sixth grade students who were not.

Qualitative research is the collection of extensive narrative data on many variables over an extended period of time in a naturalistic setting (Gay & Airasian, 2003).
Lincoln and Cuba (1985) referred to qualitative research as the naturalistic approach. Six students (2 each at the lower end of achievement, 2 each at the average level of achievement, and 2 each at the higher end of achievement) from each of the experimental groups served as a focal group (n=12). These 12 students participated in the think aloud assessment and strategies interview and were selected for this portion to provide insight as to the strategies varied readers use to comprehend. The qualitative portion of this study used triangulation to obtain different data from the focal students. According to Gay and Airasian (2003), triangulation is the process of using multiple data collection methods, data sources, analysis of theories to check the validity of findings. Through the process of triangulation, any finding or conclusion is likely to be much more convincing and accurate if it is based on several different sources of data (Lincoln and Cuba, 1985). The three prongs of this triangulated study included: strategy interviews, think aloud assessments and an analysis of students’ written summaries.

Four intact classes of sixth graders provided two control and two experimental groups. The experimental groups received summarization instruction and the control groups received the traditional basal reading instruction. The traditional basal reading instruction continued as usual with its focus on developing and delivering essential declarative knowledge and providing students with important concepts and vocabulary related to text.
Participants from a convenience sample of one middle school were obtained from a school district located in North Alabama that serves approximately 13,000 students which included nine high schools (grades 9-12), twelve middle schools (grades 6-8), and twenty-six elementary schools (grades K-5). The middle school is an Alabama Reading Initiative site, which means that the teachers in this school underwent two weeks of rigorous training to learn comprehension strategies that could be integrated across all content areas.

The student population of 479 consists of sixth, seventh, and eighth grades (94% African American, 2.3% Hispanic, 1.6% European American, .63% Asian, and .42% Indian students). The special education population was approximately 13% and the gifted population was approximately 15%. There were 36 certified teachers, 2 counselors, one media specialist, one reading coach and two administrators. The average pupil-teacher ratio was 22:1.

In 2004-2005, the school was placed on the need improvement list for failure to meet adequate yearly progress (AYP) as measured by the Alabama Reading and Mathematics Test (ARMT) and required by the No Child Left Behind Act of 2001. The Act requires that 100 percent of students be proficient in reading and mathematics as evidenced by passing state tests, by year 2014. Schools in Alabama are measured by students’ performance on the ARMT Test in third through eighth grade and on the high school graduation exam in 11th grade. These scores are disaggregated by race, ethnicity, English proficiency and socioeconomic status. States must meet the goals or face
penalties that include having to develop school improvement plans, offering school choice, or facing a complete state takeover. However, recent data from the Alabama State Department of Education indicated that the school met 100% of their 17 goals. However, due to low scores and missed goals in years past, the school remains on school improvement as a precaution (Alabama Department of Education, 2006).

Participants

Students. The convenience sample consisted of ninety-four 6th grade students drawn from four intact reading classes of mixed abilities. Two of the four classes served as the experimental instruction condition (summarization instruction) and the remaining two classes served as the control condition (traditional basal reader instruction). The four groups were similar in abilities and SES. To establish equivalence among the four groups prior to the intervention, the researcher used participants’ reading stanine scores from the 2005-2006 Alabama Reading and Mathematics Test (ARMT) and their most recent reading level from the Standardized Test for the Assessment of Reading (STAR). The STAR reading test is a computer assessment tool used to obtain a student’s independent reading level. The variables used to determine students’ SES was whether they received free/reduce or full priced school meals, since students’ eligibility for free/reduced priced school meals is often an indicator of poverty. Table 1 provides a description of the control and experimental groups. Special education students or inclusion students with individualized education plans (IEPs) did not participate in the study. These students did not participate due to information contained in their IEPs that may have required test modifications and or accommodations.
Table 1

Description of Participants

<table>
<thead>
<tr>
<th>Groups</th>
<th>n</th>
<th>Average Stanine Scores</th>
<th>Average Reading Level</th>
<th>Percentage receiving free/reduce school meals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental 1</td>
<td>24</td>
<td>4.5</td>
<td>5.3</td>
<td>87%</td>
</tr>
<tr>
<td>Experimental 2</td>
<td>22</td>
<td>4.4</td>
<td>4.8</td>
<td>96%</td>
</tr>
<tr>
<td>Control 1</td>
<td>23</td>
<td>4.6</td>
<td>5.2</td>
<td>92%</td>
</tr>
<tr>
<td>Control 2</td>
<td>25</td>
<td>4.1</td>
<td>5.0</td>
<td>95%</td>
</tr>
</tbody>
</table>

The diversity of students in today’s classrooms underscores the importance of developing curricula, teaching strategies, and policies to help all students succeed in school. Since data exists on the literacy achievement gap between African American and European American students, a cultural description of the participants was warranted. Table 2 shows the cultural identification and gender of the participants in this study.
Table 2

Cultural Identification and Gender of Participants

<table>
<thead>
<tr>
<th>Groups</th>
<th>n</th>
<th>Race/Ethnicity</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>Experimental 1</td>
<td>24</td>
<td>African American</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>European American</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hispanic</td>
<td>0</td>
</tr>
<tr>
<td>Experimental 2</td>
<td>22</td>
<td>African American</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>European American</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hispanic</td>
<td>1</td>
</tr>
<tr>
<td>Control 1</td>
<td>23</td>
<td>African American</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>European American</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hispanic</td>
<td>2</td>
</tr>
<tr>
<td>Control 2</td>
<td>25</td>
<td>African American</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>European American</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hispanic</td>
<td>0</td>
</tr>
</tbody>
</table>

To further investigate students’ metacognitive strategies use, a focal group was identified and studied in detail. Six students, for a total of 12 students were selected from each of the experimental groups to form a focal group. The criterion for selection was their posttest scores on the Gates-MacGinitie Reading Test (Form T). Posttest scores on
the GMRT had a possible range of 0-48. Two students from each of the experimental groups who scored the highest (Aaron, Bobby, Chris, Dina) average (Ericka, Felecia, Galvin, Henry) and lowest (India, Javon, Katrina, Latonya) were selected. A description of the focal group is shown in Table 3.

Table 3

Description of Focal Group

<table>
<thead>
<tr>
<th>Student Pseudonym</th>
<th>Race/Ethnicity</th>
<th>Independent Reading Level</th>
<th>GMRT Posttest Score</th>
<th>MARSI Posttest Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaron</td>
<td>African American</td>
<td>6</td>
<td>39</td>
<td>100</td>
</tr>
<tr>
<td>Bobby</td>
<td>European American</td>
<td>6</td>
<td>39</td>
<td>110</td>
</tr>
<tr>
<td>Chris</td>
<td>African American</td>
<td>6</td>
<td>39</td>
<td>117</td>
</tr>
<tr>
<td>Dina</td>
<td>Hispanic</td>
<td>5</td>
<td>38</td>
<td>120</td>
</tr>
<tr>
<td>Erika</td>
<td>African American</td>
<td>6</td>
<td>28</td>
<td>112</td>
</tr>
<tr>
<td>Felecia</td>
<td>African American</td>
<td>5</td>
<td>28</td>
<td>89</td>
</tr>
<tr>
<td>Galvin</td>
<td>African American</td>
<td>6</td>
<td>28</td>
<td>88</td>
</tr>
<tr>
<td>Henry</td>
<td>European American</td>
<td>6</td>
<td>27</td>
<td>99</td>
</tr>
<tr>
<td>India</td>
<td>African American</td>
<td>3</td>
<td>15</td>
<td>92</td>
</tr>
<tr>
<td>Javon</td>
<td>African American</td>
<td>3</td>
<td>18</td>
<td>78</td>
</tr>
<tr>
<td>Katrina</td>
<td>African American</td>
<td>4</td>
<td>18</td>
<td>80</td>
</tr>
<tr>
<td>Latonya</td>
<td>African American</td>
<td>4</td>
<td>21</td>
<td>72</td>
</tr>
</tbody>
</table>

In addition to completing the assessments, the focal group completed additional measures. I administered the Qualitative Reading Inventory-4 (QRI-4) think aloud assessment to the focal group students after their independent reading level was
determined using the QRI-4 word lists. Not surprisingly, all of the low performing
students had the lowest independent reading levels in the class as measured by the QRI-4
word lists. Their independent reading levels were grade 3, 3, 4 and 4 respectively. The
reading levels of the other focal groups students were grade 5 and 6.

The school has a pod design, that is, there are four classrooms in a confined space
separated by walls. In sixth grade there are two pods and each pod has its own group of
teachers. There are no differences in the learning abilities of students in each of the pods.
I teach science to students in pod one. Therefore, I exchanged two science classes from
pod one with two reading classes from pod two. This design helped to ensure that I did
not cross contaminate the study by teaching any group two subjects. In other words, I
only taught reading to the two experimental groups participating in the study reading.

Teacher researcher. As the teacher researcher in this study, I worked with all of
the students in the experimental group during the study. I have 10 years of teaching
experience, which includes experience as the district's secondary literacy coach, middle
school reading intervention, math and science teacher, and adjunct professor at a local
university. I also hold an Educational Specialist Degree in elementary education.

Control group teacher. The teacher for the control group has 11 years of teaching
experience which includes experience as a curriculum specialist and secondary literacy
coach. She has taught at both the elementary and secondary levels, and possesses an
Educational Specialist Degree in elementary education and holds both Administration
and Supervision certification and a P-12 Reading Specialist certification.

Reading specialist. The reading specialist served as an outside observer in this
study to ensure there were no differences in the summarization instruction for the two
experimental groups. She also provided insight into the summarization training that helped me to refine and adjust the intervention. She has 11 years of teaching experience which includes experience as a special education teacher and secondary reading specialist. She has taught special education in collaborative classes in grades 6-8. The reading specialist also has a master’s degree in special education and certification as a reading specialist. Table 4 provides a description of the teacher participants and reading specialist.

To control for researcher’s bias during the analysis of the instructional intervention, the reading specialist visited the experimental classes on days 7 and 11 of the instructional intervention in both classes as a part of the coaching cycle activities. The activities in the coaching cycle consisted of pre-conferencing, post-conferencing and debriefing. During the pre-conference, I informed the reading specialist about the study and asked that she observe the experimental classes to provide insight into the summarization training (i.e. differences in the two experimental groups and students’ response to the strategy). At post-conferencing, we discussed concerns and strengths documented from our field notes and the reading specialist’s observations. The coaching cycle helped to identify problem areas that resulted in modifications to the training.
Table 4

Description of Teacher Participants and Reading Specialist

<table>
<thead>
<tr>
<th>Teacher Participants</th>
<th>Highest Degree Held</th>
<th>Other Certification</th>
<th>Years of Teaching Experience</th>
<th>Years at this Middle School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher researcher</td>
<td>Educational Specialist</td>
<td>Administration &amp; Supervision</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Control teacher</td>
<td>Educational Specialist</td>
<td>Administration &amp; Supervision, Reading Specialist P-12</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Reading specialist</td>
<td>Master's of Education</td>
<td>Reading Specialist P-12</td>
<td>11</td>
<td>11</td>
</tr>
</tbody>
</table>

Procedures

I provided the summarization instructional intervention to each of the two reading classes that were exchanged from the other pod. The intervention consisted of fourteen 45-minute lessons over 3 ½ weeks.

Instructional Materials

Control group. Instruction in the control group consisted of reading stories from the six grade basal reader. These stories were often excerpts from novels such as Jeremiah’s Song, I Know Why the Caged Bird Sings, and The Phantom Tollbooth. The reading of selections from the basal reader was typically followed by skill worksheets (e.g. drawing conclusions, locating main idea, making inferences) related to the selection and comprehension activities that accompanied the teacher’s edition and students’ workbook. Students were required to read a minimum of four Accelerated Reader (AR)
books at their instructional reading level and pass AR tests with a score of 75% or more. Students usually created projects to reflect their understanding of the selection or novel. Examples of these projects are designing book jackets, completing book reports, constructing foldables that displays characters, and/or writing creatively.

**Experimental group.** In contrast, summarization or strategy instruction for the intervention classes focused on building procedural and conditional knowledge and teaching unskilled readers to use the processes employed by skilled readers in the flexible, interactive manner that skilled readers use them (Dole, Brown & Trathen, 1996). Each day of the intervention instruction began with teacher modeling and explanation, followed by guided practice with feedback and ended with independent practice.

I modeled reading comprehension strategies (i.e. rereading, predicting, using context clues, activating prior knowledge) using the think aloud protocol in which I made explicit the processes used in applying the strategies to summarize text using the four rules adapted from the Rinehart et al. study (see Appendix B). I informed students that the rules from the checklist will help them to write better summaries and then read the steps for good summaries aloud. Next, I demonstrated each of the steps using paragraphs from *The Watsons' Go to Birmingham*. This modeling and explanation involved physically marking the text: crossing out unimportant information and redundant information and underlining or writing main idea statements for each paragraph.

Students were then provided with guided practice with feedback of the strategies using paragraphs from lower grade level texts. They were given ample opportunity to practice the strategies in an effort to understand the text and then produce written summaries. Appropriate and immediate feedback was tailored to each student's summary.
and always included the suggestion that the summary could have been improved by following the steps on the checklist. After providing the students with feedback, I once again highlighted the usefulness of the checklist to summarize and modeled each of the rules for optimal summaries using the same text that the students attempted to summarize.

During independent practice, students practiced writing summaries on their own with lower grade level texts with minimal to no assistance from me. At times, I worked with students individually who needed additional help.

**Instructional materials for experimental group.** The instructional materials for the experimental group used in this study were taken from three novels: *Overdrive* (Walters, 2004); *Queen of the Toilet Bowl* (Wishinsky, 2005); and *The Watsons Go to Birmingham-1963* (Curtis, 1995). Students began reading *The Watsons Go to Birmingham-1963* from the point where they left off prior to the instructional intervention.

Following a similar framework of the Rinehart et al. (1986) study, passages from each of the sources were retyped into paragraph formats with two lines underneath each paragraph to write summary statements. An example of the packet is found in Appendix A. Table 5 shows books used in this study along with examples of the passages and readability levels. Increasingly difficult texts were used to provide children guided support using summarization strategies in the texts they would be expected to read when the intervention ended.
### Table 5

**Books Used in the Study**

<table>
<thead>
<tr>
<th>Titles</th>
<th>Readability Levels</th>
<th>Example of Passages</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>The Watson Go to Birmingham</em></td>
<td>5.8</td>
<td>I was sitting at the kitchen table doing homework and Watching Momma make dinner en Byron came through the door. He was surprised we were there 'cause as soon as he saw us he turned around and tried to walk right back out. Both me and Momma spelled a rat. “Byron,” Momma said, “what have I told you about wearing that hat in the house?” “Oh yeah, I was just going right back.” He pushed the screen door open again. “Wait minute.” Byron was trapped in the doorway, with his right foot in and his left foot out.</td>
</tr>
<tr>
<td><em>Queen of the Toilet Bowl</em></td>
<td>4.6</td>
<td>Why was I worried? Liz and I hung around at school but going to her house made everything different. Going to her house made us real friends. “Sit down,” said Liz. “That is if you can find a place.” I looked around Liz’s room. There were mounds of clothes on her bed, a pile of shoes on her floor and books piled on her desk. “Where?” I asked. Liz shoved some clothes off her bed. “Here,” she said. I plunked myself down on her pink and red flowered quilt. “Great quilt,” I said.</td>
</tr>
<tr>
<td><em>Overdrive</em></td>
<td>2.8</td>
<td>“Well?” Mickey said. I pulled the driver’s license out of my pocket and held it up for him. “All right! Way to go Jake. You got it!” he said. He gave me a highfive. “Did you have any doubts?” I asked. “I figure you could drive, but a test is a test, and neither of use ever does so well with those.” “This was one test I was ready for,” I said. “So now you have a driver’s license. All you need is something to drive.</td>
</tr>
</tbody>
</table>

**Summarization construction checklist.** Students were given a checklist to use when constructing summary statements. A packet was compiled for each participant consisting of the reading passages and the summarization checklist. The checklist (adapted from Rinehart et al., 1986) included the following original questions: (1) Have I found the overall idea that the paragraph or group of paragraphs is about? (2) Have I
found the most important information that tells more about the overall idea? (3) Have I used any information that is not directly related to the main idea? (4) Have I used any information more than once? On day 8 of the intervention, I modified the checklist making changes to question 3 and eliminating two of the four lines underneath each paragraph based on discussions with the reading specialist.

Think aloud assessment and Qualitative Reading Inventory-4. According to Gall et al. (1996), the interview process allows the researcher to obtain greater depth of information and clarify statements. First, participants’ independent reading level was determined using the word lists from the QRI-4 and passages from this assessment were used for the think aloud assessment. The Qualitative Reading Inventory is an informal reading inventory that contains word lists and narrative and expository passages at each level from pre-primer through high school. There are three narrative and expository passages at the third through fifth grade levels. At the sixth grade level, there are three literature passages, two social studies passages, and two science passages. These passages are designed to assess students’ oral reading, silent reading, listening comprehension, vocabulary and prior knowledge (Leslie & Caldwell, 2006). At the beginning of each passage are prior knowledge questions, and at the end there are explicit and implicit questions to assess comprehension. Answers to explicit questions can be found in the text; answers to implicit questions require the reader to make an inference based on a textual clue. The QRI also includes think alouds to determine the strategies readers use to comprehend text and to identify when comprehension breaks down. For the purpose of this study, the participants in the focal group read passages at levels three through six. All passages were of the narrative type to control for genre effects.
**Strategies interview.** Six questions modified from the Brown et al. (1996) study were asked during the assessment interview with the focal group to determine their awareness of comprehension monitoring strategies.

1. What do good readers do?
2. What makes someone a good reader?
3. What do you think about before you read a new story or chapter?
4. What do you do when you come to a word you cannot pronounce?
5. What do you do when you come to a word you can pronounce, but do not know what it means?
6. What do you do when you read something that does not make sense?

The questions inquired about reading behaviors and what students do before and during reading. They were selected because they were concerned specifically with good reading behaviors and the students’ ability to monitor their reading comprehension.

**Assessment Instruments**

*The Gates-MacGinitie Reading Test* (GMRT). This Fourth Edition assessment, a norm-referenced, 48-item multiple choice reading achievement test, was used as the pretest and posttest for this study. The Gates-MacGinitie Reading Test is designed to measure students’ ability to read and understand different types of prose; and took approximately 35 minutes to administer. Students’ scores were reported as raw scores.

According to Creswell (2003), content-related validity evidence is particularly important in selecting tests to use in experiments involving the effects of instructional methods on achievement. The test’s content validity was documented through the use of an extensive process of test development to identify the scope of the subtests and to
identify effective items within a subtest. Reliability is also essential to validity and must be carefully considered in selecting tests for use in research. It is always desirable to have high test score reliability. The Kuder-Richardson formula, K-R 20, was used to estimate internal consistency because test items on the Gates-MacGinitie Reading Test are scored dichotomously. The Kuder-Richardson formula is analogous to Cronbach’s alpha, except Cronbach’s alpha is used for non-dichotomous measures. However, the K-R 20 reliability reported by MacGinitie and MacGinitie (2000) for this measure is at or above .90, which indicates a very high reliability.

The Metacognitive Awareness of Reading Strategies Inventory (MARSI). This assessment was administered to assess students’ metacognitive awareness (Mokhtari, 2000). The instrument was designed for adolescents and adult readers (fifth grade through college); however, it has been adapted for students in third grade. The adapted version of the instrument was used in this study as the pretest, posttest, and delayed posttest because of the varied reading levels of the students. The instrument contained 30 statements; students responded to how often they used the strategy described in the statement using a 5-point Likert-type scale ranging from 1 (I never do this) to 5 (I always do this). “A Likert scale asks individuals to check their level of agreement (e.g., strongly agree, agree, undecided, disagree, or strongly disagree) with various statements” (Gall, Gall, & Borg, 2003, p. 214). The highest possible score on this instrument is 150 and found to be reliable at .89 using Cronbach’s alpha. The administration time was approximately 20 minutes for each of the administration periods. A copy of the instrument is located in Appendix C.
The strategies on the instrument are divided into three strategy subscales: global (13 items), support strategies (9 items), and problem solving (8 items). According to Mokhtari (2000), global strategies are defined as a set of strategies oriented toward a global analysis of the text. These strategies can be thought of as intentional reading strategies readers apply in order to monitor or manage their comprehension. The problem solving strategies are strategies readers use when reading comprehension becomes difficult. These strategies provide readers with action plans that help them to navigate through text. In contrast to global and problem solving strategies, support strategies primarily involve the use of materials (e.g. dictionary, thesaurus, outlining, notetaking) as support mechanisms aimed at sustaining response to reading. These three strategy subscales interact with each other and have an important impact on text comprehension (Mokhtari & Sheorey, 2002). Table 6 shows the subscales of the reading strategies as measured by the Metacognitive Awareness of Reading Strategies Inventory.

Table 6

*Subscales of Reading Strategies from MARSI*

<table>
<thead>
<tr>
<th>Description</th>
<th>Global</th>
<th>Problem Solving</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional reading strategies readers use to monitor comprehension</td>
<td>Strategies readers use when comprehension becomes difficult</td>
<td>Strategies that involve the use of materials as support mechanisms</td>
<td></td>
</tr>
<tr>
<td>I use what I already know to help me understand what I read.</td>
<td>I slow down when reading becomes hard and I speed up when it is easy.</td>
<td>I write down ideas to help me understand what I read.</td>
<td></td>
</tr>
<tr>
<td>Item Number from Instrument</td>
<td>1, 3, 4, 7, 10, 14, 17, 19, 22, 23, 25, 26, 29</td>
<td>8, 11, 13, 16, 18, 21, 27, 30</td>
<td>2, 5, 6, 9, 12, 15, 20, 24, 28</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>
**Description of the Intervention**

Two principles in the design of the treatment were adapted: direct explanation (Roehler & Duffy, 1984) and explicit teaching (Pearson & Leys, 1984). Modeling plus explanation, guided practice with feedback in whole and small groups, and independent practice were implemented daily during the intervention. Table 7 shows how the instructional intervention was implemented.

Table 7

**Description of Weekly Instructional Intervention**

<table>
<thead>
<tr>
<th></th>
<th>Days 1-11</th>
<th>Days 1-11</th>
<th>Days 1-11</th>
<th>Days 12-14</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Text/reading level</td>
<td>Text/reading level</td>
<td>Text/reading level</td>
<td>Text/reading level</td>
</tr>
<tr>
<td></td>
<td>Single paragraphs</td>
<td>Single paragraphs</td>
<td>Single paragraphs</td>
<td>Multiple paragraphs</td>
</tr>
<tr>
<td><strong>Modeling plus explanation</strong></td>
<td><em>The Watsons Go to Birmingham</em></td>
<td>5.8</td>
<td><em>The Watsons Go to Birmingham</em></td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td><em>The Watsons Go to Birmingham</em></td>
<td>5.8</td>
<td><em>The Watsons Go to Birmingham</em></td>
<td>5.8</td>
</tr>
<tr>
<td><strong>Guided practice</strong></td>
<td><em>Queen of the Toilet Bowl</em></td>
<td>4.6</td>
<td><em>Queen of the Toilet Bowl</em></td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td><em>Queen of the Toilet Bowl</em></td>
<td>4.6</td>
<td><em>Queen of the Toilet Bowl</em></td>
<td>4.6</td>
</tr>
<tr>
<td><strong>Independent practice</strong></td>
<td><em>Overdrive</em></td>
<td>2.8</td>
<td><em>Overdrive</em></td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td><em>Overdrive</em></td>
<td>2.8</td>
<td><em>Overdrive</em></td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td><em>Overdrive</em></td>
<td>2.8</td>
<td><em>Overdrive</em></td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td><em>Overdrive</em></td>
<td>2.8</td>
<td><em>Overdrive</em></td>
<td>2.8</td>
</tr>
</tbody>
</table>

Sixth grade students were currently reading *The Watsons Go to Birmingham* in their reading classes at the time of the study. It was used each week of the intervention to model and explain how to summarize. Following Dole, Brown and Trathen (1996), text of lower independent reading levels, (closer to the independent reading levels of the average readers in the groups), were used days 1-11 to ensure that students could easily read and understand the materials and attend to the strategy use. However, as the
intervention progressed, students practiced the strategy using grade level materials. Therefore, *The Watsons Go to Birmingham* (readability level, 5.8) was used on days 12 through 14 of the intervention since it was near grade level for sixth grade students.

*Modeling plus explanation.* The principles of direct explanation propose that effective strategies instruction begins with teacher explanations and mental modeling (i.e., showing students how to apply a strategy by thinking aloud), Duffy & Roehler, (1989). The strategies modeled during think aloud to help students produce summary statements included activating prior knowledge, making predictions, using context clues, visualizing images, re-reading, reading ahead, rephrasing texts into simpler terms, and using fix up strategies.

Modeling plus explanation involved the introduction of the strategy with my explicitly making students aware of the purpose of the strategy; explaining how and why the strategy works; and when and where the strategy can be used. I also modeled the use of the strategy, verbally explaining the thinking process.

*Guided practice.* Following the introduction of strategy use, students were afforded opportunities to practice the strategies in the context of real reading during whole and small group instruction. I monitored this practice and provided additional explanations, modeling, and feedback as needed. As students became increasingly independent in their strategy use, feedback and instruction were reduced. This type of instruction was designed to gradually reduce my role over the course of the instructional intervention. Therefore, at the beginning of the instructional intervention, I was responsible for explicit instruction. By the end of the instructional intervention, the
students were expected to take responsibility for constructing summary statements, checking and evaluating them.

Independent practice. After guided practice, students were given extensive independent practice in the context of regular classroom instruction using paragraphs contained in their packets (See Appendix A). Independent practice afforded students an opportunity to try using the strategy on their own without teacher assistance. I referred to the checklist (See Appendix B) often during the course of the instructional intervention. According to Harris and Pressley (1991), this type of comprehension strategy instruction is different from traditional basal reading instruction in that teachers model, discuss, explain, and reexplain.

Data Collection Procedures

Scores on the three measures: reading comprehension, metacognitive strategies inventory, and think aloud interview were the dependent variables. The independent variable was the grouping for instruction. The Gates-MacGinitie Reading Test was used to pretest and posttest the students on reading comprehension achievement. The Metacognitive Awareness of Reading Strategies Inventory was administered as a pretest and posttest to assess students' metacognitive strategies use. In addition, the two measures, the GMRT and MARSI were administered as delayed posttests. The think aloud assessment and strategies interviews were used to provide insight into the summarization training. Table 8 shows the sequence of data collection. Sources include pretests, intervention instruction, posttests, and delayed posttests.
Table 8

Sequence of Data Collection

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Data Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretests (Form S, GMRT &amp; MARSI)</td>
<td>Day 1 prior to the start of the instructional intervention</td>
</tr>
<tr>
<td>Instructional Intervention</td>
<td>Days 2-15 after the administration of the pretests</td>
</tr>
<tr>
<td>Students’ Written Summaries</td>
<td>Days 2-15</td>
</tr>
<tr>
<td>Posttests (Form T, GMRT &amp; MARSI)</td>
<td>Day 16 immediately following the instructional intervention</td>
</tr>
<tr>
<td>Think-Aloud and Strategy Interviews</td>
<td>Days 17 &amp; 18</td>
</tr>
<tr>
<td>Delayed Posttests (Form S, GMRT &amp; MARSI)</td>
<td>Four weeks after the administration of posttests</td>
</tr>
</tbody>
</table>

_Pretests._ The pretests were group administered by the teacher researcher to all of the participants in the study. The Metacognitive Awareness of Reading Strategies Inventory was administered first, followed by the Gates-MacGinitie Reading Subtest (Form S). The administration time for the MARSI took 20 minutes and the GMRT administration time was 35 minutes. Students completed the demographic portion of both pretests which asked them to provide their student number, gender, age and race. Both the MARSI and GMRT were administered in the school’s cafeteria according to the directions that accompanied the tests. The tests were hand scored by the teacher researcher.

_Posttest._ Creswell (2003) maintained that the usual practice is to administer the posttests immediately after the research participants have completed the experimental treatment. Therefore, the Gates-MacGinitie Reading Subtest (Form T) and the
Metacognitive Awareness of Reading Strategies Inventory was administered immediately after the instructional intervention. The administration for the posttests followed the same procedures as the pretests. The posttests were also hand scored by the researcher.

According to Gall et al. (1996), the interview process allows the researcher to obtain greater depth of information and clarify statements. The researcher selected six students from each of the experimental groups. These students were asked to read a text at their independent reading level from the Qualitative Reading Inventory-4 (QRI-4) and to verbalize their thoughts and strategies while reading. These sessions were audio-taped and transcribed to determine the extent to which students actually employed the strategies they reported using on the Metacognitive Awareness of Reading Strategies Inventory.

*Think aloud assessment.* A focal group consisting of six students from both of the experimental groups was purposefully selected to participate in the think aloud assessment and strategies interview (two lower ability, two average ability, two higher ability, n = 12) after the intervention. The think aloud assessment was used determine if focal students actually used the strategies they reported using on the MARSI. Their reading ability levels were based on their posttest scores from the Gates-MacGinitie Reading Test. I provided students in the focal group with two demonstrations of approximately 3-5 minutes each of thinking aloud while reading. The participants were instructed to read the text aloud (including any rereading) and to express all thoughts and strategies aloud at the time they came to mind. After the demonstration, focal students applied the procedure in reading a passage at their independent reading level. They were instructed to read a passage at their grade level from the Qualitative Reading Inventory-4
(QRI-4) and to verbalize their thoughts and strategies while reading. These sessions were audio-taped and transcribed.

**Strategies interview.** Six questions were presented to students in the focal group. These questions also served as another source to determine if students used the strategies they reported using on the MARSI. When initial student responses to the questions were unclear or brief, I probed for clarifications and elaborations. For example when a student simply replied, “I don’t know,” I asked the student, “What is the first thing that comes to your mind when you think of reading? Now, what do you think makes a good reader?” These sessions were also audio-taped and transcribed to determine the strategies that readers employed while reading.

All sessions of the instructional intervention were audio-taped and transcribed. Notes were made about issues related to the instructional intervention. These notes included, but were not limited to the following: student engagement, comprehension of the text, strategies needed to understand summarization, points of difficulties, as well as modifications and adjustments that were needed to carry out the strategy.

**Delayed posttest.** To determine if students transferred the skill and strategies taught after the intervention, a delayed posttest was administered to all students four weeks later. The Gates-MacGinitie Reading Test (Form S) previously used as the pretest, was used as the delayed posttest to measure reading comprehension. The Metacognitive Awareness of Strategies Inventory was used to assess students’ strategies usage.

**Data Analysis**

Table 9 presents an overview of the research hypotheses, the instruments and other data sources, and the data analyses that were used to analyze the data. All
statistically employed tests were significant at an alpha level < .05. Further explanation about the analysis for each of the instruments follows.

Table 9

**Research Hypotheses and Associated Data Sources and Analyses**

<table>
<thead>
<tr>
<th>Research Hypotheses/Questions</th>
<th>Data Sources and Analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) There is no statistically significant difference in the reading comprehension achievement of sixth grade students who receive summarization instruction compared to those who did not as measured by the Gates-MacGinitie Reading subtest.</td>
<td>Gates-MacGinitie Reading Subtest</td>
</tr>
<tr>
<td></td>
<td>Pre &amp; Post Assessment Forms S &amp; T</td>
</tr>
<tr>
<td></td>
<td>Repeated measures ANOVA</td>
</tr>
<tr>
<td></td>
<td>Pretest/ Posttest scores=Dependent Variables</td>
</tr>
<tr>
<td>(2) There is no statistically significant difference in the metacognitive strategy use of sixth grade students who receive summarization instruction compared to those who did not as measured by the Metacognitive Awareness of Reading Strategies Inventory.</td>
<td>Metacognitive Awareness of Reading Strategies Inventory</td>
</tr>
<tr>
<td></td>
<td>Pre &amp; Post Assessment</td>
</tr>
<tr>
<td></td>
<td>Repeated measures ANOVA</td>
</tr>
<tr>
<td></td>
<td>Pretest/ Posttest scores=Dependent Variables</td>
</tr>
<tr>
<td>(3) To what extent did students actually use the strategies they reported using on the Metacognitive Awareness of Reading Strategies Inventory?</td>
<td>Transcriptions of audio taped intervention lessons, strategies interviews, think-alouds with focal group field notes, triangulation, and grounded theory</td>
</tr>
<tr>
<td>(4) What instructional modifications were needed to motivate and support students' use of the summarization strategy?</td>
<td>Written summaries, reading specialist observations, transcripts of audio taped intervention lessons, triangulation, and grounded theory</td>
</tr>
<tr>
<td>(5) How did students' summary writing develop throughout the intervention?</td>
<td>Written summaries, and grounded theory for emergent themes</td>
</tr>
</tbody>
</table>

Data collection and analysis went hand and hand in order to promote the emergence of substantive theory, grounded in empirical data. Grounded theory is a set of ideas or propositions which have grown out of the evidence provided by the data (Glaser
This theory can further suggest implications, not necessarily a set of proofs or predictions, but understanding and insights which may guide teaching and further inquiry. The constant comparative method was used in this study to process qualitative data for analysis. Cases in which students' summary writing were similar in many variables, but with different outcomes were compared to see where the key causal differences may lie. Salient themes, recurring ideas and patterns of strategies that linked readers together were identified and explanatory theories were generated.

Creswell (2003) described data analysis as a continuous process that depends on a search for patterns, and provides some general guidelines. Both direct interpretation and categorical aggregation was used. This means that there were times when it was appropriate to analyze or assign meaning to individual instances and other times when analysis of an aggregation of instances warranted attention. For example, when Javon (a low reader) answered questions from the strategies interview that appeared to be off track and when his think-aloud assessment indicated that he rarely used strategies, when compared to Aaron (a high reader) this showed that poor readers often lack fix up strategies to comprehend text and do not know when their comprehension breaks down. This was an important finding of many reading researchers (e.g. Allington, 2001; Block, 1999; Pressley, 1998).

It was not always necessary to give equal attention to all data collected. Rather the focus was maintained on the data that referred to the key issues of the research. Data reduction was accomplished by using codes, which were labels for assigning units of meaning to “chunks” (words, phrases, sentences, paragraphs) of data so that the information could be retrieved and organized in an orderly fashion. According to Miles
and Huberman (1994), “Data reduction is a form of analysis that sharpens, sorts, focuses, discards, and organizes data in a way that final conclusions can be drawn and verified” (p. 11). Coding data is best suited for this type of study in which relevant variables could be identified.

Codes were attached to phrases, sentences, strategies of the audio-taped transcripts of the focal group interviews, and the think aloud assessments. Codes were also attached to participants’ written summaries. After several readings of the transcribed interviews and written summaries, expressions or strategies that appeared to be related were marked based on the codes and classified into conceptual categories or themes. After coding, themes were used to identify broader concepts. In this study, students’ written summaries were categorized into four categories: minimal, adequate, commendable and achieved. In addition, responses from the think aloud assessment and strategies interview were also categorized. For example, when students responded to the strategies interview stating, “I read it over and over again until I get it,” then that response was coded as rereading.

Interrater reliability. According to Creswell (2003), interrater reliability reflects the extent to which different readers or scores reach the same decision when evaluating students’ writing. Scores undergo thorough training in standardized procedures for test scoring.

I identified specific categories of students’ summaries. A specific rubric, based on the attributes of each of the summaries produced on days 1, 8, 11 and 14 were written for each category. The five categories were: (1) minimal; (2) limited; (3) adequate; (4) commendable; and (5) achieved. Twenty graduate students were trained as raters to score
students’ summaries using the five categories. Raters read and discussed students’ summaries in five groups of four raters each. After reading and discussing the summaries, raters noted there was a great deal of difficulty distinguishing between limited and the adequate categories. Therefore, after discussing the categories and rubrics, we agreed to remove limited from the list of categories. This initial training took approximately 2 hours and more practice occurred the following week for about an hour using the revised categories: (1) minimal; (2) adequate; (3) commendable; and (4) achieved.

The raters for the final reliability check were the same graduate students used in the training. The summaries for the final reliability check were purposefully selected so that they were different from the summaries used for the training. These summaries were also from days 1, 8, 11 and 14. Each graduate student received two summary statements and was asked to code them, placing each in one of the four categories. The raters scored 40 of the 184 student summaries (22%) produced on days 1, 8, 11 and 14. Interrater reliability was 95%.

Summary

Chapter Three presented a discussion of methodologies used in this study. Context and participants were discussed. The instruments used to measure reading achievement and strategies usage, data collection procedures and analyses were also presented. Chapter Four will present the findings of the study.
CHAPTER 4
RESULTS

This chapter presents the description and analysis of the data that were collected. It begins with descriptive statistics for the key variables in the study followed by the results of each hypotheses and research questions. Finally, the chapter concludes with qualitative data from think aloud assessments, strategy interviews and an outside observer.

Research Problem and Questions

Students from low socioeconomic environments often experience a difficult time in school. Socioeconomic status and race are variables that have consistently been found to be positively correlated with achievement and are of the most important predictors of academic achievement in public schools. According to NAEP results, minorities and low income students are performing lower in reading when compared to European American students and those who are not of low income backgrounds. Despite being in the era of the No Child Left Behind Act, these gaps in reading persist and minority students from low SES backgrounds continue to be left behind.

The data clearly show the need to provide minority and low income students with high quality reading instruction. Reading comprehension strategy instruction has been shown to be very effective in improving students’ reading achievement. Since reading
text with comprehension is the ultimate goal of reading instruction, it is imperative that teachers teach students how to build comprehension of text through explicit instruction of comprehension strategies (Block, 1999). In turn, students must master these strategies in order to improve their comprehension of text.

However the degree of effectiveness of comprehension strategies instruction can be influenced by a variety of factors including student characteristics (e.g., SES, gender, and language background), duration of instruction, grade level and ability level (Alvermann & Moore, 1991). Yet none of these factors have been routinely investigated, and the studies reviewed supported the effectiveness of reading comprehension strategies instruction on students’ comprehension and metacognitive abilities under limited conditions. Therefore, the focus of this study was the effectiveness of summarization training through explicit teaching on the reading comprehension and metacognitive abilities of sixth grade students in an urban Title I middle school.

The hypotheses for the quantitative questions in this mixed method study were stated in the null form.

1. There is no statistically significant difference in the reading comprehension achievement of sixth grade students who received summarization instruction and those who did not as measured by the Gates-MacGinitie Reading Test.

2. There is no statistically significant difference in the metacognitive strategies use of sixth grade students who received summarization instruction and those who did not as measured by the Metacognitive Awareness of Reading Inventory.

To further explore the problem, the following qualitative research questions were posed:

1. To what extent did students actually use the strategies they reported using on the
Metacognitive Awareness of Reading Strategies Inventory?

2. What instructional modifications were needed to motivate and support students' use of summarization strategy?

4. How did students' ability to summarize develop throughout the intervention?

Findings from Comprehension Achievement

A mixed model analysis of variance (ANOVA) was used to determine if student differences existed between the experimental and control groups' comprehension scores on the pretest, posttest, and delayed posttest. In other words, did students' comprehension change differently depending on what group they were in? To answer this question, time was used as a within-subjects factor (repeated measure) and group was used as a between-subjects factor.

The results indicated there was a main effect for time, \( F = 17.24, p < .001 \). As can be seen from the totals in Table 10, mean comprehension scores tended to increase from pretest (\( M = 23.46, \ SD = 5.35 \)) to posttest (\( M = 28.04, \ SD = 6.72 \)) for the experimental group, however, from the posttest (\( M = 28.04, \ SD = 6.72 \)) to the delayed posttest (\( M = 26.41, \ SD = 6.13 \)) comprehension scores tended to decrease. For the control group, mean comprehension scores remained about the same from pretest (\( M = 25.04, \ SD = 6.29 \)) to posttest (\( M = 25.13, \ SD = 5.39 \)), and increased from posttest (\( M = 25.13, \ SD = 5.39 \)) to delayed posttest (\( M = 26.12, \ SD = 5.55 \)). Therefore the null hypothesis was rejected. There was a statistically significant difference in the reading comprehension achievement of sixth grade students who received summarization instruction compared to those who did not as measured by the GMRT.
Table 10

Results from the Gates-MacGinitie Reading Test

<table>
<thead>
<tr>
<th></th>
<th>Experimental</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean for Pretest</td>
<td>23.46</td>
<td>25.04</td>
</tr>
<tr>
<td>(Standard Deviation)</td>
<td>(5.35)</td>
<td>(6.29)</td>
</tr>
<tr>
<td>Mean for Posttest</td>
<td>28.04</td>
<td>25.13</td>
</tr>
<tr>
<td>(Standard Deviation)</td>
<td>(6.72)</td>
<td>(5.39)</td>
</tr>
<tr>
<td>Mean for Delayed Posttest</td>
<td>26.41</td>
<td>26.12</td>
</tr>
<tr>
<td>(Standard Deviation)</td>
<td>(6.13)</td>
<td>(5.55)</td>
</tr>
</tbody>
</table>

In addition, to the main effect for time, the mixed model ANOVA also showed there was a significant interaction: Time X Group, $F = 15.13, p < .001$. The interaction is shown in Figure 1.

Figure 1. Time X Group Interaction for GMRT
A protected dependent (paired) t test, which is used to test the means of the variables, was conducted to compare the pretest to posttest, pretest to delayed posttest and posttest to delayed posttest. For the intervention group, the analysis of the paired samples t test showed there were significant differences in comprehension scores from the pretest to the posttest (mean difference = -4.59, \( p < .017 \)), the pretest to delayed posttest (mean difference = -2.96, \( p < .017 \)), and the posttest to delayed (mean difference = 1.63, \( p < .017 \)). Thus all comparisons were significant. For the control group, the analysis of the paired samples t test showed there were no significant differences in comprehension scores across testing conditions. Thus all comparisons were not significant.

An independent samples t-test was used to test the null hypothesis that there is no significant difference in the reading comprehension scores of sixth grade students who received summarization training as compared to those students who were not. Although the three comparisons were significant, the independent samples t-test revealed there were no significant differences between the experimental group and the control group on the pretest (\( t(92) = -1.31, \ p > .05 \)) and the delayed posttest (\( t(92) = .24, \ p > .05 \)). However, a significant difference was found between the two groups on the posttest: (\( t(92) = 2.84, \ p < .05 \)). The mean of the experimental group was significantly higher (\( M= 28.04, \ SD = 6.72 \)) than the mean of the control group (\( M= 25.13, \ SD = 5.39 \)).
Focal students' scores remained close to the experimental group's scores on the pretest, posttest and delayed posttest of the GMRT. Yet these scores were still significantly higher than the control group.

A question arose as to how the pretest and posttest of the GMRT correlated with each other. Although the reliability of the GMRT at the sixth grade level was at or above .90 in the Gates-MacGinitie Technical Manual (2000), alternate forms reliability and test retest reliability were not given.

To see how the pretests and posttests from the GMRT correlated with one another, a correlation matrix was used. A Pearson correlation coefficient was calculated for the relationship between the GMRT pretest and posttest. A strong positive correlation was found ($r(92) = .695$, $p < .01$), indicating a significant linear relationship between the
two variables. The correlation indicates good alternate form and test retest reliability for the GMRT as used in this study.

Findings for Reported Metacognitive Strategy Use

A mixed model analysis of variance (ANOVA) was also used to determine if student differences existed between the experimental and control groups' metacognitive scores on the MARSI pretest, posttest, and delayed posttest. In other words, did students' reported use of specific metacognitive abilities change depending on what group they were in? To answer this question, time was used as a within-subjects factor (repeated measure) and group was used as a between-subjects factor.

The results indicated there was a main effect for time, $F = 22.77, p < .001$. As can be seen from the totals in Table 11, mean metacognitive strategy scores tended to increase from pretest ($M= 86.39, SD= 9.28$) to posttest ($M= 96.00, SD= 14.31$) and from posttest to delayed posttest ($M=96.96, SD= 14.07$) for the experimental group. For the control group, mean comprehension scores remained about the same from pretest ($M= 84.96, SD= 14.55$) to posttest ($M= 85.96, SD= 16.03$), and from posttest ($M= 85.96, SD= 16.03$) to delayed posttest ($M= 86.75, SD= 15.91$). Therefore the null hypothesis was rejected. There was a statistically significant difference in the metacognitive strategies use of sixth grade students who received summarization instruction compared to those who did not as measured by the MARSI.
A protected dependent (paired) t test, which is used to test the means of the variables, was conducted to compare the pretest to posttest, pretest to delayed posttest and posttest to delayed posttest. For the intervention group, the analysis of the paired samples t test showed there were significant differences in comprehension scores from the pretest to the posttest (mean difference = -9.61, \( p < .017 \)), and the pretest to delayed (mean difference = -10.57, \( p < .017 \)). However, there was no significant difference from the posttest to delayed posttest (mean difference = -.96, \( p > .017 \)). For the control group, the analysis of the paired samples t test showed there were no significant differences in comprehension scores across testing conditions. Thus none of the comparisons were significant.

An independent samples t-test was used to test the null hypothesis that there is no significant difference in the metacognitive strategy scores of sixth grade students who received summarization training as compared to those students who were not. Significant
differences were found between the two groups on the posttest ($t(92) = 3.19, p < .05$) and the delayed posttest ($t(92) = 3.29, p < .05$). The means of the posttest (M=96.00, SD= 14.41) and delayed posttest (M= 96.96, SD = 14.07) scores for the experimental group was significantly higher than the means of the control group’s posttest (M= 85.96, SD = 16.03) and delayed posttest (M= 86.75, SD = 15.91).

As seen in Figure 3, the metacognitive strategies use of the experimental group was greater than the control group. The greatest differences can be seen from pretest to posttest, but the differences remained statistically significant at delayed posttest.

![Figure 3. Graph of MARS I Scores](image)

In addition, Figure 3 revealed that the focal students also had greater metacognitive scores than the control group. The means of the posttest (M=97.00, SD= 16.93) and delayed posttest (M= 97.67, SD = 16.71) scores for the focal students were significantly higher than the means of the control group’s posttest (M= 85.96, SD = 16.03) and delayed posttest (M= 86.75, SD = 15.91).
Table 12 shows the means and standard deviations for all participants’ reported responses on the pretest, posttest and delayed posttest of MARSI by subscales. The subscales and an example of each are: global (I know why I’m reading before I begin to read.); support (I write down ideas to help me understand what I read.); and problem solving (I read slowly but carefully to be sure I understand what I’m reading.).

Table 12

*Metacognitive Strategies Use by Subscale for Whole Group*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pre</th>
<th>Post</th>
<th>Delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(SD)</td>
<td>(SD)</td>
</tr>
<tr>
<td><strong>Global</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>44.11</td>
<td>49.50</td>
<td>47.80</td>
</tr>
<tr>
<td></td>
<td>(8.59)</td>
<td>(11.96)</td>
<td>(10.48)</td>
</tr>
<tr>
<td>Control</td>
<td>42.90</td>
<td>44.21</td>
<td>46.27</td>
</tr>
<tr>
<td></td>
<td>(10.06)</td>
<td>(12.61)</td>
<td>(11.48)</td>
</tr>
<tr>
<td><strong>Support</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>19.07</td>
<td>17.50</td>
<td>19.89</td>
</tr>
<tr>
<td></td>
<td>(6.57)</td>
<td>(8.51)</td>
<td>(8.18)</td>
</tr>
<tr>
<td>Control</td>
<td>17.85</td>
<td>16.19</td>
<td>16.48</td>
</tr>
<tr>
<td></td>
<td>(6.44)</td>
<td>(9.39)</td>
<td>(7.34)</td>
</tr>
<tr>
<td><strong>Problem Solving</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>23.22</td>
<td>29.11</td>
<td>28.28</td>
</tr>
<tr>
<td></td>
<td>(6.80)</td>
<td>(8.41)</td>
<td>(8.29)</td>
</tr>
<tr>
<td>Control</td>
<td>23.81</td>
<td>25.56</td>
<td>24.42</td>
</tr>
<tr>
<td></td>
<td>(6.88)</td>
<td>(8.88)</td>
<td>(7.98)</td>
</tr>
</tbody>
</table>
Students’ use of strategies by subscale remained about the same across pretest, posttest and delayed posttest. Global strategies were used more often than support and problem solving strategies. The largest increase in strategy use by subscale can be seen in the experimental group’s use of problem solving strategies from pretest (M= 23.22, SD= 6.80) to posttest (M= 29.11, SD= 8.41). Although there was an increase in the use of problem solving strategies by the control group from pretest (M= 23.81, SD= 6.88) to posttest (M= 25.56, SD= 8.88), this increase was not as large as the increase for the experimental group.

Table 13 provides a visual description of focal students’ metacognitive strategies use by subscales. Pretest, posttest and delayed posttest scores on the MARSI indicated that focal students used more global strategies than problem solving strategies, and support strategies. Strategies used by the focal students were similar to those used by the whole group.

Table 13

Metacognitive Strategies Use by Subscale for Focal Group

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pre</th>
<th>Post</th>
<th>Delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>45.58</td>
<td>49.58</td>
<td>48.67</td>
</tr>
<tr>
<td></td>
<td>(8.84)</td>
<td>(14.25)</td>
<td>(6.92)</td>
</tr>
<tr>
<td>Support</td>
<td>16.83</td>
<td>17.42</td>
<td>21.00</td>
</tr>
<tr>
<td></td>
<td>(7.37)</td>
<td>(7.64)</td>
<td>(10.23)</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>23.50</td>
<td>30.50</td>
<td>28.00</td>
</tr>
<tr>
<td></td>
<td>(7.57)</td>
<td>(7.40)</td>
<td>(9.58)</td>
</tr>
</tbody>
</table>
Support strategy use increased from posttest to delayed posttest, but there were no increases in global and problem solving strategies from posttest to delayed posttest. On the other hand, the greatest increase in strategy use by subscale can be seen in focal students’ use of problem solving strategies from pretest (M=23.50, SD=7.57) to posttest (M=30.50, SD=7.40).

Although the data in Table 13 showed that students in the focal group used more global strategies, two students, Felecia and Katrina used more problem solving strategies than global strategies on the MARSI posttest. Interestingly enough neither of these students were high readers. Table 14 displays individual metacognitive strategies use by subscales on the posttest for focal students.

Table 14

*Individual Metacognitive Strategies Use for Focal Group*

<table>
<thead>
<tr>
<th>Student Pseudonym</th>
<th>Global (n = 13)</th>
<th>Support (n = 9)</th>
<th>Problem Solving (n = 8)</th>
<th>Total (n = 30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaron</td>
<td>41</td>
<td>21</td>
<td>38</td>
<td>100</td>
</tr>
<tr>
<td>Bobby</td>
<td>62</td>
<td>15</td>
<td>33</td>
<td>110</td>
</tr>
<tr>
<td>Chris</td>
<td>59</td>
<td>21</td>
<td>37</td>
<td>117</td>
</tr>
<tr>
<td>Dina</td>
<td>61</td>
<td>20</td>
<td>39</td>
<td>120</td>
</tr>
<tr>
<td>Erika</td>
<td>58</td>
<td>18</td>
<td>36</td>
<td>112</td>
</tr>
<tr>
<td>Felecia</td>
<td>29</td>
<td>26</td>
<td>34</td>
<td>89</td>
</tr>
<tr>
<td>Galvin</td>
<td>60</td>
<td>10</td>
<td>18</td>
<td>88</td>
</tr>
<tr>
<td>Henry</td>
<td>63</td>
<td>13</td>
<td>23</td>
<td>99</td>
</tr>
</tbody>
</table>
Further analysis of the focal students’ scores on the posttest showed that the higher achieving students (Aaron, Bobby, Chris and Dina) had higher metacognitive scores, whereas the lower achieving students (Javon, Katrina and Latonya) had lower metacognitive scores.

Students in the focal group also responded to six questions related to the strategies that good readers use and how they approach a reading task: (1) What do good readers do? (2) What makes someone a good reader? (3) What do you think about before you read a new story or chapter? (4) What do you do when you come to a word you cannot pronounce? (5) What do you do when you come to a word you can pronounce, but do not know what it means? (6) What do you do when you read something that does not make sense? Focal group students’ responses were coded and grouped into categories. Table 15 shows the responses from the strategy interview which was a prong of this triangulated study.
### Table 15

**Focal Students’ Responses to Strategy Interview**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Category</th>
<th>Examples of Responses</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What do good readers do?</strong></td>
<td>Understanding</td>
<td>“They understand what they are reading.”</td>
<td>Aaron, Dina, Ericka, Felecia, Henry</td>
</tr>
<tr>
<td></td>
<td>Wide reading</td>
<td>“They read a lot.”</td>
<td>India, Katrina</td>
</tr>
<tr>
<td></td>
<td>Understanding</td>
<td>“Good readers know when to stop and to their best to accomplish what they read.”</td>
<td>Javon</td>
</tr>
<tr>
<td></td>
<td>Enjoyment</td>
<td>“Good readers study and like to read.”</td>
<td>Bobby, Chris, Galvin, Latonya</td>
</tr>
<tr>
<td><strong>What makes a good reader?</strong></td>
<td>Independence</td>
<td>“Reading by yourself makes you a good reader.”</td>
<td>Javon</td>
</tr>
<tr>
<td></td>
<td>Wide reading</td>
<td>“You have to read books at your grade level, and sometimes even harder books for a challenge.”</td>
<td>Dina</td>
</tr>
<tr>
<td></td>
<td>Understanding</td>
<td>“Read and understand what you read.”</td>
<td>Aaron, Bobby, Chris, Ericka, Felicia, Henry, India, Latonya</td>
</tr>
<tr>
<td><strong>What do you think about before reading?</strong></td>
<td>Use prior knowledge</td>
<td>“I think about something I already read and try to find out what the story might be about.”</td>
<td>Aaron, Bobby, Chris, Ericka, Galvin, Henry, India, Katrina, Latonya</td>
</tr>
<tr>
<td></td>
<td>Use prior knowledge</td>
<td>“I ask myself is it going to be like the last chapter or book I read.”</td>
<td>Felecia</td>
</tr>
<tr>
<td></td>
<td>Use prior knowledge</td>
<td>“I think of a new chapter because it might be good events in the next chapter.”</td>
<td>Javon</td>
</tr>
</tbody>
</table>
Table 15 (Continued)

**Focal Students’ Responses to Strategy Interview**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Category</th>
<th>Examples of Responses</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What do you do when you cannot pronounce a word?</strong></td>
<td>Use a strategy</td>
<td>“I ask someone or just figure it out myself.”</td>
<td>India, Javon</td>
</tr>
<tr>
<td></td>
<td>Avoidance</td>
<td>“I skip it so I can finish reading the story.”</td>
<td>India, Javon</td>
</tr>
<tr>
<td></td>
<td>Use a strategy</td>
<td>“You look at it and see if you see a word in that you know.”</td>
<td>Chris, Latonya, Aaron</td>
</tr>
<tr>
<td></td>
<td>Use a strategy</td>
<td>I sound it out and say it how it sounds.</td>
<td>Bobby, Dina, Ericka, Felecia, Galvin, Henry, Katrina</td>
</tr>
<tr>
<td><strong>What do you do when you do not know the meaning of a word?</strong></td>
<td>Use a strategy</td>
<td>“I look it up in the dictionary.”</td>
<td>Bobby, Chris, Ericka, Galvin, Henry, Katrina, Latonya</td>
</tr>
<tr>
<td></td>
<td>Use a strategy</td>
<td>“I take a part of the word I know and see if I know what it means.”</td>
<td>Aaron</td>
</tr>
<tr>
<td></td>
<td>Dependency</td>
<td>“I ask someone what it means.”</td>
<td>Dina, Felecia, India, Javon</td>
</tr>
<tr>
<td><strong>What do you do when you read something that does not make sense?</strong></td>
<td>Use a strategy</td>
<td>“I read it over again.”</td>
<td>Aaron, Bobby, Chris, Dina, Ericka, Katrina, Felecia, Latonya, Henry</td>
</tr>
<tr>
<td></td>
<td>Avoidance</td>
<td>“I just keep reading.”</td>
<td>Galvin, India, Javon</td>
</tr>
</tbody>
</table>

A majority of the focal students mentioned that a good reader reads a lot and comprehends what they have read. In addition, they all tended to use prior knowledge and make predictions before reading. However, Galvin, India and Javon mentioned they keep
reading when they read something that does not make sense. What is also interesting about these students is they are the average and low readers.

A second prong of this triangulated study was the think-aloud assessment. Table 16 displays the strategies students used during think aloud. A variety of strategies were evident during the think aloud interviews. Felecia was the only student to exhibit skimming the text as a strategy. Nonetheless, all of the students made predictions and reread the text for understanding when comprehension was fragmented during the think aloud interview.

Table 16

Focal Students' Think Aloud Strategies

<table>
<thead>
<tr>
<th>Strategy (Category)</th>
<th>Student Example</th>
<th>Student Who Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summarize</td>
<td>“So in order to play soccer, they had to make a fake soccer ball. Yeah, I would have to say they were poor.” “When you really like to do something, you take the stuff you already have at home and make it work for whatever you need. Pele liked soccer but he couldn’t afford a ball so he made one.”</td>
<td>Aaron, Chris</td>
</tr>
<tr>
<td>Skim Text</td>
<td>“I was just looking to see how long the story was. I didn’t know it was a strategy. I did that [skimmed the text] because I wanted to see how long the story was and were there any questions at the end. If there were questions at the end, I would probably read it slow.”</td>
<td>Felecia</td>
</tr>
<tr>
<td>Retell</td>
<td>“Pele liked to play soccer. He practiced all the time and he finally became good at it. Even though he was poor, he still became a professional soccer player.”</td>
<td>Aaron, Bobby, Ericka, Latonya</td>
</tr>
</tbody>
</table>
Table 16 (Continued)

**Focal Students’ Think Aloud Strategies**

<table>
<thead>
<tr>
<th>Strategy (Category)</th>
<th>Student Example</th>
<th>Student Who Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior Knowledge</td>
<td>“I know it’s about a boy because you don’t see girls trying to be a professional soccer player.”</td>
<td>Aaron, Bobby, Chris, Dina, Felecia, Katrina, Javon</td>
</tr>
<tr>
<td></td>
<td>“He [John Chapman] planted appleseeds for people because he liked apples. Seeds can be planted to grow different things, but he liked apples.”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“That reminds me of learning how to speak English when I was in preschool.”</td>
<td></td>
</tr>
<tr>
<td>Context Clues</td>
<td>“That [primitive] must mean in the old days.”</td>
<td>Bobby, Chris, Felecia</td>
</tr>
<tr>
<td></td>
<td>Oh, it’s not a girl. It has to be a boy. The sentence says he.”</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>“I wonder what anthropology means?”</td>
<td>Aaron, Chris, Latonya</td>
</tr>
<tr>
<td></td>
<td>Why did he [Pele] have to make a soccer ball out of other stuff?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Why did she want to learn about those people?”</td>
<td></td>
</tr>
<tr>
<td>Reread</td>
<td>“Pele discovered that the ball could be better when he wore shoes. (Student reread the sentence correctly: Pele discovered that the ball could be better controlled when he wore shoes).”</td>
<td>Aaron, Bobby, Chris, Dina, Ericka, Felecia, Galvin, Henry, India, Javon, Katrina, Latonya</td>
</tr>
</tbody>
</table>

A comparison of the focal group students’ reported strategies use on the MARSI, strategies from the strategies interview, and observed strategies use during the think aloud assessment is located in Table 17. Bolded names indicate students who reported using the strategy during the think aloud assessment.
Table 17

*Comparison of Focal Group Reported and Used Strategies*

<table>
<thead>
<tr>
<th>Strategy (Category)</th>
<th>Students’ Reported</th>
<th>Students’ Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summarize</td>
<td><em>Aaron, Bobby, Chris, Dina, Ericka, Henry, Latonya</em></td>
<td><em>Aaron, Chris</em></td>
</tr>
<tr>
<td>Skin Text</td>
<td><em>Aaron, Chris, Ericka, Henry, Javon, Katrina, Latonya</em></td>
<td><em>Felecia</em></td>
</tr>
<tr>
<td>Retell</td>
<td><em>Aaron, Chris, Ericka, Galvn, Katrina, Latonya</em></td>
<td><em>Aaron, Bobby, Ericka, Latonya</em></td>
</tr>
<tr>
<td>Predict</td>
<td><em>Aaron, Bobby, Chris, Dina, Ericka, Felecia, Galvin, Henry, India, Javon, Katrina, Latonya</em></td>
<td><em>Aaron, Bobby, Chris, Dina, Ericka, Felecia, Galvin, Henry, India, Javon, Katrina, Latonya</em></td>
</tr>
<tr>
<td>Prior Knowledge</td>
<td><em>Aaron, Bobby, Chris, Dina, Ericka, Felecia, Galvin, Henry, India, Javon, Katrina, Latonya</em></td>
<td><em>Aaron, Bobby, Chris, Dina, Felecia, Katrina</em></td>
</tr>
<tr>
<td>Context Clues</td>
<td><em>Aaron, Bobby, Dina, Ericka, Felecia, Galvin, Katrina, Latonya</em></td>
<td><em>Aaron, Bobby, Chris, Felecia</em></td>
</tr>
<tr>
<td>Question</td>
<td><em>Aaron, Bobby, Dina, Ericka, Felecia, Galvin, Henry, India, Javon, Katrina, Latonya</em></td>
<td><em>Aaron, Chris, Latonya</em></td>
</tr>
<tr>
<td>Reread</td>
<td><em>Aaron, Bobby, Chris, Dina, Ericka, Felecia, Galvin, Henry, India, Javon, Katrina, Latonya</em></td>
<td><em>Aaron, Bobby, Chris, Dina, Ericka, Felecia, Galvin, Henry, India, Javon, Katrina, Latonya</em></td>
</tr>
</tbody>
</table>

All of the focal students reported they make predictions and reread the text. These same strategies were exhibited during think aloud. Also noted is Javon reported using a number of strategies that were not exhibited during the think aloud interviews.
Findings from Field Notes about the Intervention

Summarization Checklist

Despite the fact that I modeled and explained to students how to construct summary statements using the checklist, at the end of days one and two, I did not observe the students utilizing the summarization checklist. Their lack of usage was evident in their summary statements. For example, their summary statements were often longer than the paragraphs themselves. Table 18 shows an example of summary statements produced on day two of the intervention from two students, one in each of the experimental groups.

Table 18

Examples of Summary Statements Produced on Day Two

<table>
<thead>
<tr>
<th>Actual Text</th>
<th>Racheal (Experimental Group One)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liz pushed another pile of clothes off her bed and flopped down beside me. “My aunt made it when I was ten.” Liz patted her quilt like an old friend. “It has a couple of holes and a mustard stain near the top, but I love it.” “It’s beautiful,” I said. “If you could see it,” said Liz laughing. “I always plan to clean my room, but things get in the way. It drives my mom crazy. She’s a neat freak.” It was true. The rest of Liz’s house looked like a movie set. There were sparkling, mahogany antique tables, glass lamps and a marble coffee table with four perfectly lined up glossy magazines on top. It looked like no one ever sat on or touched anything.</td>
<td></td>
</tr>
<tr>
<td>She pushed a pile of clothes off the bed and flopped down beside me. Her aunt made the great quilt when she was ten. She really likes the quilt and is very special to her because her aunt made it. Her mom is a neat freak. She likes it to be sparkling clean. She had a coffee table. The room looked like nobody had touched it.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patrick (Experimental Group Two)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The paragraph is about Liz pushing another pile of clothes to sit next to her friend. Liz tells her about the quilt. She hopes her friend could see it from all of those clothes on the bed. Then it talks about her mom being a neat freak and all of the nice furniture that her mom keeps clean. It looked like no one had touched it.</td>
</tr>
</tbody>
</table>

Model Summary

Liz’s room is junky compared to the rest of her house.
The two student-written statements above reflected retelling statements rather than summary statements. This is evident by the number of irrelevant details and length. It appeared that the students were not employing any of the techniques previously taught in two lessons to develop a summary statement. As noted above, the summary statements did not reflect the overall idea and the most important information that supported the overall idea of the paragraph. In addition, the statements contained information that was irrelevant to the overall idea. Because of the recurring issue regarding finding the overall idea of each paragraph, it proved to be rather difficult to proceed with items two through four of the checklist.

The checklist was designed to be used as an organizer to support students’ summaries. However, when I noticed students were not utilizing the checklist, I continued to model and explain the importance of the checklist as a guide to aid in producing summary statements, being more explicit each time. To help facilitate students’ use of the checklist, students were questioned as to why they were not using the checklist. Their responses indicated they did not have a clear and concise understanding of a main idea and thus could not comprehend item number three on the checklist.

Modifications

Armed with this information, I made several modifications. First, I worked with the students to clarify what a main idea is and its role in producing a summary. Second, number three on the original checklist was revised from, Have I used any information that is not directly about the overall idea, to Have I used any information that is unnecessary? Third, since students produced summaries that were longer than the original paragraphs, instead of four lines underneath each paragraph, two lines were used.
Next, to encourage students’ use of the checklist, they were placed in peer tutoring groups of two-three students for additional guided practice. Finally, to clarify retelling and summary statements, two examples of students’ summaries were used for reteaching. These statements were retyped as written without the students’ names and placed on the overhead.

Students were asked to give the main idea or gist of the paragraph. I clarified any statements that did not reflect the main idea. Afterwards, lines were drawn through any information that did not support the main idea, information that was unnecessary and information that was used more than once, while utilizing the checklist.

After making the aforementioned modifications, students’ production of summary statements improved. They had a tendency to rely more on the checklist when they were evaluating each others’ summary statements in small groups. For instance, in small groups, students read each other statements and used the checklist to ensure the statements reflected the information that should be included in a summary. If their statements were more retelling than a summary, students focused their attention to the checklist to resolve the conflict. Table 19 provides a description of how four of the students’ summary writing developed over time. These four were chosen as they represent the range of development that occurred for students’ written summaries.
Table 19

*Description of Students' Summary Writing from Days 1, 8, 11 and 14*

<table>
<thead>
<tr>
<th>Student</th>
<th>Day 1</th>
<th>Day 8</th>
<th>Day 11</th>
<th>Day 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Javon (focal student)</td>
<td>A girl has a friend named Liz. They were very good friends at school, but they had never been to each other's house. And one day Liz offered her to come to her house, but she had never been there. When she got there Liz's room was junky with stuff all over her bed. The quilt her aunt bought was there too.</td>
<td>It's about how Mickey and Jake is riding in his brother's car for the first time. Jake had to get the car home by 10:00 because brother wanted to use the car later.</td>
<td>Jake was telling how he flunked ninth grade and how he was being teased. Then Mickey sees a nice car on the way.</td>
<td>Byron will get in trouble when his dad gets home for perming his hair. He put chemicals in his hair to make it straight.</td>
</tr>
<tr>
<td>Travis</td>
<td>This was her first time coming over. Coming over and inviting someone to her house was making her nervous. Her room was a mess because she is always so busy doing other stuff. She was looking for a place for her to sit. So she just pushed the stuff off the bed.</td>
<td>Jake had to get the car back by 10. Then he said the car was fast. He and Andy had fixed the car up. The car was fast like an airplane, but it just couldn't take flight.</td>
<td>Jake regrets flunking grade 9 because he fell six of his classes. That is why he didn't like school.</td>
<td>Byron shouldn't have perm to his hair because he knew he was going to get in trouble.</td>
</tr>
<tr>
<td>Samantha</td>
<td>The overall idea is the girl is going to Liz's house. The girl was worried about going. Her room was junky and there is nowhere to sit. They had to move the clothes off the bed.</td>
<td>Jake had to get the car back home by 10:00 because his brother got off work at 9:30.</td>
<td>Jake tried to make flunking sound like it was cool. He didn't want his friends to know he was dumb.</td>
<td>Byron is in trouble because he perm to his hair.</td>
</tr>
<tr>
<td>Aaron (focal student)</td>
<td>Liz's friend goes to her house and her room is</td>
<td>Jake helped Andy fix the car so he loaned it to him, but he had to have it back by 10:00.</td>
<td>Jake tried to make flunking sound cool because he didn't want to be embarrassed or feel stupid.</td>
<td>Byron is going to get in trouble for putting chemicals in his hair.</td>
</tr>
</tbody>
</table>
Students gradually moved from retelling to summarizing with main idea statements included. The lengths of students’ summaries are also noticeable from day 1 to day 14. On day 1 all of the students produced long summary statements that included irrelevant information. In terms of length, Aaron’s summary statements were short and remained the same length throughout.

However, as the intervention progressed, students began to produce summary statements that were shorter, but still included some irrelevant information. It was not until day 11 when a majority of the students were writing summary statements that included the main idea and relevant information that supported the main idea.

**Conversation in Small Group**

During small group, students were engaged in task-oriented dialogue with their peers. They used think-alouds as they read the text and verbalized strategies (i.e. predicting, prior knowledge, questioning, inferencing, visual images) that helped to facilitate their understanding of the paragraphs. They were able to relate information from the text to their prior knowledge to provide insight about ideas expressed in the paragraphs. Their conversations afforded all students in the group opportunities to participate and share knowledge from the perspectives of those in the group. In addition, the student-to-student dialogue showed those experiencing comprehension difficulties the kind of processing or thinking skills needed in order to complete the task. Below is an example of one group’s conversation discussing a paragraph from *Overdrive*.

I think the main idea of this paragraph is that Mickey didn’t want to get dress inside the house. He wanted to get dressed in the car. (Aaron)

No, I think he was rushing to get to the car because they were on their way somewhere. (Robert)
They don’t say they were on their way somewhere. They just say let’s roll. (Aaron)

Yeah, that means they were on their way somewhere. (Robert)

I am thinking that Mickey didn’t want to hold him up. That’s why he was rushing. (Aaron).

Mickey was in a rush to go somewhere. (Pamela)
Or he didn’t want to hold him up. (Aaron)

Ok. They were getting ready to go somewhere and they were rushing. (Marsha)

Mickey’s brother was rushing to go somewhere. (Robert)

No, not his brother. Mickey was the one that had to go change his clothes. Mickey is his friend. I think we should write down this: Mickey didn’t want to hold Jake up. (Aaron)

I think they were in a rush to go somewhere. (Pamela)

I still think he didn’t want to hold him up. But hold up is just like in a rush. (Aaron)

Mickey was in a rush because they wanted to leave. (Robert)

Mickey ran out of the house because they were in a rush to leave. (Paul)
So which one are we going to use? (Aaron)

Mickey was in a rush to get in the car. (Pamela)

The interaction within the cooperative learning group allowed the students to explain material to each other, listen to each other’s explanations, and arrive at a joint understanding. For instance, although Aaron appeared to be the facilitator or group leader, in some cases he was unsure about the main idea of the paragraph. However, after listening to the other students’ explanations, he agreed with their main idea statement.
In addition to the dialogue that occurred during small group, several students were observed reading ahead to confirm their predictions about the text and because they were interested in finding out what happened next. One student stated, “since we are summarizing more than one paragraph, we get to see if Jake is going to race somebody in his brother’s car.”

*Use of Texts*

Although there were texts of lower grade levels, some students still experienced difficulties with reading and comprehension. They had to be continuously encouraged to reread the text when they lacked understanding. In addition, there was a great need to activate students’ prior knowledge because some of the vocabulary (e.g. linoleum, grief, mahogany) posed a problem which may have affected their comprehension. Furthermore, the dialect used in the novel, *The Watsons Go To Birmingham* also created a problem for many of the students. Often times, I had to restate information using Standard English.

Since there were multiple novels, students were often distracted by the different story lines and characters. For example, they were not sure which character in *Overdrive* had a license to drive and often confused this character (Jake) with Byron from *The Watsons Go To Birmingham*. In some cases, instead of students using the characters’ names, students used pronouns instead because of the uncertainty of the characters.

Students were excited about summarizing multiple paragraphs because they wanted to find out what would happen next in the text. One student stated, “Now we don’t have to wait until tomorrow to find out if Byron got a whooping for putting the chemicals in his hair.” However, they found it difficult to construct a summary from the four or five summary statements they produced from single paragraphs. Again, they were
not utilizing the checklist to form a summary statement. Prior to modeling and explaining using samples from each of the two experimental groups, students’ summary statements included information about story elements such as the setting, characters, plot, conflict and resolution. Finally on day 11, after four days of additional guided practice with extensive monitoring, praise and feedback, most students began to produce statements that reflected more of a summary than retelling.

An analysis of students’ summaries, which was the third prong of this triangulated study, fell into four broad categories over days one, eight, eleven and 14: minimal, adequate, commendable, and achieved. These categories were developed using grounded theory. The categories of summary writing complexity and examples are described in Table 20.
Table 20

Description of Summary Writing Themes

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal</td>
<td>copies directly from text, lacks organization, includes irrelevant and redundant information, misses key concepts, texts is longer than original text, makes up information, retells</td>
<td>Jake wasn’t liked by the rich kids.</td>
</tr>
<tr>
<td>Adequate</td>
<td>partially identifies main idea, uses author’s words to paraphrase, includes some irrelevant information, use some sequential order, shorter length</td>
<td>Kids who had money thought they were better than Jake because he didn’t have money.</td>
</tr>
<tr>
<td>Commendable</td>
<td>distinguishes between main idea and retelling, uses author’s words to summarize, shows sequential order, uses relevant information to support main idea, summaries are short in length</td>
<td>The kids make jokes about Jake and he doesn’t like it.</td>
</tr>
<tr>
<td>Achieved</td>
<td>identifies main idea with supporting details, statements shows connection of ideas, summaries are short in length</td>
<td>The kids in Jake’s class made fun of him because he wasn’t smart and didn’t have a lot of money.</td>
</tr>
</tbody>
</table>

Looking at Table 20, the summary that was categorized as minimal is quite different than the summary that was categorized as achieved. The minimal summary statement showed that the student did not have an understanding of the main idea and was missing key concepts. However, the student that produced an achieved summary statement had a clear understanding of the main idea and used supporting details to support the main idea statement.

Table 21 below shows the number of students that fell in each of the categories on days 1, 8, 11 and 14. As noted in the table, there was a noticeable increase in the number of students who moved from the minimal category to the adequate category on day 11.
Table 21

*Whole Group Producing Summaries at Each Level on Days 1, 8, 11 and 14*

<table>
<thead>
<tr>
<th>Category</th>
<th>Day 1</th>
<th>Day 8</th>
<th>Day 11</th>
<th>Day 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal</td>
<td>32</td>
<td>25</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>(70%)</td>
<td>(54%)</td>
<td>(39%)</td>
<td>(17%)</td>
</tr>
<tr>
<td>Adequate</td>
<td>14</td>
<td>18</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>(30%)</td>
<td>(39%)</td>
<td>(43%)</td>
<td>(54%)</td>
</tr>
<tr>
<td>Commendable</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>(7%)</td>
<td>(11%)</td>
<td>(11%)</td>
<td></td>
</tr>
<tr>
<td>Achieved</td>
<td>3</td>
<td></td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(7%)</td>
<td></td>
<td>(17%)</td>
<td></td>
</tr>
</tbody>
</table>

Of the 46 students in the experimental group, more than half (70%) of the students were producing minimal summary statements on day 1. However, it is important to note that that number decreased on days 11 and 14. Students were producing more mature summaries (achieved) by days 11 and 14.

Table 22 displays the percentage of the different types of readers (i.e. high, average, low) for the whole group that fell into each of the four summary writing categories on days 1, 8, 11 and 14.
Table 22

*Reading Levels by Percentage for Whole Group*

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage of Readers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High: n=17</td>
</tr>
<tr>
<td>Day 1</td>
<td></td>
</tr>
<tr>
<td>Minimal</td>
<td>13 (76%)</td>
</tr>
<tr>
<td>Adequate</td>
<td>4 (24%)</td>
</tr>
<tr>
<td>Commendable</td>
<td></td>
</tr>
<tr>
<td>Achieved</td>
<td></td>
</tr>
<tr>
<td>Day 8</td>
<td></td>
</tr>
<tr>
<td>Minimal</td>
<td>9 (53%)</td>
</tr>
<tr>
<td>Adequate</td>
<td>6 (35%)</td>
</tr>
<tr>
<td>Commendable</td>
<td>2 (12%)</td>
</tr>
<tr>
<td>Achieved</td>
<td></td>
</tr>
<tr>
<td>Day 11</td>
<td></td>
</tr>
<tr>
<td>Minimal</td>
<td>5 (29%)</td>
</tr>
<tr>
<td>Adequate</td>
<td>7 (41%)</td>
</tr>
<tr>
<td>Commendable</td>
<td>3 (18%)</td>
</tr>
<tr>
<td>Achieved</td>
<td>2 (12%)</td>
</tr>
<tr>
<td>Day 14</td>
<td></td>
</tr>
<tr>
<td>Minimal</td>
<td>9 (53%)</td>
</tr>
<tr>
<td>Adequate</td>
<td>9 (53%)</td>
</tr>
<tr>
<td>Commendable</td>
<td>3 (18%)</td>
</tr>
<tr>
<td>Achieved</td>
<td>5 (29%)</td>
</tr>
</tbody>
</table>

Across the four days, low readers were the majority of readers in the minimal category. There were no low readers who actually reached achieved. The achieved category consisted mainly of high and average readers.
The data for the focal students were nearly identical to the data produced by the whole group. Table 23 disaggregates the data by summary writing categories on days 1, 8, 11 and 14.

Table 23

Focal Students Producing Summaries at Each Level on Days 1, 8, 11, and 14

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Students (n=12)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day 1</td>
<td>Day 8</td>
<td>Day 11</td>
<td>Day 14</td>
</tr>
<tr>
<td>Minimal</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>(67%)</td>
<td>(33%)</td>
<td>(25%)</td>
<td>(17%)</td>
</tr>
<tr>
<td>Adequate</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>(33%)</td>
<td>(42%)</td>
<td>(50%)</td>
<td>(50%)</td>
</tr>
<tr>
<td>Commendable</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(25%)</td>
<td>(17%)</td>
<td>(25%)</td>
<td></td>
</tr>
<tr>
<td>Achieved</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(8%)</td>
<td></td>
<td>(8%)</td>
<td></td>
</tr>
</tbody>
</table>

More than 60% of the focal students were producing summaries at the minimal level on day 1. It was not until day 11 when one student produced a summary that was categorized as "achieved." That number remained the same on day 14 of the instructional intervention.

Table 24 shows the percentage of readers in each category on days 1, 8, 11 and 14. High and average readers showed improvement in their summary writings at a faster pace than low readers.
### Table 24

**Reading Levels by Percentage for Focal Group**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage of Readers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High ( n=4 )</td>
<td>Average ( n=4 )</td>
</tr>
</tbody>
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**Day 1**

| Minimal   | 2 (50%) | 2 (50%) | 4 (100%) | 8 (67%) |
| Adequate  | 2 (50%) | 2 (50%) |          | 4 (33%) |
| Commendable |        |         |          |         |
| Achieved  |         |         |          |         |

**Day 8**

| Minimal   | 2 (50%) | 1 (25%) | 3 (75%) | 4 (33%) |
| Adequate  | 2 (50%) | 2 (50%) | 1 (25%) | 5 (42%) |
| Commendable |        | 1 (25%) |          | 3 (25%) |
| Achieved  |         |         |          |         |

**Day 11**

| Minimal   | 2 (50%) | 3 (75%) | 3 (75%) | 3 (25%) |
| Adequate  | 2 (50%) | 3 (75%) | 1 (25%) | 6 (50%) |
| Commendable | 1 (25%) | 1 (25%) |          | 2 (17%) |
| Achieved  | 1 (25%) |         |          | 1 (8%)  |

**Day 14**

| Minimal   | 1 (25%) | 3 (75%) | 2 (50%) | 2 (17%) |
| Adequate  | 1 (25%) | 3 (75%) | 2 (50%) | 6 (50%) |
| Commendable | 2 (50%) | 1 (25%) |          | 3 (25%) |
| Achieved  | 1 (25%) |         |          | 1 (8%)  |

**Motivation**

In spite of the fact that the selected novels were interesting to students, constant feedback and praise were needed to keep them motivated. At the beginning of the instructional intervention, some students became discouraged, inattentive and withdrawn
because they experienced more difficulties than others when attempting to construct a summary statement. Subsequently, the continuous praise and feedback appeared to have motivated them to work harder to produce a summary.

*Notes from Outside Observer*

The reading specialist observed the two experimental groups on days seven and eleven of the instructional intervention. She noted that the students were not using the checklist to produce summary statements when they worked independently. “They knew they needed to find the main idea and that is where their attention was focused. They seemed to have ignored the rest of the rules.”

She further explained that the texts may have been too difficult for students to get the main idea. As the text was read aloud by different students, vocabulary interfered with fluency. The reading specialist commented, “Several students were focused on decoding the words and this meant that the passage had to be reread in order for the remaining students to grasp some understanding.”

The following suggestions were made after the observations: (1) Continue to model and explain, being more explicit; (2) take the time to question students to ensure their understanding of the main idea before they are released to work independently or in small groups; (3) afford them more opportunities to practice using the strategy with the lower level texts and; (4) organize small groups so that students represent varied reading abilities. The recommendations made by the reading specialist were implemented immediately after each of the post conferences during the coaching cycle.
The students were also observed being on task and participating during the instructional intervention. She also detected the motivation and diligence of the students to produce a summary statement when they were encouraged and praised in response to their comments. In addition, she informed me that she did not see a difference in the summarization instruction provided to each of the groups; the instruction in each of the groups was essentially the same.

The following comment was made by the reading specialist on day 11 during the post-conference:

You did a fabulous job activating students’ prior knowledge and emphasizing the use of context clues. There were so many other strategies that you modeled to help them understand the passages. When students read a part of the text that talked about mom still being mad in *The Watsons Go to Birmingham*, you provided a perfect example and explanation using multiple strategies and the students immediately connected with the text. I think this made them more interested in what they were reading and made it easier to comprehend the remainder of the text. This was also reflected in their summary statements. It appeared that when they understood the text, they produced a better summary statement. Activating their prior knowledge and directing them to context clues in the texts really helped ease some of the difficulties that several of them experienced. It will probably take more time for them to get a full understanding of how to construct summaries that reflect their use of the checklist.

**Summary**

The main goal of this study was to determine the effectiveness of the intervention, summarization instruction, on the reading comprehension achievement and metacognitive strategies use of sixth grade students in a Title I school. The focal group served to provide a more in-depth investigation of the effects of summarization training and the application of metacognitive strategies use on the reading comprehension achievement of these students. The repeated measures ANOVA was conducted to determine if there was
a significant difference in the reading comprehension abilities and metacognitive
strategies use of sixth grade students who received summarization instruction as
compared to those who did not.

This chapter included the results of the participants’ comprehension and
metacognitive scores, as they relate to the two null hypotheses, an analysis of the
summarization instruction, think aloud assessments and strategy interviews as they relate
to the two research questions. The data were analyzed using multiple sources. The
following chapter provides a discussion of the results.
CHAPTER 5
DISCUSSION

Chapter 5 discusses the findings of this research study. Implications for classroom practice and recommendations for future research are also explored.

Reading Comprehension

The increase in scores on the Gates-MacGinitie Reading Test from pretest to posttest indicated the positive impact of summarization instruction on students' reading comprehension achievement when compared to those sixth grade students who did not receive such instruction. Although the experimental group did not score significantly higher than the control group on the delayed posttest, like other studies of comprehension strategy instruction (Baker & Brown, 1991; Palinscar & Brown, 1984; Pearson & Dole, 1987), there was a trend for the experimental group to outperform the control group. Students' lower scores on the delayed posttest may be attributed to its administration almost four weeks after students had a 2-week break. Length of the instructional intervention may also have been a factor. This intervention was only 14 days over 3 weeks. This duration may not have been sufficient to sustain a difference in reading achievement.

According to Pressley, et al. (1983), in order for comprehension strategy instruction to be effective, students need to be able to practice the strategy over a longer
period of time. In addition, frequent and extensive re-explanations are absolutely essential for students to be able to understand and use strategies. Effective strategy instruction that increases reading comprehension depends largely on diagnosing what it is that students do not understand, followed by explanation focusing on points of difficulty and re-explanations appropriate to the level of understanding of the students (Dole, Duffy, Roehler, & Pearson, 1991; Pressley, 2002). Although additional practice and re-explanations were provided when I noticed students were experiencing difficulties with the texts, extensive diagnosing and re-explanation was difficult to implement due to the length of time in which this study was conducted. However, without time constraints, student practice should be ongoing, with re-explanations which can continue as long as necessary for the students to acquire the strategic procedure to a high level of confidence (Brown, El-Dinary, & Afflerbach, 1995; Palinscar, 1986; Palinscar & Brown, 1984).

Metacognitive Strategies Reported and Actually Used

Since better readers apply metacognitive strategies more often and more effectively than do those who read less well (Baker & Brown, 1984, Pearson & Dole, 1987), one might expect that, if the strategy is learned, a concomitant increase in reading comprehension would be evidenced. Although the good readers in this study had higher comprehension scores, think aloud and strategy interviews revealed that good readers did not use many of the strategies that were taught during the summarization instruction. The findings in this study paralleled that of Dole, Brown and Trathen (1996), who speculated that higher achieving students did not find the strategy instruction helpful and initiated their own strategies. It is not clear as to why readers in this study used some of the
strategies taught and not others. Perhaps it is again a result of the short duration of the study not allowing students ample opportunities to practice the strategy with meaningful academic tasks (Tierney & Pearson, 1983). Additional practice may have been helpful in sustaining their use of new strategies beyond the intervention period (Tierney & Readence, 2005). Or perhaps, students’ may have reported they used a particular strategy on the instrument because they knew about it. However, as August, Flavell and Clift (1994) suggest, knowledge of a strategy does not guarantee its use.

Then again, students may have used a strategy, but may not have been aware it was a strategy and not reported it. For example, Felecia did not indicate on the MARSI that she skims the text before reading, but she was observed using this strategy during the think aloud interview. When asked why she was using that strategy, she stated “I didn’t know it was a strategy. I did it because I wanted to know if there were questions at the end. If there were questions at the end, I would read it slowly, but if not, I can read it sort of fast.” I argue that Felecia probably did not identify this strategy because she was not aware it was a strategy.

This mismatch between students’ actual and reported strategy use was also evident with Javon. He reported using several strategies on the MARSI that were not exhibited during the think aloud and strategy interviews. Whereas think alouds can reveal important information about the reading processes, they could also disrupt comprehension and may reveal only those strategies students exhibit when comprehension is fragmented (Bereiter & Bird, 1985). This may have been the case with Javon and other poor readers. As a poor reader, Javon was able to decode words correctly, but he was unable to attend to the meaning of passage and relate ideas in the
passage to prior knowledge (Bos and Vaughn, 1994). Therefore, it is possible that he was not able to evaluate his ongoing comprehension processes while reading, and lacked knowledge of fix up strategies when these processes were fragmented. Allington (1991) posits that active awareness of one’s comprehension while reading and the ability to use effective fix up strategies when comprehension breaks down are essential tools for becoming an effective reader; and lack of such metacognitive skills is a characteristic of poor readers. Research shows that poorer students and those with learning disabilities stick with strategies they know well even if they are ineffective (Brown et al., 1996).

**Summarization Instruction**

The analysis of the summarization instruction indicates that students may have benefited from explicit instruction in main idea at the onset of the study. In addition, the use of graphic organizers supported students’ comprehension abilities and identification of important information. The use of the checklist, selection of texts used and students’ motivation to use the strategies that were taught during the summarization instruction also had a direct impact on the summarization instruction.

**Main Idea Versus Retelling**

Rinehart, Stahl and Erickson (1986) maintained that summarization instruction draws students’ attention to the structure of ideas within the text. Although the students in this study were aware that a summary should be different from the original text and should include only the important information, they seemed to be confused as to what is important and unimportant in the text. A number of researchers (e.g., Bean & Steenwyk, 1984; Brown & Day, 1983; McNeil & Donant, 1982) have found positive results in
summary writing using rules and checklists. Garner (1985) used a similar framework to teach students how to summarize, but students in her study experienced difficulties identifying the main idea. She suggested that effective summary writing instruction should begin with teaching main idea identification.

In spite of the fact that main idea identification was not taught prior to summarization instruction in this study, the distinctions between main idea and summarizing and summarizing and retelling were critical elements to the production of adequate summary statements. When it was apparent that students could not identify important information in the paragraphs, I used graphic organizers (e.g., gist, concept maps, webbing) to show students how to look at information in the paragraphs holistically and make connections among the parts in order to see relationships rather than isolated facts (Brozo & Simpson, 1999). After a brief demonstration of using graphics organizers and allowing students to practice in cooperative learning groups to facilitate main idea identification, they were able to differentiate between summarizing and retelling. This differentiation led them to produce summary statements that were adequate or closer to mastery or those coded as achieved. These statements often included the main idea with supporting and relevant details.

Winograd and Bridge (1986) acknowledged that students have serious problems identifying important information in texts. Like the other students in Hidi and Anderson's (1986) study, students in this study had a tendency to identify importance by personal interest rather than by structural importance.

Despite the fact that summarization skills tend to develop slowly, and proficiency is rarely achieved by high school students and college students (Brown & Day, 1983;
Garner, 1987; Hare & Borchardt, 1984), it may be possible that a different design in summarization instruction could demonstrate otherwise. As shown in this study and the work of other researchers (e.g., Brozo & Simpson, 1999; Stevens & Weinberg, 1985; Millet, 2000), the use of graphic organizers facilitated students' awareness of important information. However, unlike other studies, this study produced sufficient evidence to suggest that the use of graphic organizers facilitated students' awareness of important information and their ability to include this information in their summary statements even when using text at the sixth grade reading level. Perhaps with additional initial scaffolding in main idea instruction with the use of graphic organizers preceded summary writing instruction, summarization skills could be developed prior to high school.

*Use of the Checklist.*

At the beginning of the instructional intervention, students were not utilizing the summarization checklist to construct summary statements. As a result, their summary statements reflected this lack of usage. Although Baumann (1984) and Bean and Steenwyk (1984) did teach these similar rules to sixth grade students, it is not clear from the results of their study whether students learned to apply the rules to construct summary statements. With that being said, even after the modification to the checklist, I can not be certain that the checklist was an essential tool that aided students in the construction of summary statements. It was modified because the reading specialist and I thought students did not understand question 3.

Despite the fact that the checklist was modified, students continued to produce long summary statements that contained many irrelevant details and often lacked the main idea. Therefore, in addition to modifying the checklist, the number of lines
underneath each paragraph was also modified, changing from four lines to two. These resembled the gist graphic organizer that was used for main idea identification. The modifications to the number of lines underneath each paragraph proved to be more helpful than making the changes to the checklist. Changing the number lines forced students to narrow down the information they originally included in their summaries to a gist statement. This modification further helped students to clarify differences between retelling and summarizing and identifying important information. They knew that if their summary statements were longer than the two lines, they were probably retelling rather than summarizing. Needless to say, it appeared that when they were able to identify important information, they began to produce adequate summaries.

_Selection of Text_

Many researchers (e.g. Garner, 1987; Kintsch, 1989; Winograd & Bridge, 1986) have maintained that summarization instruction improves comprehension of text because it may force students to be more attentive. However, in order to summarize text students need to be able to read and understand what they have read (Schnotz, Ballstead, & Mandle, 1987). The less skilled readers in this study, as indicated by their GMRT scores, had a tendency to produce minimal summary statements throughout most of the intervention. Their summaries often included irrelevant information and elaborate details about events and actions. Important information was not found in their summaries. This finding was also consistent with the research of Garner (1987) and Winograd and Bridge (1986). Thus the level of understanding from the text often determines the capacity at which struggling readers can effectively produce adequate summary statements (Garner, 1987). In this study, where text levels were 2.8, 4.6, and 5.8, less skilled readers may
have been faced with comprehension difficulties at all levels increasing with each instructional text level. There is a possibility they could not process all the needed skills at once (e.g. comprehension, establishing connections between the text, deleting irrelevant information, and identifying important information) to produce a summary.

Moreover, the use of three different texts proved to be difficult for students because they were often confused about the characters' roles in each. They often confused Byron from *The Watsons Go to Birmingham*, with Jake and Mickey from *Overdrive*. This mix up did not occur, however, in *Queen of the Toilet Bowl*, because the characters were all females.

Even though the students seemed to enjoy reading *The Watsons Go to Birmingham*, there were some problems understanding the language that was often included in the text. For example, the text read: *Momma was real hot, but she surprised me, she just shook her head and went back to peeling potatoes*. I had to provide students with an example that best described Momma at that point. I stated, “Momma is really not hot as in body temperature. She is probably mad or angry because Byron put chemicals in his hair.” Before I provided this example, some students thought hot was referring to the chemicals Byron put into his hair.

Other terms such as *butter, conk*, and *a do*, which meant chemicals used to straighten one's hair, also had to be explained. Although the majority of the students in the study were African American children, they were not aware that the chemicals used to straighten one's hair, African Americans in this case, was actually referred to as a perm. Although they knew what a perm was, until my explanation, they did not realize the chemicals Byron put into his hair were in fact a perm. Therefore, teachers need to
provide students with instructional texts that they can read accurately, fluently and with good comprehension (O’Connor et al., 2002). When students attempted to summarize text after reading, their summaries included irrelevant information and lacked main idea statements. These findings are analogous with those of Schnottz, Ballstaed and Mandl (1981). In their study, German students also included elaborations and irrelevant information in their summaries when they read difficult texts.

In this study, students may have benefited from text that matched their reading levels (Allington, 2001; O’Connor et al., 2002). The lower levels of texts that were used for independent and guided practice proved to be difficult for some students. Lower results than expected may be attributed to design of this study. Use of independent and guided practice of strategies with text of lower independent reading levels at first, with a gradual move to text closer or at grade level (Dole, Brown, & Trathen, 1996), may have required more time.

Additionally, students’ diverse reading levels and interests must be taken into consideration when the goal is to improve reading achievement via strategy instruction. Providing readers with books that offer just the right amount of support and challenge to read and comprehend text is an important part of any positive reading experience for all ages. Children at different developmental levels of reading approach a book in different ways use different strategies and clues and illustrations from text to make meaning, and often read for different purposes (Fountas & Pinnell, 1999). Additionally, students need to have instructional texts that they can read accurately and fluently (O’Connor et al., 2002). Therefore, more appropriately leveled text for all readers during practice may have led to even greater gains on the posttest to delayed posttest.
Cooperative Learning Groups

In addition to the modifying the checklists and number of lines, students appeared to be more willing to work to produce summary statements when they were placed in cooperative learning groups during guided practice. Although cooperative learning has not been included in many comprehension strategies studies (Dole et al., 1991) because it was thought to be an instructional medium, it was used in this study. Only one study reviewed in this literature, Anderson (1992) used small groups for strategy instruction.

In this study, hearing ideas and comments from other students’ points of view and discussing those ideas in cooperative learning groups helped students to clarify their own thinking. For example, Aaron was convinced that the main idea of a paragraph was “Mickey did not want to hold Jake up.” But after several rounds of discussions with other group members, he came to understand that the main idea of the paragraph was “Mickey and Jake was in a hurry to go somewhere.” Although the two statements may appear to be similar, the group used the checklist to determine what should be added to support the main idea. It is also important to note, that during group discussions the students tended to rely on the checklist to resolve conflict about the main idea and information that supported the main idea. Prior to the implementation of the cooperative learning groups, the checklist was seldom utilized. Cooperative learning groups aided students in understanding and synthesizing new information with existing knowledge which allowed thinking to evolve.

Motivation

Students required feedback and praise to keep them motivated when they were experiencing difficulties with constructing summary statements. According to
Borokowski et al. (1987), changing beliefs about the self as a learner can have a profound effect on comprehension strategy instruction. Positive statements and encouragement helped the students stay on task and participate actively throughout the instructional intervention. Students’ motivation to produce a summary increased when they came to believe they were capable of acquiring strategies and when they used those strategies to produce adequate summaries (McKenna, Kear, and Ellsworth, 1995).

Beliefs about the outcomes of reading and specific reading experiences influenced students’ motivation in this study to continue or discontinue the summarization tasks. If a student believes that the more he or she applies reading comprehension strategies, the better his or her reading skills will become, it is likely that a student’s attitude toward reading will be increased (Baker & Wigfield, 1999; Wigfield & Eccles, 2002). This is an important fact to remember during comprehension strategy instruction. Teachers need to support, guide and show students how and why the use of strategies helps them to understand the text, thus increasing their reading comprehension abilities (Tierney & Readence, 2005). Such understanding helps creates a sense of self-efficacy for students to have success and a sense of competence with metacognitive strategies (Nist & Simpson, 1994; Paris et al., 1991).

**Implications for Classroom Practice**

Since the reading of the varied texts used in this study proved to be difficult for some students, to effectively address the needs of struggling adolescent readers, teachers should provide students with explicit instruction in reading comprehension strategies using text that students are able to read and comprehend. The goal of comprehension
strategy instruction is to teach students when, where and how to apply the strategies learned. A better way to accomplish this goal is to use text that students are able to read and comprehend. When the goal of comprehension strategy instruction has been accomplished, teachers can gradually move students to text closer or at their independent reading levels while providing support for strategy use.

Different types of text will require the use of different strategies. Therefore teachers must think about how a particular strategy is best applied and in what context. Explicit instruction in reading comprehension instruction must include reasons why some strategies are applicable in a variety of reading situations and contexts when others are not.

Comprehension strategy instruction has been found to be most effective when it takes place over a long period of time (Pressley et al., 1983). The positive short term effects and long term trends in this study suggest that teaching these comprehension strategies over an entire year- allowing the strategic instruction to permeate the curriculum has the potential to greatly impact children’s reading achievement.

Recommendations for Further Research

The findings from this study opened up many areas for future research. Concerns for future research that stem directly from this inquiry should include an analysis of the levels of texts used in strategy instruction. More specifically, further research should explore to what degree reading levels of text affect students’ ability to produce mature summary statements. The optimal mix of easy and more challenging texts should be examined.
Another area of concern in this study was the time frame in which the study was conducted. Further research is warranted on the effects of long term comprehension strategy instruction on students’ summary writing and comprehension abilities.

Since many basal reader story selections do not contain main idea statements that are explicitly included in the text or are not topic sentences in passages, further research is needed to determine how to teach students to detect main ideas in passages in which the main idea is not explicitly embedded in the text.

Finally, this study was limited to observing and analyzing the comprehension process and did not address other issues related to reading such as phonemic awareness, fluency and vocabulary. It would be useful to have a comprehensive training study that included attention to other areas of reading to provide the most effective instruction for teaching reading comprehension strategies to struggling adolescent readers from low SES backgrounds.

Limitations

This mixed method study focused on sixth grade students in one economically diverse, urban middle school in North Alabama. The results are not generalizable to students in other grades, different schools, or systems. The use of a self-report instrument may have resulted in socially desirable, rather than fully accurate responses. In addition, the students were not randomly assigned to the treatment or control groups. They could not be randomly assigned because they were already scheduled into periods of time for their reading and science instruction. Changing this arrangement would have created too much disruption in their normally scheduled classes. This is a limitation of the study.
because random assignment of students to experimental and control groups greatly strengthen the internal validity of a research study (Gall, Borg, & Gall, 1996).

The instruction for the experimental group was conducted by the researcher. By doing this, the internal validity of the experiment is enhanced, but the external validity is diminished. When the researcher provides the instruction, extraneous variables are controlled so that any observed effects may be attributed to the treatment variable. To control for extraneous variables, the reading specialist visited the intervention classes on days 8 and 11 to provide insights into the summarization instruction and to assure the researcher there was not a difference in the treatment between the two experimental groups.

The short duration of the summarization instruction may also be a limitation. In this study, six days were spent on assessments and student interviews while fourteen days were spent on summarization instruction.

Conclusion

Comprehension strategy instruction for students of low SES background should not be delivered in a short duration of time. Reading comprehension is a skill that students must master and use in every aspect of their lives. Therefore, in order to sustain this most critical skill, reading comprehension strategy instruction for these students should be extensive, explicit, and supported through small groups. The instruction should include more than making students aware of the strategies; that is, how these strategies can be used to increased their reading and metacognitive abilities.
Students of low SES background need to know the strategies they learn will be beneficial to them and will not be just another reading task. They need ample opportunities to practice these strategies in small groups that will afford them opportunities to converse and discuss ideas with their peers. The scaffolding with feedback, encouragement and positive reinforcement provided by the teacher helps these students to accomplish reading tasks that they could not do without the teacher’s assistance.

In addition, these students need texts they can read fluently and understand. Texts must be relevant to students’ lives and match their reading abilities. When teaching reading comprehension strategies, students should be introduced to strategies while using text they can easily read and understand. Once they have mastered the strategies, they can use texts that are closer or at their reading levels. Despite the fact that some of the texts used in this study were difficult for both good and poor readers, the re-explanation and extensive practice in small groups provided evidence that students were beginning to understand what they were reading. The interesting texts used also played a vital role in students’ willingness to participate in the task. This study clearly showed that low SES students who are engaged in reading comprehension instruction using interesting and appropriate text at their independent reading levels with extensive time to practice, can improve their reading comprehension and metacognitive abilities.

In regards to summarization training, such training should also be explicit and extensive. Students of low SES background benefit from training that provides explicit instruction in identifying the main idea with scaffolding, followed by instruction in the construction of summary statements. Again, in order to be effective, students need to be
provided with text they are able to read and understand with positive feedback and
couragement. For those students who may continue to experience difficulties, rules for
constructing summaries may also be beneficial.
REFERENCES


Allington, R. L. (1994). Schools we have, schools we need. The Reading Teacher, 48, 14-29.


APPENDIX A

Student Packet Used in the Study
The Watsons Go to Birmingham

I was sitting at the kitchen table doing homework and watching Momma make dinner when Byron came in through the back door. He was surprised we were there 'cause as soon as he saw us he turned around and tried to walk right back out. Both me and Momma smelled a rat. “Byron,” Momma said, “what have I told you about wearing that hat in the house?” “Oh yeah, I was just going right back…” He pushed the screen door open again. “Wait a minute.” Byron was trapped in the doorway, with his right foot in and his left foot out.

“Come here.” Momma put down the knife she’d been peeling potatoes with and wiped her hands on a dish towel. Byron’s inside foot joined his outside one in trying to get away. “Uh, I’ll be back in a minute, they’re waiting for me down at—” “Byron Watson, you take off that hat and get over here right this minute!” It was “he-uh” instead of “here.” Uh-oh. Byron started walking around toward Momma in slow motion, sliding his feet on the linoleum. He pulled off his hat and stood there looking down, like his shoes were all of a sudden real interesting.
Queen of the Toilet Bowl

Why was I worried? Liz and I hung around together at school but going to her house made everything different. Going to her house made us real friends. "Sit down," said Liz. "That is if you can find a place." I looked around Liz's room. There were mounds of clothes on her bed, a pile of shoes on her floor and books piled on her desk. "Where?" I asked. Liz shoved some clothes off her bed. "Here," she said. I plunked myself down on her pink and red flowered quilt. "Great quilt," I said.

Liz pushed another pile of clothes off her bed and flopped down beside me. "My aunt made it when I was ten." Liz patted her quilt like an old friend. "It has a couple of holes and a mustard stain near the top, but I love it." "It's beautiful," I said. "If you could see it," said Liz laughing. "I always plan to clean my room, but things get in the way. It drives my mom crazy. She's a neat freak." It was true. The rest of Liz's house looked like a movie set. There were sparkling mahogany antique tables, glass lamps and a marble coffee table with four perfectly lined up glossy magazines on top. It looked like no one ever sat on or touched anything.
Overdrive

“I’ve seen you two together. It looks like you give more grief than you get.”

“Haven’t you ever heard that it’s better to give than to receive?” Mickey smiled. “But guess it’s only fair you get to borrow it when you consider all the help you’ve given him with his car.” “It’s not like he’s forcing me. I love fooling around with cars. Besides, he’s taught me a lot of things.” “You mean your brother knows more about cars than you do?” Mickey asked. I liked the way he said that. It was like he couldn’t believe it was possible.

“He knows more, but he’s two years older.” I paused. “So, you want to go for a ride?”

“Yeah, of course… where to?” “I was thinking that maybe we could go for a little cruise along the Lakeshore strip, or even go to the Burger Barn and pick up a burger and fries. “I am so there,” Mickey said. “We are going to see and be seen. Let me get changed.”

Mickey rushed up the driveway back toward his house. “What’s wrong with what you have on?” “Shoes would be a good start, but the rest is only okay for hanging around in my basement. Let me get changed and do something with my hair.” “Hurry up!” I yelled after him. “We don’t have all night!”

I wasn’t joking. We didn’t have all night. My brother was getting off work at the grocery store at nine thirty, and I had to have the car home by ten so he could go out. I climbed into the car-climbed in behind the wheel of the car. I turned the key in the ignition and the motor came to life. It made a gentle purring sound. I revved the engine slightly and the purring got louder and more powerful. This wasn’t just any car. This was the car. I’d worked with Andy to redo the engine-torqued it so it put out over 300 horsepower. We’d redone the exhaust system to deal with the extra power. We’d overhauled the suspension to get the frame lower to the ground. It allowed it to be more stable at high speeds, especially around corners. My brother wanted this car to fly but not actually take flight.
APPENDIX B

Summarization Checklist
Summarization Checklist

☐ Have I found the overall idea that the paragraph or group of paragraphs is about?

☐ Have I found the most important information that tells more about the overall idea?

☐ Have I used any information that is not necessary?

☐ Have I used any information more than once?
APPENDIX C

Metacognitive Awareness of Reading Strategies Inventory
Metacognitive Awareness of Reading Strategies Inventory
Adapted for students in grades 3+

Name ___________________ Age _______ Male ____  Female______

Grade _______

Ethnicity: African American/Black ___ American Indian ___ Asian ___

Caucasian/White ___ Hispanic ___ Other ___

I consider myself (Check One)

1. An Excellent Reader
2. A Very Good Reader
3. An Average Reader
4. A Poor Reader
5. A Very Poor Reader

Directions: The statements on this inventory are about what people do when they read. The following sentences follow each statement:

1. This statement is never or almost never true of me.
2. This statement is rarely true of me.
3. This statement is sometimes true of me (about half the time).
4. This statement is often true of me.
5. This statement is always or almost always true of me.

After reading each statement, circle the number (1, 2, 3, 4, or 5) that applies to you. There are no right or wrong answers to the statements in this inventory.

Example:

I wash my hands before eating dinner.

1. This statement is never or almost never true of me.
2. This statement is rarely true of me.
3. This statement is sometimes true of me (about half the time).
4. This statement is often true of me.
5. This statement is always or almost always true of me.

Check statement # 5 if you always or almost always wash your hands. Check statement # 1 if you never or almost never wash your hands, and so on.
Metacognitive Awareness of Reading Strategies Inventory (MARS-I-3+)

1. This statement is never or almost never true of me.
2. This statement is rarely true of me (less than half the time).
3. This statement is sometimes true of me (about half the time).
4. This statement is often true of me (more than half the time).
5. This statement is always or almost always true of me.

1. I know why I’m reading before I begin to read.
   1. ___  2. ___  3. ___  4. ___  5. ___

2. I write down ideas to help me understand what I read.
   1. ___  2. ___  3. ___  4. ___  5. ___

3. I use what I already know to help me understand what I read.
   1. ___  2. ___  3. ___  4. ___  5. ___

4. I look at what I’m going to read to see what it is about before reading it.
   1. ___  2. ___  3. ___  4. ___  5. ___

5. I read aloud to help me understand what I read.
   1. ___  2. ___  3. ___  4. ___  5. ___

6. I think about the main ideas to help me remember important information.
   1. ___  2. ___  3. ___  4. ___  5. ___

7. I think about what I read and decide if it agrees with my purpose for reading.
   1. ___  2. ___  3. ___  4. ___  5. ___

8. I read slowly but carefully to be sure I understand what I’m reading.
   1. ___  2. ___  3. ___  4. ___  5. ___

9. I discuss what I read with others to see if we understood it the same.
   1. ___  2. ___  3. ___  4. ___  5. ___

10. I look through the reading material to see how long it is and how it is organized.
    1. ___  2. ___  3. ___  4. ___  5. ___

11. I try to concentrate on my reading when my mind wanders.
    1. ___  2. ___  3. ___  4. ___  5. ___

12. I underline or circle information in the reading material to help me remember it.
    1. ___  2. ___  3. ___  4. ___  5. ___

13. I slow down when reading becomes hard and I speed up when it is easy.
    1. ___  2. ___  3. ___  4. ___  5. ___

14. If I find something in a book that I think is not important, then I do not read it.
    1. ___  2. ___  3. ___  4. ___  5. ___

15. I use materials such as dictionaries to help me understand what I read.
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**Metacognitive Awareness of Reading Strategies Inventory (MARSI-3+)**

1. This statement is never or almost never true of me.
2. This statement is rarely true of me.
3. This statement is sometimes true of me (about half the time).
4. This statement is often true of me.
5. This statement is always or almost always true of me.

16. When reading becomes hard, I start reading more carefully.
   1. __________ 2. __________ 3. __________ 4. __________ 5. __________

17. I use pictures in the book or story to help me understand what I read.
   1. __________ 2. __________ 3. __________ 4. __________ 5. __________

18. I stop from time to time and think about what I’m reading.
   1. __________ 2. __________ 3. __________ 4. __________ 5. __________

19. I use picture and word clues to help me understand what I read.
   1. __________ 2. __________ 3. __________ 4. __________ 5. __________

20. I say things in my own words to understand what I read.
   1. __________ 2. __________ 3. __________ 4. __________ 5. __________

21. I try to imagine or picture information to help me remember what I read.
   1. __________ 2. __________ 3. __________ 4. __________ 5. __________

22. I use the way words look, like bold or italics, to help me find important information.
   1. __________ 2. __________ 3. __________ 4. __________ 5. __________

23. I try to decide what’s really important in the things I read.
   1. __________ 2. __________ 3. __________ 4. __________ 5. __________

24. I go back and forth in the reading material to find how ideas go together.
   1. __________ 2. __________ 3. __________ 4. __________ 5. __________

25. I stop and think about what I have read if I find information that doesn’t make sense.
   1. __________ 2. __________ 3. __________ 4. __________ 5. __________

26. I try to guess what the book or story is about before I read it.
   1. __________ 2. __________ 3. __________ 4. __________ 5. __________
27. If I don’t understand what I’m reading, I read it again.
   1. _____ 2. _____ 3. _____ 4. _____ 5. _____
28. I ask myself questions I want to have answered in my reading.
   1. _____ 2. _____ 3. _____ 4. _____ 5. _____
29. When I’m done reading, I check to see if my guesses were right or wrong.
   1. _____ 2. _____ 3. _____ 4. _____ 5. _____
30. I try to guess the meaning of words or phrases I don’t know.
   1. _____ 2. _____ 3. _____ 4. _____ 5. _____

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