Evaluating Alternative Instructional Strategies to Improve Sixth Graders' Reading Comprehension.

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EVALUATING ALTERNATIVE INSTRUCTIONAL STRATEGIES TO IMPROVE SIXTH-GRADERS' READING COMPREHENSION

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy

in

The Department of Curriculum and Instruction

by

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December 2000

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DEDICATION

This dissertation is dedicated to my parents John and Jacque McCall and grandparents Jack and Melba Morgan and Brooks and Maxine McCall who taught me the value of teaching through their examples. And, finally, to Bryan, who has always supported me as we have, and continue, to travel through life side by side.
ACKNOWLEDGMENTS

A warm thank you is extended to the committee members who have assisted the writing of this work: Dr. Jill Allor, Dr. Kevin Bongiorni, Dr. Ken Denny, and Dr. Margaret Stewart. Your time and expertise have been greatly appreciated. Also, thank you to the administrators, teachers, and students who invested their time and energy in the research study. Your participation and helpful suggestions have enhanced the study and the research community immensely. And, to Dr. Cheek: Thank you for your time and patience with me as I emerge into the realm of scholarly writing. You have been more than a mentor, continually modeling the quintessential effective teacher.
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ABSTRACT

Although little empirical evidence supporting various instructional strategies for teaching reading comprehension exists, many educators utilize particular strategies assuming their effectiveness. Because difficulties with comprehension are intensified as students reach the intermediate grades, it is necessary that middle school educators instruct using strategies empirically supported through research. This mixed-method study examined the effectiveness of the Directed Reading-Thinking Activity (Stauffer, 1969), the PreP technique (Langer, 1981), and graphic organizers (Barron, 1969), three popular strategies among middle school teachers. Six teachers participated in the two-group design, pretest/posttest study; over a seven-week period, three of the teachers instructed their sixth-grade students using lessons constructed with the strategies (n=103). Results indicate a significant difference (p<.05) between the groups according to an informal procedure; a formal test indicated no significant difference between the groups. Qualitative observational data in the form of fieldnotes and interview data indicate motivational differences between the groups and suggest areas for revision and extension of the lessons.
CHAPTER 1

INTRODUCTION

Reading comprehension, after a surge in popularity spanning the late nineteen-seventies to the early nineteen-nineties, has once again begun to regain the respect it merits by many scholars in the field of reading research. In a recent editorial, Santa (2000), current President of the International Reading Association, discussed the lack of research that has followed Durkin's (1979) study of comprehension instruction in elementary classrooms over the past two decades. Santa (2000) noted with concern that little has changed since the wealth of studies conducted, prompted by Durkin's (1979) study of the percentage of classroom time devoted to comprehension instruction; Santa (2000) continued by noting from her own experiences that "...even teachers identified as exemplary (do) little teaching of comprehension."

The time for in-depth investigations of instructional strategies for teaching comprehension to middle schoolers has come. Recently, NCATE (National Council for the Accreditation of Teacher Education) (NCATE, 2000) outlined guidelines for teacher education programs offering certification in middle school education. As many university educational programs face the adoption of these guidelines, university committees struggle to create middle school curricula for their teacher education programs; less than half of the teacher education programs in
the United States have certification programs in middle school education (NCATE, 2000). For these programs, investigations involving effective instructional strategies are fundamental to the development of comprehensive teacher education programs.

**Statement of the Problem**

The lack of effective comprehension instruction was well documented by Durkin's investigation of classroom instructional practices related to the explicit teaching of reading comprehension (1979). Durkin's study brought many issues regarding comprehension to the forefront of reading research. Many researchers responded by either creating new comprehension strategies or extending previous strategies. These strategies have arisen through various reading theories; some have focused on models of explicit instruction, others have focused on models of schema-theoretic instruction (see Tierney & Readence, 1999, 352-358; Leu & Kinzer, 1999, 366-418). Regardless of the theory, reading comprehension strategies are generally viewed as instructional necessities, particularly in the middle grades. Part of this interest is due to the students' lack of reading maturity, particularly in the areas of sequencing and summarizing ideas and using inferential skills (Vidal-Abarca & Gilabert, 1995).

The importance of these strategies is clear; an investigation into the empirical support of these various strategies yielded an alarming lack of research. Though there are numerous published and
unpublished instructional aids, many of the popular strategies included within these sources have not been supported with empirical research. The few strategies that do have support often have only a few studies supporting them. Alvermann and Swafford (1989), in a review of the literature evaluating effective strategies for comprehension instruction, categorized the existing empirical research into five subsets: the Directed Reading Activity, the Directed Reading-Thinking Activity, prereading guides, organizers, and strategies involving text structure. With the exception of these five categories, Alvermann and Swafford (1989) offer little more evidence concerning strategy effectiveness. Other published strategies, such as the K-W-L (Ogle, 1986), the Anticipation Guide (Readence, Bean, and Baldwin, 1998), and the Dialogical-Thinking Reading Lesson (Commeyras, 1993), for example, offer no empirical support of their effectiveness.

Furthermore, most empirical research investigating the effectiveness of the strategies falls short of its goal by limiting the scope of the study to a particular strategy. Although this first step in the research process has been to determine the significance of the particular strategies individually, the goal of determining effectiveness must be sought in a realistic scenario. The next step, in addition to replication of the existing studies, is for researchers to investigate combinations of studies. In fact, few research studies have been conducted that have included more than one strategy. As teachers
realistically employ several strategies during each lesson, researchers must focus on these combinations for their overall significance.

The Purpose of the Study

Durkin's (1979) study instigated much attention towards the teaching of comprehension. As a result, many researchers focused their efforts towards creating numerous strategies aimed at improving students' comprehension. These strategies were based on theories of reading including bottom-up theories, top-down theories, and schema theory, among others. Many of the resulting strategies, due to their logical practicality, have become popular among educators.

The number of strategies is overwhelming. Many of them, becoming popular after Durkin's (1979) study, have continued to be utilized in classrooms despite the fact that most have little or no empirical support. An investigation of some of the most common strategies revealed the extent of this disturbing trend: in fact, very few studies have been evaluated statistically. This study will serve to increase the information concerning the significance of three popular strategies: the Directed Reading-Thinking Activity (Stauffer, 1969), the PreP Technique (Langer, 1981), and graphic organizers (Barron, 1969).

Studies involving these three strategies, though they have at least two sources of empirical or theoretical support, require replication and extension before their effectiveness can be sufficiently determined. Further examination must include investigating the existing studies
involving the Directed Reading-Thinking Activity (Stauffer, 1969), the PreP Technique (Langer, 1981), and graphic organizers (Barron, 1969), and considering the findings and limitations of the studies. Extension of the strategies involves researching them in combination with one another to simulate a classroom setting in which strategies are often intertwined according to the content material.

This study examined the impact of specific comprehension strategies on reading comprehension ability. The three strategies included the Directed Reading-Thinking Activity (Stauffer, 1969), the PreP Technique (Langer, 1981), and graphic organizers (Barron, 1969). Primarily, this study sought to determine if these three research-based strategies can be successfully taught to sixth-grade readers, increasing their general reading comprehension abilities as measured by both a norm-referenced reading assessment and also an informal assessment instrument.

The Setting

This study involved six sixth-grade classrooms, three classrooms in each of two schools; these two schools were the only two middle schools in a small, rural Texas town. In the study, all participants were referred to as members of either the experimental or control group; no participants were singularly identified with the exception of pertinent examples as part of the qualitative analysis. For these examples, pseudonyms were assigned to the participants. The teacher participants
were each assigned numbers; these numbers served as teacher identification. Additionally, for the interview analysis, the six teachers were assigned pseudonyms for singular responses as needed.

The Community

The selected site was a small, rural town located in South Texas. With a population of approximately 20,500, it is a middle-class town. Founded as a Dutch settlement in 1894, the town's population is predominately European American; the estimated 8% of the minority population includes African American, Vietnamese American, and Mexican American ethnicities. The majority of the residents of the town are employed in the oil industry with the refineries located in nearby rural towns adjacent to the selected town's borders. Other residents of the region work for small businesses within the community or commute to city jobs in the nearest urban center located twenty miles away.

The Educational System

Two public middle schools house all the students of the town in grades five through eight. The Texas town prides itself on its educational excellence and town spirit. The school system serves approximately 5,445 students in four elementary schools, two middle schools, and one high school. The current racial composition is 91.8% European American, 3.8% Mexican American, 3.1% Asian American, and 1.3% African American. Of the district student population, 17.4% are classified as economically disadvantaged (see Appendix B).
Scores for the Texas Assessment of Academic Skills (T.A.A.S.), a criterion-referenced test administered annually have placed the town's middle school students in the 90th percentile for both reading and mathematics consistently over recent years. These recent high scores, in addition to the reputation from previous test scores over the past twenty years, have earned the town's school district the respect of neighboring communities. Additionally, this Independent School District was honored by the Texas Education Association as a Recognized Site for its students' overall performance last year (1999). Due to their reputation for excellence, the middle school teachers have been invited to give workshops for teachers in neighboring school districts on a variety of issues including their effective use of teaming.

The southern Texas town was selected due to its cultural homogeneity. It is an example of a small, close-knit community representing small-town America. As such, it is an ideal location for a research study. The homogeneity of the students, the community interest in education, and the faculty's commitment to academic excellence contribute to the goals of the research study.

The Schools

Middle School A serves approximately one-half of the town's students. The attendance zone is arbitrarily drawn along one street, separating two very similar areas of town: one perceived by the residents as slightly older, one slightly newer. Both schools serve
students from middle-class homes. School A includes the older, more established section of town; as such, it is considered by the townspeople to be the "poorer" section of town. School B serves the other half of town; it includes similar residences as School A with the addition of a few "wealthier" neighborhoods. Competition between the schools is intense both academically and politically.

**Middle School A**

School A's student ethnic background roughly resembles the district's: European American 88%, Asian American 5.5%, Mexican American 4.1%, and African American 2.4%. Of the student body, 19.7% are classified as economically disadvantaged (Texas Education Association, 1999). The percentage of students qualifying for special education services is 14.1% (Texas Education Association, 1999). All students are served in the regular classroom setting with the exception of students labeled as emotionally disturbed; these students are placed in a special classroom located on campus. A pull-out program is active for students in regular classes who require additional academic services. Qualifying students who are in need of academic assistance visit the resource room during their regularly scheduled course time. Visits to the resource room are reassessed each six-week grading period and as needed. The current sixth-grade class includes approximately 176 students.
Middle School B

Middle School B serves the other half of the town’s students. The students who attend School B are also predominately middle class, very similar to School A’s population. The student ethnicity also mirrors the district’s: European American 95.9%, Mexican American 3.2%, African American .7%, and Asian American .2%. Of the school’s student body, 14.9% are classified as economically disadvantaged (Texas Education Association, 1999). Furthermore, 17.7% of the student body has been identified and has qualified for special education services. These students are served inclusively in the regular classroom setting. The current sixth-grade class includes approximately 191 students.

Programs for Students with Special Needs

The district implements a pull-out program for students with special academic needs. Once a student is identified as requiring special assistance in the classroom through the diagnostical process delineated by the Special Education Service Center, an Individualized Educational Plan (I.E.P.) Committee convenes to determine a curriculum for a student. Students who qualify for academic services are served by a certified special education teacher in either a small group or individualized format outside the regular classroom during regular classroom time. The special education teacher meets with the students as needed during the week, modifies their assignments according to their IEP protocols, and gives oral examinations as needed. The
students involved in the pull-out program are reassessed each six-weeks by way of a progress report reflecting their progress according to their goals; changes in time involved within the pull-out program are adjusted each six weeks as needed according to student performance.

**The Curriculum**

Although the district has adopted a basal text for its sixth-graders, both schools have selected to use these texts as supplemental texts to enhance their curriculum. Rather than follow the basal curriculum directly, the teachers have opted to include trade books and alternative instructional material to accomplish their academic goals. Both schools follow a general curriculum guide that mirrors the goals and objectives provided for Texas teachers in the Texas Essential Knowledge and Skills (TEKS) (Texas Education Agency, 2000). The curriculum guide, much like the TEKS, delineates academic objectives and goals designed to serve as minimum standards for Texas’s students. The district curriculum presents these goals and objectives in categories including reading comprehension, vocabulary development, and writing skills.

**Middle School A**

Experimental School A follows the curriculum guide consistently. They include short stories and poems within their curriculum; twice over the course of the year they include an age-appropriate chapter book. They frequently select a variety of activities from Kamico (c.) Instructional Materials (Kamico, 1992), a program that guides students
through reading comprehension exercises very similar to the Texas Assessment of Academic Skills (TAAS) test in a very direct manner. Another program from which they extract instructional materials is Harden and McGough’s (1999) *Breaking the Code in Reading Comprehension*, a source which systematically and explicitly guides the reader through the process of comprehending text. Designed as an instructional adjunct targeted at elementary and remedial secondary students, *Breaking the Code in Reading Comprehension* (Harden & McGough, 1999) emphasizes skills including sequencing, recognizing cause and effect, and determining fact versus opinion. The experimental school implements the Accelerated Reading Program (Advantage Learning Systems, 1996); students are given a weighted grade each six weeks for their participation in this at-home reading program (see below).

**Middle School B**

The control school (School B) also follows the curriculum guide, heavily emphasizing the skills on which their students scored lowest during the previous TAAS test. The control group teachers eagerly mention the fact that their team of teachers wrote the curriculum guide; they also credit themselves with the district’s adoption of the Kamico (c.) materials (Kamico, 1992). The teachers use the Kamico (c.) Instructional Materials almost exclusively. At the end of the school year after the TAAS test, they do include a chapter book in their
curriculum. The Accelerated Reader Program (Advantage Learning Systems, 1996) is an integral part of the curriculum at the control school. One day each week is devoted to sustained silent reading; outside reading is expected and recorded in individual reading logs.

**The Accelerated Reader Program**

The school district is involved in the Accelerated Reader Program (A.R.) (Advantage Learning Systems, 1996). This comprehensive reading program includes a computerized diagnostical assessment followed by individually assigned reading levels. Students read books within their instructional to independent reading levels according to the assessment. Points are assigned for books read; the points refer to the reading level of each text. Following the reading of self-selected books, students take reading tests designed to assess their comprehension skills and content knowledge. The Accelerated Reading Program (Advantage Learning Systems, 1996) allows the teacher to follow and monitor the students' individual reading progress. The computer program generates weekly reports for each student as well as classroom averages as requested.

As both schools utilized the Accelerated Reader Program (Advantage Learning Systems, 1996), an integral part of the district curriculum, it is important to understand how each school's usage applied to the overall district curriculum. Both schools allowed one classroom weekday of sustained silent reading. Additionally, students were expected to keep their books with them at all times. In all six
classrooms, there was an expectation that extra time in class was to be devoted to reading these materials. Both schools used the same computerized program for assessing reading levels and comprehension assessments. Likewise, all teachers expected their students to expend personal reading time as an on-going homework assignment. Regularly throughout the study, the teachers reminded the students of their reading and encouraged them to increase their reading time at home. The students responded generally by acknowledging this insistence and reading when possible in class.

_Accelerated Reader (Advantage Learning Systems, 1996) Implementation in School A_

The A.R. program was implemented as previously described by School A; the teachers allowed the students to visit the library as needed during Advisory period, a twenty-five minute period following lunch. Students were allowed to take A.R. tests during this same time period; the central computer was located in the team leader's classroom. The A.R. Program was valued by the teachers in School A; a test grade was assigned to the students at the end of each six-week reporting period. School A emphasized the importance of reading and followed the A.R. program as it was designed.

_Accelerated Reader (Advantage Learning Systems, 1996) Implementation in School B_

Although School B also followed the A.R. program, the method of implementation was far more structured. In addition to the
comprehension tests accompanying each book, the teachers created reading logs distributed each six-week period. The students recorded all of their reading time, at home and at school. The parents were responsible for signing the logs weekly. Each week, the teachers in School B checked the logs for documented reading time and signatures. Students who were tardy, lacking either reading time the teacher expected for the individual students or a parental signature, were reprimanded and issued a punishment through the classroom management system. In School B, each teacher had a library and A.R. computer within her individual classroom; the teachers had written and received grant funding for the individual classroom libraries. Additionally, the students were allowed to visit the school library once every two weeks. The students were expected to have their reading material with them in class at all times, or they were punished and then were sent to retrieve their books from their lockers. As part of the management system, each teacher posted the names of students who either received one-hundred percent on an A.R. test and those students who held the highest scores on bulletin boards. The use of the A.R. program in School B was very structured and consistent.

**The Teachers**

Percentages of the highest degrees held by the teachers in the school district are as follows: no degree 1.0%, Bachelors 74.9%, Masters 24.1%, and Doctorate 0% (see Graph A).

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The mean years of teaching experience held by the teachers at School A was 14.1 years. At School B, the mean years of teaching experience held was 12.6 years (see Graph B). The range of teaching experiences within School A (Experimental) was from four to twenty-two. The range of teaching experience within School B (Control) was nine to ten years.

Graph B: Mean Years of Teacher Experience
Each middle school contained a teaming framework: teams of teachers worked with mutual students and shared common planning periods. The team teachers, three per team, were responsible for dividing the instructional time among themselves; the teams had the option of deciding to have each teacher teach a particular subject or for all teachers to teach all subjects. For the purposes of this study, a team of three teachers was selected from each school. The criterion for selection of the two teams was that each team teacher taught at least one reading class. This requirement was instituted to diversify the teacher pool and to enhance the interview portion of the research study. Through this selection process, a total of six teachers, one team per school, were chosen for inclusion in the research study.

After receiving approval from the superintendent and principals, the researcher met with each school's team of teachers. After a presentation of the project, the teachers had the opportunity to ask questions and make suggestions. The overview information was also presented to the teachers in the form of a letter along with a brief questionnaire (see Appendices A and B). The questionnaire included questions regarding demographic information and teaching philosophy. The responses were used to support the similarities of the sample groups.
Significance of the Study

Both empirical and descriptive research has been conducted attempting to determine the effectiveness of particular strategies in reading comprehension. Other strategies have been ignored by the research community and have no empirical support. Nonetheless, the popularity of these strategies suggests that many teachers, unaware of the lack of empirical research, continue to use them daily in their classrooms. Furthermore, these strategies are often not employed in isolation; rather, they are used in combination with other strategies to meet the needs of the students.

One way to extend the research base regarding reading comprehension strategies is to investigate some of the strategies that have been empirically grounded, namely the PreP Technique (Langer, 1981), the Directed Reading-Thinking Activity (Stauffer, 1969), and graphic organizers (Barron, 1969). By considering these strategies in various combinations with each other, there is a greater probability of simulating an actual teaching environment. These strategies are used in combinations everyday; it is important to ascertain their instructional value. Lastly, the attitude of the teacher regarding various techniques cannot be ignored. As the facilitators in the classroom, the teachers' perspectives regarding the effectiveness of the strategies will necessarily reflect on the students' attitude and performance.

Considering the teachers' perspectives and their levels of
implementation will aid research by presenting challenges for future research.

**Research Questions**

1. Will three reading comprehension strategies (Directed Reading-Thinking Activity, PreP Technique, and Graphic Organizers) used in combination positively impact student achievement as demonstrated by the students' ability to apply these skills to both the *Gates-McGinitie Reading Test* and an informal cloze procedure?

2. Will both the experimental and control teachers, respectively, appropriately implement the three reading comprehension strategies in their classrooms and the regular curriculum at least eighty percent of the time over the course of the study as measured by weekly fidelity observations?

3. How will the intervention impact affective performance and attitude for both teachers and students as confirmed by classroom observations?

In an effort to provide a thicker, richer description of the information gathered during the study, both quantitative data, as well as qualitative data in the form of observations, were collected.
CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

Determining the most effective methods for teaching reading comprehension has been a poignant undertaking for reading researchers over the decades. Gray (1941) reports the interest of reading researchers in the area of comprehension and their efforts to determine effective methods of instruction as early as the late 1800's. Gray (1941) cites several studies that he identifies as "productive in securing a clearer understanding of various procedures" and challenges the reader to extend the research by "...determin(ing) the patterns of guidance that are most effective in reading for different purposes (p.71)."

Many researchers have accepted Gray's challenge since the time period of the early reading research to which he refers. Strategies have continued to be developed through both the "systematic method" and "other procedures (Gray, 1941)" to reflect a broad array of philosophies of reading instruction. From theoretical and philosophical backgrounds have come strategies focusing on vocabulary, questioning, or other affective aspects of comprehension (Alvermann & Swafford, 1989). At present, a multitude of instructional strategies exists; some of these strategies can be found in scholarly articles in the form of logically and
theoretically sound extensions of a theoretical model. Other strategies have been published by individuals or publishing companies to be used as supplemental teacher aids. A smaller portion of these strategies can be found in journals, research reports, and other scholarly publications with empirical or descriptive support.

Despite the research interest of a handful of researchers, questions remain to this day concerning the effectiveness of various popular strategies for teaching reading comprehension. Namely, which reading comprehension instructional strategies are significantly effective? And, how have the strategies been used in combination effectively? These two questions prompted the investigation of the literature surrounding reading comprehension strategies. Although numerous strategies were examined, three strategies were selected for closer examination according to certain criteria: there were at least two research studies supporting the strategy—or strong theoretical support in the case of the PreP Technique (Langer, 1981)—and the strategy was relatively popular among middle school educators. The search included only empirical studies since no descriptive studies existed. The three selected strategies include: the Directed Reading-Thinking Activity (Stauffer, 1969), the PreP Technique (Langer, 1981), and graphic organizers (Barron, 1969).
• Directed Reading-Thinking Activity (Stauffer, 1969)

Directed Reading-Thinking Activity (Stauffer, 1969) is a method of teacher-directed predicting-reading-proving followed by skill training. The DR-TA was created to develop students' ability to read critically and reflectively (Tierney & Readence, 1999). The DR-TA can be adapted for any age level.

• PreP Technique (Langer, 1981)

The PreP Technique (Langer, 1981) is a method of brainstorming in which students reflect on their prior knowledge of a concept before reading; both student and teacher are able to assess the prior knowledge and expand upon it during the lesson. The PreP Technique was developed to aid in prior knowledge activation for students and to allow the teacher to assess students' knowledge before a lesson; the teacher can then better prepare the students for the text (Tierney & Readence, 1999).

• Graphic Organizers (Barron, 1969)

Graphic Organizers (Barron, 1969) are “pictures or schematic diagrams” presented to students to clarify difficult concepts (Tierney & Readence, 1999, p. 398). Graphic organizers have been adapted and modified for various instructional methods: for example, students can create them as a means of review. The rationale for graphic organizers is to provide a logical means of preteaching technical vocabulary, to present the student with important conceptual relationships between
content vocabulary, and to help teachers clarify teaching objectives (Tierney & Readence, 1999). The term “graphic organizer” connotes various visual organizers used in reading instructional practices with students of all ages; Tierney and Readence (1999) focus on a specific definition of the graphic organizers as a tool that "...present(s) the students (with) an idea framework designed to show an important conceptual relationship between content vocabulary" and suggest such graphic organizers for use with grades four through twelve.

The literature review that follows includes a theoretical section outlining various philosophies behind certain strategies. Following this section, the existing empirical support for each chosen strategy will be discussed at length.

**An Interest in Comprehension**

Gray (1956) synthesized numerous studies dealing with reading comprehension practices through the first half of the last century. Among other aspects of reading, Gray (1961) grouped the studies according to the following categories: method of teaching, word recognition, vocabulary development, comprehension, and fluency. Gray's (1956) collection of research reports reflect a comprehensive portrait of reading research in comprehension during the formative years of the instructional debate which continues to this day in the educational research community. In summary of his work, Gray (1941) summons the reader to extend the research base by conducting further
experimental studies considering the effectiveness of various methods of instruction.

Following years of independent research in the area of comprehension, the work of Dolores Durkin (1979) initiated much attention in the field of reading by focusing on a definition of reading comprehension and how often teachers taught comprehension. Through an exhaustive minute by minute examination of teaching time, Durkin (1979) found that less than 3% of it was related to teaching comprehension strategies. This lack of explicit instruction in reading comprehension surprised many in the educational field. Once again, an interest in investigating reading comprehension instructional strategies rose to the forefront of the reading research community. A number of studies dealing with the various aspects of comprehension arose from various philosophies; some empirical studies were published during this period of interest (see Gray, 1956; Gray, 1941).

However, this resurgence of interest in reading comprehension soon waned due to the popularity of Smith and Goodman’s (1971) philosophically-driven whole-language movement. As popularity grew for the whole-language philosophy, comprehension instruction rescinded into the shadows of the popular topics in reading research. In fact, the reading research community, as a whole, rejected the notion of systematic instruction, following instead the notion that within whole language:
...there are no pre-reading skills, no formalized reading readiness. Instead, learning is expected to progress from whole to part, from general to specific, from familiar to unfamiliar, from vague to precise, from gross to fine, from highly contextualized to more abstract. (Goodman & Goodman, 1982: cited in Tierney & Readence, 1999, p. 41)

The focus on whole language methodology continued in popularity until the end of the nineteen-eighties when another group of researchers, Alvermann & Swafford (1989), again synthesized the relevant research and ultimately questioned the lack of studies supporting various instructional strategies. Finding little empirical support for the strategies used in practice, the authors brought the problem to the attention of the reading research community (Alvermann & Swafford, 1989).

Slowly, the interest in determining the effective strategies for teaching reading comprehension is rising to the forefront of the reading research community; a recent request for papers including the topic of reading comprehension from the International Reading Association confirms this fact. As the interest increases, the challenge is for researchers to expand the number of studies with empirical support and extend the focus to include combinations of strategies designed within either singular philosophies of reading and within multiple philosophies of reading.
Theories of Reading Comprehension

Numerous strategies exist from a wealth of scholarship in reading comprehension spanning before the 1960's to the present. Many of these strategies reflect the changes in the broader movements of the educational sphere. For example, a focus on various explicit teaching activities aimed at improving comprehension, popular in the 1960s and 1970s, reflects a traditional philosophy of E.L. Thorndike (Clifford & Guthrie, 1988). In this traditional philosophy, "...novice readers acquire a set of hierarchically ordered subskills that sequentially build toward comprehension ability" (Dole, Duffy, Roehler, and Pearson, 1991). The goal of many of these traditional strategies is to alert the student to a particular strategy and allow him to practice the strategy until he has mastered it; this method of strategy instruction has come to be termed metacognitive theory. Tierney & Readence (1999) define metacognition as "knowing what you know and knowing how you know what to do" (p.437).

While some researchers have continued developing strategies involving metacognitive theory based on this traditional philosophy, a movement began during the late 1970s emphasizing the important connection between prior knowledge and reading comprehension (Tierney et al, 1995). Rather than focusing on teaching particular strategies explicitly, these strategies represent a cognitive philosophy; they delineate the importance of "...the interactive nature of reading..."
and the constructive nature of comprehension..." (Rumelhart & Ortony, 1977; Anderson, Reynolds, Shallert, & Goetz, 1977; Rumelhart, 1980; Spiro, 1980: cited in Dole et al, 1991). These strategies, popular through the eighties and nineties, are based upon the concept of schema theory introduced by Kintsch and Van Dijk (1978) and expanded by Pearson, Hansen, and Gordon (1979). Schema theory explains how knowledge is represented, stored, and used (McCormick, 1988). A schema is "a data structure for presenting the generic concepts stored in memory" (Rumelhart, 1980: cited in McCormick, 1988). According to this theory, knowledge is contained within these schemata; the schemata also contain sub-schemata, embedded within one another (McCormick, 1988). This framework of understanding contains numerous interconnected schemata that extend and connect dynamically. Durkin tied this schema-theoretic vision of learning with comprehension by succinctly stating that reading comprehension is "filling in the slots in the appropriate schemata in such a way as to jointly satisfy the constraints of the message and the schemata" (Durkin, 1980: cited in McCormick, 1988, p. 28).

Various philosophical perspectives have enriched the theoretical framework surrounding reading comprehension instruction; utilizing strategies from these numerous perspectives offers the type of varied instruction Collins and Cheek (1999) term "...essential since students vary in their needs and learning styles (p. 195)." This approach to
instruction, termed by the authors as the "eclectic approach" (Collins & Cheek, 1999, p. 195) allows for the use of a variety of strategies. Indeed, the eclectic approach seeks the most effective instructional methods from the various theoretical camps in an attempt to eke out the best practices of teaching reading comprehension. After accepting the theoretical combination of the eclectic approach, the logical move is to discover the most effective strategies according to a variety of theoretical frameworks, discover the strategies that have been investigated and empirically supported, and enrich the existing empirical support by examining the resulting studies and finally extending the research base.

**Searching for Empirical Support**

Regardless of philosophical perspective, most researchers would agree that the need for strategies in reading exists, however they might be presented. One would hypothesize that the same researchers would also concur on the topic of the necessity of evidence supporting these strategies. In their article “Do Content Area Strategies Have A Research Base?” Alvermann & Swafford (1989) examine various strategies and their research histories throughout the literature. Their searches included textbooks, various citation indices conducted by both hand and computer, and topically related literature reviews (Alvermann & Swafford, 1989). In a comprehensive table, they summarize various strategy research findings and their effectiveness or ineffectiveness; in
conclusion, they determine that the effectiveness of a strategy is difficult to determine due to the multitude of possibilities for expanding or changing a particular strategy. Additionally, they report “...(an) unevenness of the research base that underlies many of the recommended practices in secondary reading” (Alvermann & Swafford, 1989). Lastly, they offer some hope for reading teachers by suggesting that some of the more popular strategies are the most researched ones: DR-TA, Pre-reading Guides, organizers, and the use of text structure (Alvermann & Swafford, 1989).

**Directed Reading-Thinking Activity**

One strategy useful for teachers of reading comprehension is the Directed Reading and Thinking Activity (DR-TA). “Russell Stauffer (1969) developed the DR-TA to provide conditions that would produce readers who could think, learn and test” (Tierney et al, 1995). Stauffer (1969) states that the key step in teaching students to think critically and reflectively is to get them to develop a purpose for reading. He believes that the goal of the teaching process should be instilling an “intellectual curiosity” in the students, a goal aligned with Dewey’s (1902) philosophy.

The DR-TA involves several steps through which the teacher directs the group or individual. First, the reader predicts, reads, and proves hypotheses developed through pre-reading and reading activities. The teacher is on hand to answer questions and guide the
reader. Afterwards, the teacher directs a "skill training" phase; through this activity the teacher answers questions and points out various word attack skills, the use of semantic analysis, reflective abilities, etc. (Tierney et al 1995).

Studies Investigating the Directed Reading-Thinking Activity: Draheim (1983)

In a study involving 16 college freshmen at the University of California, Berkeley, who were labeled as poor readers according to the English Composition Test (CEEB), a college entrance exam, Draheim (1983) examined the effect of DR-TA instruction, paired in this case with conceptual mapping. Namely, Draheim questioned the ability of the DR-TA strategy to enhance the organization and identification of ideas in expository text as measured by students' incorporation of them within their writing.

Through a stratified random sampling process, eight students (four poor readers, four average readers) were divided into two groups: control and experimental. Over a five-week period, the experimental group received training in DR-TA; additionally, they constructed maps after reading, but before writing their papers. The control group read the same assignments and wrote from the same prompts; they were taught brainstorming techniques for their writing. Both groups were assigned the same writing prompt that related to their reading; they were given one week to write a paper.
After two writing activities, as defined above, related to topics the students could reflect upon and include within them their own experiences, the students were ready for their midterm. Preparation for the midterm included activities spanning two fifty-minute class periods. The experimental group read the selected reading and created a conceptual map the first day; the following day involved a discussion and sharing of five students' conceptual maps. The control group read the same selection. For this class, the instructor led a discussion based on student comments. Both groups were given the same general topic for the midterm.

Data were collected during this third writing phase. Raters identified main ideas and superordinate ideas prior to grading; interrater reliability was \( r = .80 \) (Draheim, 1983). The raters examined the essays and recorded the number of main ideas; the results indicate that "...experimental students did use significantly more main ideas in their essays than control students," according to a nonparametric test (Mann-Whitney U test) and a nonparametric measure of association test (Kendall's Tau) (Draheim, 1983). The findings were statistically significant according to these tests. Although not a strongly generalizable study, because of the small population involved, Draheim's study (1983) does offer support for further research attention directed toward the DR-TA paired, in this case, with conceptual mapping.
In an expanded study three years later, Draheim investigated the DR-TA strategy once again. This study proposed to contrast four different instructional approaches to reading: DR-TA alone, mapping alone, DR-TA and mapping combined, and the typical method of reading for main ideas and underlining (Draheim, 1986). Secondarily, the study "...explored what effects each approach had on college students' ability to recall ideas from an expository test through the process of discriminating among ideas in a text to find their hierarchical importance" (Draheim, 1986).

Using college-aged participants once again, Draheim selected 48 college freshmen enrolled in four sections of a developmental reading course. After sorting the students according to Scholastic Aptitude Test (SAT) verbal scores (www.collegeboard.org), Draheim (1996) randomly assigned the students to comprise four groups. These four groups, one class per group, were created prior to the second semester of the developmental reading program. Each class was assigned to a condition. The four groups included three experimental sections along with one control section of reading for main ideas and underlining. Each group contained a stratified random sampling of students divided into two categories: higher SAT scores and lower SAT scores.

For a period of four and one-half weeks, the participants received instruction in their English courses in their respective strategy. The
course instructors had been trained the previous summer in the use of the strategy they would teach their particular group. The training included reading the same expository material as the control group and responding to the material through the same amount of in-class essays. After two separate writing assignments, the first assigned with more of the instructor's guidance than the second, the participants completed the final writing activity. This measurement included one final reading selection and essay writing activity. The participants were given fifty minutes to read a short essay on a reading selection they had read during the previous class; although they were not allowed to use prepared notes or maps, they were encouraged to use the strategies they had learned in class. Responses for this one particular paper had been previously coded by two separate researchers for main ideas and high subordinate ideas (interrater reliability r=.95) (Draheim, 1986). The student essays were coded according to the rater's responses; additionally, any maps the students completed as part of their pre-writing plan were analyzed. A two-way ANOVA was conducted to test for significance.

The results indicate that the experimental group utilizing the combined DR-TA and mapping strategy recalled more main ideas than did mapping or DR-TA instruction alone (Draheim, 1986). Also, DR-TA instruction had a greater effect on recall of main ideas than mapping instruction had for low-aptitude developmental students. With regard to
the recall of subordinate ideas, “both aptitude groups revealed no statistically significant differences in contrasts of treatment groups” (Draheim, 1986). The author notes that the low aptitude students in the DR-TA group did not recall any high subordinate ideas in their essays; the low-aptitude group in combined strategy group fared better. Finally, the author notes that the mapping group, while they were able to recall significantly more main ideas than the control group, recalled the ideas in their maps; frequently, these ideas did not surface in their essays. Nonetheless, the combined strategy of mapping and DR-TA was shown to be significantly more useful for this sample population than were the strategies used in isolation or the control method of reading and underlining.

The author states the difference between the students’ effective use of the DR-TA questioning strategies through class discussion and the ultimate failure of students to retrieve the information in their writing (Draheim, 1986). Draheim (1986) suggests that further research is needed to “…determine how DR-TA or mapping affect retrieval of high subordinate ideas” (p. 11). Another limitation of the study included the short period of instructional time. An extended study during which the experimental students would have been able to become more familiar with the DR-TA strategies was needed. Also, although the researcher thoroughly explained the process for aligning instructors with the groups, and described them as qualified teachers,
she did not explain the instructors' training process. Furthermore, the
students self-reported their SAT (www.collegeboard.org) scores, the
basis for the group assignment. Self-reportings, when used as sources
of research in data collection, are considered to be a poor method of
eliciting reliable information (Yin, 1994). Lastly, the small sample
produces inherent difficulties with generalization of the findings.

**The PreP Technique**

Developed by Langer in 1981, the PreP technique was designed to
expose a student and his teacher to the prior knowledge he brings with
him to a particular reading. This technique presents "...an extension of
the research of the late 1970s on the relationship between prior
knowledge and reading comprehension" (Tierney, Readence, & Dishner,
1984: in Tierney & Readence, 1995). The PreP technique relies on the
schema-theoretic view of reading for its support (Anderson, Reynolds,
Schallert, and Goetz, 1977). Langer (1981) stresses the importance of
the teacher's role in assessing the prior knowledge and its pertinence;
the PreP Technique allows for this assessment.

The technique involves a discussion format; the teacher begins by
requesting responses to either a picture or other stimulus. The students
then reflect on the thoughts emitted by the stimulus. After this
discussion, the teacher follows up the questioning by asking if the
students have any other, new ideas (Tierney et al, 1995). Once the
responses to these questions are elicited, the teacher documents them

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and assesses the student's prior knowledge on the subject. Langer (1981) presents a scale for the teacher to use in the evaluation process; the scale rates the responses from morphemic to illustrative. Judging the quantity and quality of the students' spontaneous responses, the teacher can determine whether the students have adequate prior knowledge on the topic to successfully comprehend the text.

A Theoretical Background for the PreP Technique

The largest support for the PreP Technique is derived from the background support for schema theory. Graves and Prenn (1983) discuss the importance of pre-reading activities throughout reading history. They report that Dooling and Lachman (1971) "...found that passages were better recalled if a topic was presented prior to reading"; also, Bransford and Johnson (1973) "...found that reading was positively affected by presenting a meaningful title or picture prior to reading" (cited in Graves & Prenn, 1983). These findings provide enough support for many reading researchers who advocate the PreP Technique. The following study is a pilot study conducted by Langer investigating students' responses to PreP; this particular study has been reported several ways and is a popular reference for advocates of schema theory.

Langer and Nicholich (1981)

Langer and Nicholich (1981) examined the differences for students who utilized the PreP technique compared with those who did not. They studied 36 high schoolers who comprised two senior-level
English classrooms. All subjects were given three vocabulary words taken from a story they would later read; the students were told to freely write all of the related words and ideas that they associated with the vocabulary terms. This method of ascertaining prior knowledge was conducted with two separate passages. Using Langer's questioning scale, the students' written answers were thus quantified for analysis and averaged (Langer & Nicolich, 1981). Scores were assigned to each student based on the written responses, and the scores were categorized into four groups: much, some, little, or no prior content knowledge. Following silent reading of the passages, the students wrote the information they remembered from the passage. These final responses were, similar to the prior responses, tallied and scored. To strengthen these results, the researchers correlated the answers with standardized test scores previously obtained (Langer & Nicolich, 1981).

The findings that compared the level of prior knowledge with student ability according to the standardized test support the notion that student intellect does not correlate with student prior knowledge. The results indicated that, although "the full pattern of relationships among prior knowledge, recall, and IQ varied between passages (p.379)," most students performed significantly better on the final recall. Furthermore, the authors assert that the findings support the assumption that prior knowledge activation through the PreP strategy aids student comprehension.
The absence of a control group provides an inherent flaw within the research design of this study. In addition to this challenge, the authors utilize tests of association between scores on the two writing activities rather than comparing mean scores. Also, the written free-writing activity eliminated the interactive experience of prior knowledge activation and building that is a fundamental component of the theoretical foundation for this strategy. Langer (1981) presents a method of oral assessment; in the oral assessment of PreP, the teacher presents material and has students brainstorm on the topic, broadening each others' concepts. Undoubtedly due to the difficult analysis of such a design, the authors chose to eliminate this crucial aspect of the strategy and replace it with written recall. The authors recommend future studies with larger samples and alternative statistical procedures. The theoretical background of schema theory (Kintsch & Van Dyck, 1978) supports the usage of the PreP Technique. Further research investigating PreP that enhances the design, analysis, and length of this study is needed.

**Graphic Organizers**

The graphic organizer, developed by Stauffer in 1969, was originally developed as a means of pre-teaching technical vocabulary of a reading selection. "Graphic organizers represent a way that students and teachers can communicate about thought processes which are put into a concrete form" (Ward, 1999, p. 41). There are many examples
throughout the literature of reading comprehension including graphic organizers used and amended in various ways. Teachers have used them at the end of lessons as a summary or practice activity. Collins & Cheek (1999) state:

While the teacher may provide a complete chart to introduce the new vocabulary, greater learning occurs when a chart with limited information is presented along with the new words or concepts to be learned; through discussion the students are involved in completing the diagram (p. 282).

Furthermore, Moore and Readence (1984) found that organizers that were student-created were more effective after the reading task. The graphic organizer has been amended in other ways by substituting concepts or story grammars (Mandler & Johnson, 1977: cited in Dimino, Gersten, Carnine, & Blake, 1990) in place of technical vocabulary, an organizer sometimes referred to as a semantic map. Graphic organizers have gained popularity in various content areas; Ward (1999) compiled an extensive search of studies involving graphic organizers in the content area of science. Additionally, studies involving issues relating to graphic organizers have developed; one example is Simmons, Griffin, & Kameenui's (1988: cited in Dunston, 1992) investigation of the best time for presentation of graphic organizers: they found no significant differences for organizers presented before or after reading activities. Some authors, such as Robinson & Schraw (1994), advocated particular types of graphic organizers, in their case the matrix. Still others have
discussed the variety of uses of graphic organizers; Alvermann (1981) suggested the effectiveness of graphic organizers in compensating for disorganized text. In a later study, Alvermann (1988) examined the effect of teacher-created organizers as preview aids to independent student learning in high school. Overall, Dunston (1984) concluded that the research on graphic organizers is inconclusive in many areas, one being the type and construction of the organizer.

Effective Use of Graphic Organizers

Certainly the most debatable issue regarding graphic organizers is the question of their practical application. Robinson (1998) in his review of graphic organizers research, questions the unsystematic construction process. The effectiveness, Robinson (1998) notes, is contingent on the context and construction of the instrument. Robinson (1998) warns about the careless construction of organizers in popular material; he states that often constructors are uninformed concerning text organization. All in all, Robinson (1998) calls for careful examination of graphic organizer research and the different construction methods. Robinson (1998) admonishes the existing research for “…a failure to simulate actual learning situations in which graphic organizers would likely be used” (p. 91). Lastly, Robinson (1998) includes five suggestions for future research efforts; among these suggestions is that researchers utilize multiple graphic organizers,
as "Most text chapters have a complex structure that cannot be fully captured in detail by one GO" (p. 99).

**Studies Investigating Graphic Organizers: Alvermann and Boothby (1986)**

Selecting fourth-graders because the young students had not made the transition to expository text, Alvermann & Boothby (1984; 1986) conducted two studies investigating the effectiveness of graphic organizer instruction. The 1984 study involved a simple two-group design that served as a precursor to the later study; for this reason, the later study will be discussed in detail. For the second study, Alvermann & Boothby (1986) assigned 24 fourth-grade students to one of three groups: two experimental and one control. One of the experimental groups received explicit instruction in completing graphic organizers for 14 days; the second experimental group received explicit instruction for 7 days (Alvermann & Boothby, 1986). The instruction involved reading stories taken from an approved social studies textbook and creating graphic organizers with the information. An end-of-chapter multiple-choice test was administered at the end of the training for the experimental groups and after the reading for the control group. ANOVA was used to analyze the results; the results indicate that there were significant differences between the 14 day experimental group and the other two; however, no significant differences were found between the 7 day experimental group and the control group (Alvermann &
Boothby, 1986). The length of classroom training time was an effect as measured by student performance on the ratings of recall and recognition on the graphic organizers. However, differences among the groups were not significant according to the end of the chapter posttest. The authors attribute this result to a "ceiling effect" inherent within the groups prior to the study.

This study represents a good starting point for future studies; it supports the contention that graphic organizers can be effective and that the length of training is important. However, the research design did not include a pretest; without such, it is impossible to adjust the scores to allow for prior differences. The end-of-chapter tests were designed as criterion tests; the authors did not comment on the reliability or validity of the tests. The transfer of skills to this assessment was considered as the dependent variable in the research design, yet the authors did not elaborate on the construction of the measure. Furthermore, the authors stated that an investigator observed all classroom lessons for "consistency" yet failed to offer an instrument for assessing the fidelity of the lessons. Although the sample allows insight into students in a middle class, above average population, the small sample hinders the generalization of the findings to the larger, heterogeneous population.
Simmons, Griffin, and Kameenui (1988) examined the effects of graphic organizers constructed by the teacher and presented both before and after content instruction. 49 participants were assigned to three treatment conditions: prereading graphic organizer, postreading graphic organizer, or traditional direct instruction (control) (Simmons, Griffin, & Kameenui, 1988). A short twelve item, short answer pre-test revealed no statistical differences among groups (Simmons, Griffin, & Kameenui, 1988). The intervention lasted for 11 sessions; during the intervention, the experimental groups were provided with completed organizers. The material included passages taken from a sixth-grade science textbook; additionally, teaching scripts were provided with specific directions regarding the organizer explanations (Simmons, Griffin, & Kameenui, 1988). Three probes were administered during the intervention; the posttest measurement included twelve short-answer responses covering the material taught during the intervention process (Simmons, Griffin, & Kameenui, 1988). The results of the post-test only analysis indicated no significant differences for the different groups. The authors discuss various reasonings for this result; they mention that the mean scores for the two experimental groups were higher than the control and “approached statistical significance” (Simmons, Griffin, & Kameenui, 1988).
Certainly issues such as the post-test only research design, the measurement used, and the length of the intervention pose questions about the findings of this study. The researchers planned for differences beforehand within the population; the pretest accommodated the support for equivalency among the groups. Comparison of the findings from the pretest scores would have offered more information regarding the effectiveness of the intervention. Furthermore, the research design would have been strengthened with the additional administration of a formal test to provide support for the criterion-referenced assessments.

Bean, Singer, Sorter, and Frazee (1986)

Bean, Singer, Sorter, and Frazee (1986) included seventy-two tenth-grade students in their investigation of the effects of graphic organizer instruction versus outlining on students' recalling of text. The participants were divided into two experimental (graphic organizer) groups and one control (outlining) group. The experimental groups included two classes of students; one of the classes had previously been instructed in summarization methods (Bean et al, 1986). During a twelve-week period, the experimental groups were instructed in the construction of graphic organizers. The groups created graphic organizers with their text; six multiple-choice measures were instituted during the twelve-week period. Results indicate significant differences for the experimental groups; the experimental group that had
previously received training in summarization recalled significantly more text details than did the pure experimental group, supporting the authors' assertion that the metacognitive summarization techniques benefited the graphic organizer instruction (Bean et al, 1986). The findings support earlier results indicating the effectiveness of graphic organizer instruction, in this case utilizing student-constructed organizers. The effectiveness of the combined summarization/graphic organizer strategy offers more hope for researchers investigating the most efficient use of graphic organizers.

**Bean, Singer, Sorter, and Frazee (1987)**

In a second study, the same authors continued their investigation of student-constructed organizers (Bean, Singer, Sorter & Frazee, 1987). 47 high school honors students were selected for inclusion in the semester-long study. The secondary study investigated the benefit of using graphic organizers through instruction to facilitate student memory of hierarchically organized knowledge. The students were grouped into experimental (instructed in organizer construction) and control (instructed in outlining procedures) groups (Bean et al, 1987). The experimental intervention involved three phases: “teacher modeling of the strategy for one session, small group application with evaluative feedback from the teacher, and finally, independent application” (Bean et al, 1987). The measurement included a reading passage read for homework; a test including both a multiple-choice section and an essay
that required specific details from the text was administered the following day. Following this format, five such tests were administered during the semester. Both the multiple-choice subtests and essay responses were scored by the content area teacher using a rubric designed by the researchers to include important textually explicit concepts. “The purpose of the five multiple-choice chapter tests of knowledge was to determine whether the treatment led to differences between the groups in acquisition of information” (Bean et al, 1987). T-tests performed for the five separate chapter tests indicated no statistically significant difference (p<.05) between the groups (Bean et al, 1987).

The authors offer several explanations for the findings including the ability for the high-level control group students to compensate (Bean et al, 1987). Furthermore, the format of the tests used as the curriculum-based measurements did not represent the type of instruction the experimental students had received. Rather than testing the students through the use of a graphic organizer, the authors assumed a direct correlation between memory recall on this type of test and knowledge acquisition during the creation of the graphic organizers. In other words, they investigated the transfer of knowledge between the student’s creation of knowledge and another person’s interpretation of the knowledge. The authors make note of the improvements in the experimental students’ abilities to make
predictions using the organized knowledge they had acquired during instruction. Although the empirical findings were not significant according to the assessment instruments, the descriptive findings of the rubrics used to evaluate the essay responses offer information supporting the importance of organizing knowledge and teaching students ways to use their knowledge to make predictions during reading.


Griffin, Malone, and Kameenui (1995) investigated the effects of graphic organizer instruction on fifth-grade students. A population of 91 students enrolled in five social studies classrooms was taken from two schools; three of the five classes were randomly assigned to an experimental group, two to a control condition (Griffin et al, 1995). A pretest included a 15-item short answer pretest used to determine equivalency of the groups; an ANOVA indicated no significant differences between groups (Griffin et al, 1995). The intervention included passages from an approved social studies textbook; nine graphic organizers were constructed for each subsection of the passage. The graphic organizers highlighted the key points in the passage; in addition, teacher scripts were included (Griffin et al, 1995). The scripts, highly explicit at first, were reduced to “only the critical features of the instructional procedures” (Griffin et al, 1995, p. 100). The experimental students were trained over a 10-day period for 45 minutes per day; they
were then divided into separate groups by class (Griffin et al, 1995). Three of the classes received explicit instruction in using the graphic organizer along with the organizer, and two received only the organizers. The students completed one organizer for each lesson. After the fifth graphic organizer was presented, students began constructing their own organizers (Griffin et al, 1995). Responses on the organizers were quantified and evaluated by the researcher. The resulting scores on all measures were analyzed using ANOVA and MANOVA; the experimental group scored significantly higher than the control group on all measures (p<.05) (Griffin et al, 1995). Moreover, the mean scores for the experimental group with explicit instruction were significantly higher than the control group (Griffin et al, 1995).

The study conducted by Griffin et al (1995) represents a thorough investigation supporting the effectiveness of graphic organizers. Extension of this study should include a longer instructional period. Also, further research investigating the teachers' reactions to the instruction and their implementation of the instruction, particularly following the use of the scripts, must ensue. Finally, the authors stated the importance of considering the impact of the explicit instruction added with the organizers; this area needs to be expanded and extended to other studies.
Investigating the Directed Reading-Thinking Activity and Graphic Organizers: Darch, Carnine, and Kameenui (1986)

Darch, Carnine, and Kameenui (1986) examined three instructional strategies: graphic organizer instruction, the SQ3R study strategy, and the Directed Reading-Thinking Activity. In addition to investigating the strategies themselves, the researchers also studied the differences between group work and individual work with each of the strategies (Darch, Carnine, & Kameenui, 1986). Participants included eighty-four sixth-grade students randomly assigned to four classrooms (Darch, Carnine, & Kameenui, 1986). Over the course of fifteen lessons during the regular social studies class, the students were instructed with their particular strategy. The four experimental groups included: graphic organizer-group, graphic organizer-individual, SQ3R-individual, and DR-TA-group. Teacher scripts were followed for the experimental groups receiving graphic organizer instruction (Darch, Carnine, & Kameenui, 1986). The lessons for these two groups included presentation and application using graphic organizers in either the individual or group setting. Instruction in the SQ3R experimental group included explicit instruction in the seven-step study method. Lastly, instruction for the fourth experimental group included the basal-text with teacher questioning following the reading and, finally, assigned comprehension questions.
The measurements included a ten-item pretest and a 15-item posttest covering material taught during the content lessons (Darch, Carnine, & Karmeenui, 1986). Within the experimental group receiving instruction in graphic organizers, the mean difference was significantly higher for the group study as compared to the individual study according to ANOVA; however, the difference between the SQ3R and DR-TA groups was not statistically significant (Darch, Carnine, & Karmeenui, 1986). The differences between both graphic organizer groups and the two remaining groups were significant, as well.

The findings, interesting for comparing differences among the strategies, prompt several questions. An obvious question includes the omission of a control group; however, the traditional instruction utilized within the DR-TA group, although titled by the authors as an experimental group, represented a control condition. In fact, the DR-TA strategy instruction was modified by the authors to exclude the scaffolded-questioning phase that occurs during the reading of text. Another important component of DR-TA, that of premise-building (Stauffer, 1969) during reading, was omitted, as well. Indeed, the authors "design" of the strategy (p. 286) changed the style of instruction immensely. The findings support the assertion that the students in the graphic organizer groups performed higher than did the other students. However, before the results can be considered as evidence of strategy effectiveness independent of other variables, more research including a
control sample must occur. Also, future authors must be wary of adapting strategies to suit their research needs for fear of extending the strategies beyond recognition.

**Summary**

Throughout the history of reading research in the United States, various philosophies and theoretical viewpoints have cycled in popularity. Reading comprehension research has risen to the forefront in the reading research community numerous times over the past years. Its importance within the research community can not be overstated: whether or not comprehension research remained in fashion, it has been a research topic revisited. After its importance has been brought to the research community's attention and the lack of empirical support documented, there remains a need for action.

Three strategies in need of more extensive empirical support are the DR-TA (Stauffer, 1969), PreP Technique (Langer, 1981), and graphic organizers (Barron, 1969), all strategies popular in middle school reading classrooms today. Though the strategies have some empirical evidence supporting their effectiveness, more research is needed before they may be considered sufficiently investigated. Replication is certainly a next step; however, it will not be enough. More extensive research investigating combinations of these strategies will offer the most realistic response to the question concerning the most effective strategies for teaching reading comprehension.
The review of the literature offers some guidance for research designs including these strategies. First, the study must include empirical data in the form of a pretest/posttest design with an adequate sample. These assessments should include both formal and informal measurements for comparison; the data from both tests will enrich the findings and offer further evidence for the results. The duration of the intervention is important, as well; it must continue long enough for metacomprehension to commence, certainly longer than the two to three-week periods used in previous study designs. Concerning the strategies themselves, the implementation of the individual strategies must reflect the guidelines for construction suggested by the strategy developers. Lastly, the intervention must include explicit directions for reliability of the implementation.

In addition to the empirical data collection, further investigation into the perspectives of the participants is important. Although explicit scripts are helpful within a research design, in most cases they are not representative of actual classroom experiences. Considering the teachers' impressions of the strategy effectiveness and describing the reactions of both teacher and students in the classroom offer insights into the practical application of the strategy outside the realm of the research study.
CHAPTER 3
METHODOLOGY

Introduction

The quasi-experimental research design was patterned after Tashakkori and Teddlie's (1998) Parallel Mixed Model Study. The data were collected and analyzed simultaneously and separately with research questions designed to elicit both quantitative and qualitative information. Furthermore, the three research questions necessitated continuous data collection concurrently throughout the study.

Research Design

This study, though based primarily in the quantitative paradigm, included qualitative data gathered through the use of teacher interviews and classroom observations. The decision to incorporate both methodologies was a result of the researcher's investigation of various hypotheses regarding methodology. Though many researchers have incorporated studies with mixed designs into their research repertoire, others have resisted on various grounds. Lincoln and Guba (1989) in Naturalistic Inquiry concluded that the two methodologies are incompatible, hence they cannot exist intertwined for research purposes. Their point derives from the notion that the two methodologies are created from different world views (Lincoln & Guba,
1989). While other researchers have not disputed this perspective, they have disagreed with the idea that the two are incompatible. One of the foremost researchers disagreeing is Howe (1988) who has presented an argument for the necessity of combining the two methodologies by stating that they are inherently interwoven (Howe, 1988).

Tashakkori and Teddlie (1998) presented various frameworks for mixed-methodological designs. The authors divided the various research designs into categories including confirmatory investigations, exploratory investigations, and parallel or sequential mixed-method designs (Tashakkori & Teddlie, 1998). The Parallel Mixed-Method allows for separate data to be analyzed within separate modes of inquiry; this research design offered the best framework for the investigation of the present study. The design for the current study included both quantitative and qualitative data used for different purposes to answer different research questions. Empirical data were utilized to answer the primary research question pertaining to investigating academic differences assessed through the use of the two tests. The second research question that addressed implementation levels of the teachers required quantitative data from the observation checklists; qualitative data in the form of fieldnotes were also used to address this question. Finally, the third question regarding affective differences among the students and teachers was addressed qualitatively through observational fieldnotes and teacher interviews.
The use of mixed-methodological designs has become popular in recent educational literature in the area of reading. Creswell (1994) cites examples of mixed-methodological designs from recent educational research. Indeed, many researchers have chosen to include mixed-methodological designs in a variety of formats. The majority of these studies have included quantitative studies utilizing qualitative aspects such as attitudinal surveys or questionnaires. Two studies cited earlier exhibit this mixed-methodological design (see Alvermann, 1988; Graves & Prenn, 1983).

Tashakkori and Teddlie's (1998) Parallel Mixed Model Study includes data that are parallel and are simultaneously collected and analyzed. This design allows for continuous data collection throughout the study. The quantitative data were collected through the pre-test, post-test phase of the experiment with the observational data quantified for analysis. The qualitative data were gathered from teacher interviews and observational fieldnotes.

**Selection of the Sample Groups**

Since the intact teams' teachers instructed their students using the same lesson plans, the decision was made to allow the teams to represent the groups. Furthermore, the intact classrooms at the separate schools served in teams; each team of three teachers met daily to plan common lessons. The concern with randomly assigning the samples by classroom involved a validity issue of experimental
strategies influencing the control group's regular lessons. Thus, the teams of teachers were grouped to form two groups; the two teams were randomly assigned to either the experimental or control group. For analysis, the three groups receiving the intervention (n=58) were combined to form the experimental group; the other three classes were combined to form the control group (n=45).

As all classes in both schools were heterogeneously grouped, the teachers' entire reading classes were selected for inclusion in the study. This method of convenience sampling, by selecting intact classrooms, was conducted at both schools. The decision to employ this form of sampling was made because of the researcher's desire not to disturb the classroom setting any more than necessary for the required testing. The importance of retaining the classroom culture for the observation process was paramount; the researcher decided that disturbing the classroom by randomly assigning students within classrooms was not practical. To assist with the selection of equivalent groups, questionnaires were given to the teachers regarding their professional experience and philosophies of education. Following this questionnaire, all students in both teams were issued permission forms (Appendices C and D); the students were encouraged to return the signed permission forms to their teachers. Only a handful of students failed to return the forms; however, five control students' parents and one experimental student's parents refused to allow the students' participation in the
study. At the completion of the study, participating students were given thank you letters (Appendices E and F) informing them and their parents regarding general findings of the study.

**Overall Plan**

A pre-test/post-test administration of both the *Gates-MacGinitie Reading Test* (1989) and an informal cloze procedure yielded the quantitative results. The measurement instrument was the *Gates-MacGinitie Reading Achievement Test* (1989), an established reading test accepted throughout the literacy community as a reliable and valid test (Collins & Cheek, 1993). The subtests of Vocabulary and Reading Comprehension on the *Gates-MacGinitie Reading Test* were administered. Developed by Arthur Gates and Walter MacGinitie, this multiple-choice test was administered in a group format. The *Gates-MacGinitie Reading Test* is "widely used as a screening device in reading, and has proven to be a valuable instrument for use with groups of students" (Collins & Cheek, 1993, p. 92).

Additionally, a pre-test/post-test administration of an informal reading assessment occurred. The cloze procedures used for the assessments were designed according to the criteria outlined by Collins and Cheek (1993). The stories used for the two administrations included nonfiction stories from an instructional supplement (Heyworth, 1998); both stories tested at approximately the same 6.5 independent reading level according to the Fry Readability Graph (Fry,
Both formal and informal assessments were delivered to ascertain the effectiveness of the intervention on student achievement.

Qualitative inquiry involved classroom observations; for these observations, the researcher observed each experimental (Appendix I) and control (Appendix J) teacher's classroom lessons two days per week for fifty minutes per session for the duration of the study. The instrument used during the observations of the experimental group consisted of a checklist of objectives for each content lesson, specific teaching strategies, and a place for general comments regarding the lesson and overall student response. The observational data provided quantitative data that provided evidence concerning the teachers' implementation of the intervention. Likewise, from the descriptive data emerged themes relating to the affective performance and attitude for both teachers and students in both classrooms.

**Control Group Instruction**

The control group teachers planned their daily lessons during team planning time each week. The three control teachers taught the corresponding skill lessons using the same material. The material included worksheets designed to sequentially introduce particular skills found on the Texas Assessment of Academic Skills (TAAS) test. Each lesson was intended to introduce the skill, provide guided practice, and then conclude with an independent practice phase. Within the daily
lesson scheme, the teachers included Accelerated Reader (Advantage Learning Systems, 1996) and vocabulary workbooks as daily homework assignments.

**The Intervention**

**Experimental Group Training**

The teachers in the experimental group implemented the intervention. After an initial meeting including a presentation of the proposed study, the three experimental teachers agreed to participate. At this time, the teachers selected from approved books the researcher presented. Also during this meeting, two dates for training were scheduled two weeks apart prior to the start of the study.

The first training session lasted one hour during the teachers' common planning time. During this training, the researcher disseminated summaries of the strategies to be employed and answered general questions concerning their implementation. The discussion that ensued included a brief history of the theoretical support for the selected strategies. Next, logistics including scheduling, researcher placement during observations, and specific teacher responsibilities were discussed. Lastly, the teachers presented the district curriculum guide that included objectives and goals they were supposed to achieve for both the district and themselves.

Two weeks later the experimental teachers and researcher again convened during another hour-long training session. During this
session, the teachers received notebooks containing vocabulary lists and a variety of individual and group comprehension checks (Appendix K) for the stories along with lesson outlines (see Appendix L) to be used during the study. The lesson outlines included summaries of the stories to be taught, specific instruction regarding the strategies, time approximations for the various activities, and daily objectives aligned with the district's curriculum. Following a description of the lesson outline, the researcher modeled examples of instruction for each of the three strategies.

During a week-long pilot study, the teachers were observed and given feedback regarding implementation. Using lesson outlines designed from reading comprehension passages taken from a nonfiction instructional workbook at the sixth-grade reading level (Heyworth, 1998), according to the Fry Readability Graph (Fry, 1977), the teachers practiced instructing their classrooms using the designated strategies. This informal week of instruction allowed for direct feedback and encouragement of the strategy instruction. The format of the lesson outline was adjusted to include specific goal alignment with the district curriculum and the Texas Essential Knowledge and Skills (TEKS) (Texas Education Agency, 2000) according to the suggestions of the teachers.

Extended training involved informal thirty to forty-five minute weekly meetings during the team planning time. During this time, the researcher answered questions regarding implementation of the
strategies and provided feedback for observed lessons. This training resembled a discussion group format; time was spent among the teachers discussing particular ways of implementing the instructional strategies and reactions to student responses. Question categories included concern for consistency among the teachers, concern for time allotments, requesting feedback from lesson observations, and concern for additional vocabulary activities within the lessons. The researcher addressed the issues and included the teachers' responses within the fieldnotes for post-study lesson revisions.

**The Lessons**

**Lesson Development**

Lessons for the twenty-eight days of planned instruction were developed prior to the study. The length of four days per week was decided upon by the teachers and researcher in an effort to continue the team plan of allowing students to read their Accelerated Reader (Advantage Learning Systems, 1996) books on Fridays in class. Each lesson outline (see Appendix L) was designed to include the three strategies within a week-long, four day process. The breakdown for mean time spent on each strategy according to the lesson outlines were as follows: PreP technique, 10%; DR-TA, 60%, and graphic organizers, 30%. Each lesson plan was designed to be appropriate for the forty-five minute reading class period. Each class period included a brief review of the prior day's lesson, the strategies for the new day's lesson, and a
brief summarization at the end of the class period. For the daily assignments, the term "lesson outline" was chosen so as to encourage the teachers to stay within the allotted time constraints. Descriptions of the strategy activities were listed below each assigned section. Furthermore, each lesson outline included a variety of activities including silent reading, vocabulary group and individual vocabulary activities, and group and individual comprehension checks, all of which were aligned with the DR-TA. The teachers were encouraged to follow the lesson outlines as closely as possible while noting the time allowances. The teachers were asked to report any problems with the suggested time allotments as they occurred.

Selection of the Stories

The lessons included stories taken from two short novels located on the acceptable list provided by the school board. From these acceptable stories, particular stories that were both interesting and motivating were selected. The selection process which occurred during the first committee meeting involved both teacher and researcher input; the teachers were asked to submit titles for the team to consider; also, the researcher offered books for consideration. The committee decided upon two collections of short stories recommended by the researcher: *The Dark Thirty* (McKissack, 1992), a Newbury Award-winning collection of short mysteries, and *Sixteen Short Stories* (Gallo, 1984), a collection of
fictional short stories written for teens by respected authors within the field of adolescent and adult literature.

The stories selected from these sources for use in the study met the following requirements: they were on the sixth-grade reading level according to the Fry Readability Graph (Fry, 1977), and the length of the stories were reasonable (varying from six to twenty pages) for conforming to the lesson outlines designed for the forty-five minute class periods. A total of seven stories were selected, an average of one story per week of instruction. The stories included "Boo Mama", "The 11:59", "The Conjure Brother", "The Gingi", "Priscilla and the Wimps", and "Future Tense", respectively. Although all stories used tested within the upper-independent to mid-instructional level for sixth-grade readers, some variability existed with regard to vocabulary and complexity of language among the stories. For this reason, the lessons were created using four stories from *The Dark Thirty* (McKissack, 1998) followed by two stories from *Sixteen Short Stories* (Gallo, 1984). The selection of the story order was determined by a formula developed to compare the relative lengths of stories, difficulty of vocabularies, and complexities of plot (see Appendix M). According to this formula, stories were placed along the list from least to most difficult. Once selected, these stories, along with the necessary teaching materials, were provided to the teachers.
Classroom Observations

Qualitative inquiry included classroom observations; these observations involved the researcher observing each classroom lesson two days per week for each group. The purpose of the observations was to provide consistency to the intervention and to verify the control group's interview statements regarding teaching philosophy and practice. The instrument used during the observations of the experimental group consisted of a checklist of objectives for each content lesson, specific teaching strategies, and a place for specific comments regarding the lesson and the students' responses. The instrument used during the observations of the control group included a similar form with more general categories.

Development of the Experimental Group Observation Checklist

The experimental checklist was developed according to the specific behaviors associated with the effective implementation of the three instructional strategies. For reliability of the consecutive observations, the checklist model included behaviors for all three strategies (see Appendix I). Thus, the checklist provided behaviors for the continuum of lessons for each story. Only the applicable portion of the checklist was completed during any particular lesson. The instructors' behaviors were quantified on a nominal scale that recognized observed and unobserved behaviors. Every effort was made to create behavioral statements that were objective and complete.
Observed behaviors rated a score of one whereas unobserved behaviors received a score of zero.

**Development of the Control Group Observation Checklist**

The checklist used during the observations of the control group was created based upon the organization of an effective lesson (Leu & Kinzer, 1999). The behaviors were objectively defined; each behavior received a rating of zero or one, depending upon its observation. Unlike the experimental checklists, the control checklists were designed to include all aspects of an effective lesson (see Appendix J). The categories for each lesson included a review of prior knowledge, instruction, guided and independent practice, and a brief review of the daily lesson.

**The Pilot Study**

Following the pretesting phase, all teachers participated in a week-long pilot study. The purpose of the pilot study was twofold: first, the experimental teachers would be able to practice the strategy instruction and receive feedback prior to the data collection, and secondly, the pilot study would offer the opportunity for refinement or revision of the observational checklists. During the pilot study, the experimental teachers instructed their students using prepared lesson outlines designed for short one-page stories at the sixth-grade instructional reading level. Revisions including rewording and clarifying behavioral objectives for both checklists followed the pilot study.
Finally, copies of the appropriate checklists were disseminated to the teachers for review prior to the study commencement.

**Fidelity Observations**

After the pre-testing and pilot study phases, the experimental group teachers implemented the provided lessons daily for a seven-week period. During this time, the researcher observed each class in both groups twice weekly; these observations included observational checklists outlining specific behaviors expected for the experimental teachers. These observations served as fidelity checks for implementation. Additionally, an experienced, retired teacher, after being trained in the use of the checklists, conducted observations along with the researcher, for the purpose of interrater reliability. These fidelity observations comprised eighteen of the ninety observations, or twenty percent of the total number of observations.

**The Training**

The training of the thirty-two year veteran master teacher selected to assist with the observations included two thirty-minute meetings. During the first meeting, the teacher was familiarized with the research design and purpose of the study. She was given her assigned tasks, that of observing and documenting behaviors, and was given time to ask questions regarding her responsibilities. During this initial personal meeting, she was given copies of the observation checklists for her review. The second meeting, occurring two days later, involved a
discussion of the specific strategies; the teacher expressed concern for her ability to observe the behaviors in the intervention due to the length of the checklist. To assist her with this issue, the decision was made for her to record her thoughts in the form of fieldnotes, subsequently completing the checklists immediately after each observation. She identified the control checklist as similar to the form used for teacher evaluation in the state of Texas. As a certified teacher evaluator, she was very comfortable using this particular form. Following each observation, the two observers tallied the checklists; the percentages of implementation were recorded and averaged to find mean implementation levels for each observer. These means were used to determine interrater reliability between the observers.

**Pre and Post Teacher Interviews**

In addition to the observational checklists, the researcher interviewed each experimental teacher regarding lesson effectiveness and student behavior at both the beginning (see Appendix N) and end (see Appendix O) of the study for one hour each. The interview process included a standard-open ended interview approach guide (Patton, 1994). This guide allowed the researcher to derive categories for the interview for comparative purposes across teachers and as a supplement to the observational fieldnotes. The categories for the interview guides included personal beliefs regarding reading instruction,
various responses to the lessons themselves, various responses to students' responses, and overall effectiveness of the intervention.

The control teachers were interviewed once during the study to ascertain their perspectives, namely their philosophies of reading instruction (see Appendix N). The interview responses were used comparatively to validate the teachers' initial questionnaire responses. These interviews also incorporated Patton's (1994) standard open-ended interview approach guide. The categories included personal beliefs regarding reading instruction, teaching styles, and students' responses to their lessons.

Interview Guide Construction

Patton's (1994) standard open-ended interview guide provided the model for the design since it guides the respondents' answers so that they may be compared across respondents, yet it is not entirely restrictive. One guide served as the pre-interview for both groups; the experimental teachers' post interview guide was similar in content, yet more focused on particularities of the intervention. Each guide contained nine to ten categories; the categories included more general questions regarding educational beliefs and best practices and continued to include specific questions regarding teachers' individual relationships with students. The interview categories consisted of questions dealing with the teachers' philosophical beliefs, responses to strategy effectiveness, and general feedback. These interviews served a
two-fold purpose: the analysis revealed trends in teacher attitude toward the lessons, and the interviews, particularly the experimental post interviews, served as a source of feedback regarding the lessons. Although the researcher did not modify the lessons during the intervention, suggestions that arose through the interview process were recorded for modification of the lesson outlines after the completion of the study.

**Data Collection**

Data collection included pre and post intervention assessment data. The *Gates-McGinitie Reading Test* (Form J) was administered over a two-day period prior to the intervention; the vocabulary and comprehension subtests were administered, respectively. The researcher administered the test with the classroom teacher present. Each of the testing sessions occurred in the regular reading classrooms during the school day. Similarly, the informal cloze procedure (Appendix G) was administered next over a two-day period. Following the seven-week intervention, the researcher administered the posttest form of the cloze procedure (Appendix H). Over the following two days the students completed the posttest (Form K) of the *Gates-McGinitie Reading Test* (1989).

In addition to the testing data, observational data were collected throughout the length of the study. Observational checklists designed for both groups were completed during bi-weekly visits to each reading
classroom. During these visits, qualitative data in the form of fieldnotes were collected for descriptive purposes. Each of the six teachers was visited an average of fourteen times over the seven-week period. For consistency purposes related to the fieldnotes, the teachers in both groups were interviewed prior to the study to discern both their philosophical beliefs and also their perspectives regarding their students' abilities. Then, the experimental teachers were interviewed during an hour-long meeting at the close of the study in order to ascertain their perspectives regarding the intervention; during this interview, the teachers expressed their responses to the strategy instruction and suggested revisions and extensions for the improvement of the lessons.

Summary

The research design for this study included a pretest and posttest phase with student performance, measured by both a norm-referenced test and an informal instrument during the seven-week strategy intervention, as the independent variable. The study was patterned after Teddlie & Tashakkori's (1998) Parallel Mixed Methodological design to allow the collection of both quantitative and qualitative data simultaneously. Both sources of data offered evidence in the form of different perspectives regarding the effectiveness of the intervention and the participants' responses to the lessons.
The objective data related the significance of the intervention. The quantitative findings guided the research by offering evidence of the effectiveness of the strategy intervention. Simultaneously, the qualitative data offered parallel evidence of the study by tracing the experimental teachers’ attitudes towards teaching using the intervention. The use of this parallel method of inquiry offered insights into the implementation of strategy instruction in this controlled environment; the intention was for the findings to offer challenges for future research.
CHAPTER 4

DATA ANALYSIS

Introduction

Immediately following the data collection phase, the data were analyzed using a variety of measures appropriate for the methods of inquiry. The quantitative data gathered from the standardized test and the cloze procedure were first analyzed using a t-test for group comparison; ANCOVA was also employed for both a two-group comparison and across teacher comparisons on both assessments. Next, the observation checklists were analyzed for mean percentages of implementation within teacher groups. Following the analysis of the empirical data, the observation field notes and the qualitative pre and post teacher interviews were evaluated using Glaser & Strauss’s (1969) Constant Comparative Method of unitizing and categorizing.

Quantitative Data Analysis

The first research question investigated the effectiveness of the intervention on students’ achievement as measured by both the Gates-McGinitie Reading Test and an informal cloze procedure. This question was answered by comparing differences on the two groups’ difference scores on both assessments.

The first step in the analysis process involved scoring and assessing the quantitative data. The difference scores for the pretest
and posttest administration of both the Gates-McGinitie Reading Test (1989) and the cloze procedure were analyzed using t-tests, Levene's Test for Homogeneity of Variances (Levene, 1960: cited in Huck, Cormier, & Bounds, 1974), and ANCOVA.

**Gates-McGinitie Reading Test**

Investigating Differences Between The Two Groups

In this two-group design, each sixth-grade team represented a group. Table 1 illustrates the pretest and posttest scores for each group. Also, differences between the groups according to the pretest data are included.

**TABLE 1: GATES-MCGINITIE PRETEST AND POSTTEST SCORES BY GROUP**

<table>
<thead>
<tr>
<th>Group Instruction</th>
<th>Pretest Mean</th>
<th>Posttest Mean</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental n=59</td>
<td>62.67</td>
<td>65.44</td>
<td>2.77</td>
</tr>
<tr>
<td>Control n=45</td>
<td>76.07</td>
<td>78.89</td>
<td>2.82</td>
</tr>
</tbody>
</table>

The quantitative data collected from the pre-test/ post-test administration of the Gates-McGinitie Reading Test (1989) were analyzed using a t-test (see Table 2). The difference scores used for the t-test included total scores from both the pre and posttest administrations. These total scores represented total raw scores for both the vocabulary and comprehension subtests. The Gates-McGinitie Interpretation Manual suggests using this method of combining raw scores for validity purposes (Gates-McGinitie, 1989). Although differences between the
two groups were not significant at the set confidence interval (p<.05), the mean scores for the experimental group were higher in magnitude than were the control group scores.

**TABLE 2: t-TEST COMPARISON OF GATES-MCGINNITTE GROUP MEANS FOR TOTAL SCORES**

<table>
<thead>
<tr>
<th>Group Instruction</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Method</td>
<td>2.93</td>
<td>6.63</td>
<td>.09a</td>
</tr>
<tr>
<td>n=59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Method</td>
<td>2.82</td>
<td>5.51</td>
<td></td>
</tr>
<tr>
<td>n=45</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Following this initial analysis, the group scores were analyzed by school using Levene's Test for Homogeneity of Variances (Levene, 1960: cited in Huck, Cormier, & Bounds, 1974); differences were not significant (F=2.098, df=1/101, p<.05), allowing for the use of an analysis of variance test to calculate variability between groups. The choice to proceed with ANCOVA was made based on the determination that the sample populations contained inherent differences with regard to their ability levels. As this statistical anomaly could not be determined prior to the start of this quasi-experimental study, and its effect on the study's internal validity was an issue, it became necessary to control for it after the data had been gathered. Thus, ANCOVA was the statistical test selected for the analysis.

The first ANCOVA involved looking for differences between the school groups. The decision was made to proceed with ANCOVA to support the findings of the t-test, a test that did not allow for control of
a covariate. For this procedure, the independent variable was the strategy instruction and the dependent variable was the difference score according to the Gates-McGinitie Reading Test (1989). The covariate was the pretest score for the Gates-McGinitie Reading Test (1989). ANCOVA between the groups resulted in similar findings as compared with the t-test: the differences were not significant ($F=2.157$, df=1/102, $p<.05$).

**Cloze Procedure**

As in the previous analysis, each team represented a group for both the administration and analysis of the cloze procedure. A t-test between groups was conducted using the mean differences of each group. Following this analysis, ANCOVA was utilized to determine between and within group differences. The independent variable was the strategy instruction and the dependent variable was the difference score according to the cloze procedure.

**Investigating Differences Between Groups on the Cloze Procedure**

For the analysis of the cloze procedure means, the difference between the pretest and posttest served as the dependent variable. Differences between the groups according to difference means on the cloze procedure were significant ($p<.05$). Table 3 presents the pretest and posttests scores, as well as difference scores, for each group according to the cloze procedure. The t-test results for the difference scores on the cloze procedure tests are illustrated in Table 4.
TABLE 3: CLOZE PROCEDURE PRETEST AND POSTTEST SCORES BY GROUP

<table>
<thead>
<tr>
<th>Group Instruction</th>
<th>Pretest Mean</th>
<th>Posttest Mean</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>0.37</td>
<td>0.39</td>
<td>0.02</td>
</tr>
<tr>
<td>n=54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>0.45</td>
<td>0.43</td>
<td>-0.02</td>
</tr>
<tr>
<td>n=40</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 4: T-TEST FOR CLOZE PROCEDURE MEAN DIFFERENCES

\[ t(94)=2.02, \ p<.05 \]

The mean difference score for the experimental group was .02 (SD=.1, n=54) and the mean difference for the control group was -.02 (SD=.08, m=40) (see Table 6). To further explore differences within teacher groups, an ANCOVA was also conducted.

Investigating Differences Among Teachers on the Cloze Procedure

For ANCOVA of the cloze difference means, the pretest served as the covariate while the posttest served as the dependent variable. An ANCOVA for between subjects resulted in differences that were not significant (see Table 5). Levene's Test for Homogeneity of Variances (Levene, 1960: cited in Huck, Cormier, & Bounds, 1974) showed no
significant differences between teacher means (p<.05). Although differences between the groups were significant, differences among teacher groups were not significantly different.

**TABLE 5: ANCOVA TEACHER GROUPS COMPARISON FOR CLOZE PROCEDURE**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher</td>
<td>5.79</td>
<td>5</td>
<td>1.16</td>
<td>.09α</td>
</tr>
<tr>
<td>Error</td>
<td>1112.58</td>
<td>87</td>
<td>12.79</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1118.37</td>
<td>92</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

αns, p<.05
M1 = 21.14, M2 = 20.43, M3 = 19.67, M4 = 22.20, M5 = 22.77, M6 = 23.00

**Observation Checklists-Quantitative**

The second research question investigated the experimental teachers’ appropriate implementation of the intervention. To address this question, the quantitative portion of the observation checklist was analyzed by calculating percentages of implementation per day. Each teacher was observed twice per week throughout the seven-week period. The mean number of observations per teacher was fifteen. Mean implementation levels were calculated by teacher and between groups. Table 6 displays the mean percentages of implementation for each teacher individually.
The experimental teachers appropriately implemented the intervention with greater than eighty percent accuracy during the course of the study. Contrastingly, two of the control teachers (5 and 6) implemented the curriculum appropriately more than eighty percent of the time; however, one control teacher did not fulfill the eighty percent of implementation required in the research question.

The experimental teachers—teachers 1, 2, and 3—were evaluated using the observation checklist designed to accompany the lesson outlines including the intervention (see Appendices I and J). The control group teachers—teachers 4, 5, and 6—were evaluated using the companion checklist designed to evaluate lessons according to criteria established through prior research regarding lesson effectiveness (Good & Brophy, 1987) and commonly accepted within the educational community.
Fidelity Observations

An outside observer trained by the researcher conducted twenty percent (eighteen of the ninety total) of the observations. Implementation levels for the outside observer were calculated by the same method as the researcher. Interrater reliability levels were then calculated by comparing implementation means assigned by the observers. Individual means for teachers were compounded to form a mean score overall. Interrater reliability for the observations was 91.9%.

Qualitative Data Analysis

The third research question investigated the impact of the intervention on affective performance and attitude for both teachers and students as confirmed by classroom observations. This question was addressed by identifying emerging themes in the fieldnotes and supporting these themes with interview data collected through member-checking with the teachers.

Emerging themes were identified for both the qualitative portion of the observation checklist and also the teacher pre and post interview responses. Both sources of data were analyzed independently using the Constant Comparative Method (Glaser & Strauss, 1967). Analysis of the fieldnotes included descriptive accounts of a typical day in each of the teachers' classrooms to illustrate differences in style and their effect on the curriculum. Finally, the fieldnotes were analyzed to determine emerging themes throughout the intervention.
Observation Checklists- Qualitative

The observational data gathered by way of field notes were analyzed using qualitative methods. The checklists were analyzed using the Constant Comparative Method of unitizing and categorizing data (Glaser & Strauss, 1967; Lincoln & Guba, 1985). This method of analysis allowed for grouping of categories into themes. The emerging themes, once identified, were evaluated a second time by process of data reduction.

Descriptive Accounts of the Teachers

Experimental Teacher 1

The teacher began the first period reading class with a morning routine that included announcements and roll call. The twenty-six students, eighteen boys and eight girls, were seated at tables of four; the room had no empty seats. Following the announcements, the teacher began the lesson in various ways. Occasionally, the teacher would read aloud to the students from a chapter book. In other instances, the teacher allowed the students to read their Accelerated Reader books for ten minutes before class. The lesson followed these opening activities, leaving approximately forty-five minutes for reading class.

The teacher explained that her students, for the most part, were able to recall from their prior experiences situations; the teacher was able to judge the knowledge through the PreP strategy. On one occasion, the students were not able to associate the PreP picture with
prior knowledge; this incident involved the students' reaction to the porter in “The 11:59.” However, this was an isolated incident. Every other observed PreP strategy included some type of connection between the students' prior experiences and the PreP picture. Typically, the students, were able to connect the pictures with vocabulary words, some of which the teacher identified as previous vocabulary words. One student, in particular, helped his fellow classmates by initiating associations on several occasions. Following the daily lesson, the teacher informed the researcher that this student was an avid reader with a tremendous imagination. He guided his classmates and had a tendency to correct or clarify definitions for his classmates. A majority of the class time was allotted to the Directed Reading-Thinking Activity portion of the intervention. The teacher followed the provided lesson outlines and recorded the comprehension premises on a provided chart. The teacher invited a variety of the premises during each lesson and recorded all suggestions. Teacher 1 often asked students to clarify their ideas by first talking through their thoughts and then summing up their ideas in one sentence. Although this activity occurred orally most of the time, from time to time the teacher would assign tables of four to select a premise among themselves and report their answers concisely. When asked about this method of premise building, the teacher responded that she added it as a source of variety for the students. According to her, four weeks into the intervention, the students began raising their
hands during their silent reading time to create premises; for the most part, the students were motivated and eager to transfer the strategy metacognitively. In fact, on several occasions, the teacher had difficulty keeping the students on task; she would often remind the students of the importance of creating educated premises, as a few students would lose focus with irrelevant yet imaginative premises. Regarding the vocabulary sheets, the teacher would have students discuss their choices and decide on pertinent definitions either preceding or immediately following an premise-building session.

Teacher 1 did not spend as much class time on the graphic organizer strategy as on the other two portions of the intervention, a percentage below the expected amount of time on task. However, the class time that was devoted to the graphic organizers followed the lesson outline plan very closely. The teacher began the strategy intervention by using the provided guided organizers and progressed to having her students create their own graphic organizers. Teacher 1 stated that her students did not require the specified time to complete the organizers. When the students finished early as a group, the teacher would improvise by having the students rewrite their graphic organizers using the skill of summarization to produce concise entries. Additionally, the teacher would allow her students to share their responses with their table groups and the whole class. As an additional reward, those graphic organizers that were considered to be exceptional
by the class were shared with the other teachers in the team following the completion of a particular story. "Cool Capers," paper tickets which allowed the possessor to leave early for lunch, were awarded to students who summarized well; the students coveted these tickets.

**Experimental Teacher 2**

As team leader, Teacher 2 worked closely with the other team teachers. Before describing the classroom practices and teaching style of Teacher 2, it is first important to stress the fact that Teacher 2's teaching style and classroom culture exuded collaboration; more so than the others, Teacher 2 urged the other teachers to talk through the lesson outlines during the team meeting time. For example, for the story "The Gingi," Teacher 2 asked the other teachers to share the processes they planned to use for the PreP technique involving a picture of a gypsy. Teacher 2 explained to the team members that this process both helped him feel more confident with his teaching and also aided in the reliability efforts for which the researcher was striving. This sense of teamwork was shared by the other team teachers; it carried over to Teacher 2's classroom atmosphere, as well.

A typical day in Teacher 2's classroom involved a short routine of approximately two the three minutes including classroom maintenance activities. The routine was followed by a short review of the previous day's lesson. This review often included students' recollections of specific hypotheses and student rephrasing of the reading selection.
Following the short review, the teacher guided the students to the day's activities; Teacher 2 began by stating the objectives explicitly in a motivated fashion. Teacher 2 was very devoted to following the lesson outlines, and every attempt was made to attend to the daily task as scheduled. When occurrences such as announcements or assemblies interrupted the class, Teacher 2 worked to get his students back on task by either encouraging them to use their time wisely or allowing them extra time to work during scheduled AR time.

Teacher 2's handling of the PreP Technique could be described as almost scripted. It was obvious that he had planned his thoughts ahead of time and had considered possible student responses. Though he did not spend much time explicitly on the PreP Technique, he continually returned the students to the picture through the vocabulary and comprehension exercises. The majority of Teacher 2's time was devoted to the DR-TA, a strategy he described as very useful.

Through the DR-TA premise building activities, Teacher 2's expressions denoted a sense of adventure and intrigue regarding the stories; on several occasions, Teacher 2 played the part of the novice reader, having the students explain the concepts or vocabulary to him. This sense of interest emanated through Teacher 2's actions and was well received by his students. Their reactions escalated from mild student interest to comments such as "Can we take the books home to finish the story?" to "Can't we skip English today so we can finish the
Regarding the reading selections and their guided format, Teacher 2 commented that he had difficulty with his faster readers trying to read ahead of the others. Teacher 2 noted that this problem was a welcomed one, since only weeks before he had difficulty getting his students to read at all. To discourage those reading ahead, Teacher 2 circled the room during the reading period and had the quicker readers put their books down once they reached the end of the assigned reading section. Interestingly enough, the students who finished early often reached for their AR books during the lull time they had following their reading. This phenomenon was noted by Teacher 2 and supported through observations. During discussions following the silent reading assignments, the teacher stressed the importance of the students' creating the premises while reading. Teacher 2 informed the students of the importance of using contextual clues to discover new vocabulary words, as well. He followed the lesson outline directions by having the students record new words as they read. He emphasized the importance of using the clues to first understand the meaning of a particular sentence and then use the sentences to create meaningful premises. Following the class discussions, Teacher 2 recorded hypotheses that the class created on a chart provided by the researcher; occasionally, the teacher would nudge less-participatory student to rephrase or add to a premise. Teacher 2 emphasized the class's effort to create informed premises.
Following the DR-TA phase, Teacher 2 would introduce the relevant graphic organizer. Teacher 2 followed the lesson outline explicitly by utilizing the whole-class activities designed to facilitate the independent creation of the graphic organizers. Students were urged to use new vocabulary while constructing their graphic representations. Furthermore, Teacher 2 stressed that the students return to their texts to answer particular questions regarding the sequencing of events within the graphic organizers. On one occasion, when a particular student was having difficulty understanding the format of the graphic organizer, the teacher had him re-read the story, summarizing each paragraph as he read. After completing this task, the student took the summaries and, with the teacher's assistance, created main ideas to use as his main points on the assignment. Teacher 2 was willing to assist the students, though only after the students had exhausted other means within themselves.

Following their creation, Teacher 2 had students present their graphic organizers to one another in class; students who had done exceptional work were frequently rewarded by being allowed to attend lunch early. During brief periods of time between lessons, and occasionally on Fridays, Teacher 2 expanded the lessons by having the students review vocabulary words they had encountered in their reading and writing. During these short five and ten minute periods of time, Teacher 2 had students read vocabulary words with classmates defining...
them orally. The emphasis during these vocabulary reviews was on the
importance of using the vocabulary in other contexts and on the
importance of recalling such vocabulary terms.

Experimental Teacher 3

As the most experienced teacher on the team, Teacher 3 had
much to offer her fellow teachers and her students. Trained initially as
a math teacher, her teaching style followed a systematic and logical
format one might expect from such a professional. The class
atmosphere was accepting; following instruction, Teacher 3 allowed her
students to approach the teacher's desk with questions. Teacher 3
emphasized the importance of one-on-one with her students and the
fact that they often knew when they needed help. The students in
Teacher 3's classroom, however, did not project an atmosphere one
might think as conducive to learning. Rather, the students personified
an image that could be characterized as "the cool group," or the more
popular and well-liked sixth-graders. Curt glances and smiles, occurring
during the teacher's correction of student misbehaviors, were common
place. When asked about the student behavior, Teacher 3 commented
that she felt that the students had a sense of apathy, or lack of desire to
do well in reading. This, she stated, could be attributed to a group in
the class that was frustrated with their reading; however, other higher-
achievers within the classroom also demonstrated this behavior.
Teacher 3 was eager to discover a motivating tool for the classroom.
A typical day in Teacher 3's classroom involved a ten-minute period of time classified as AR reading time. Following the ringing of the bell, the teacher would check to see that each student was reading an assigned AR book. Those students who failed to have their assigned book, generally one student per session, took a dictionary from the shelf and read it instead. Following this ten minute quiet period, the teacher began the assigned lesson; Teacher 3 followed the lesson outline carefully. On occasion, she would question the researcher regarding specific expectations and to verify that she was implementing the strategies satisfactorily.

The PreP Technique provided Teacher 3 with an opportunity to enrich the students' vocabulary, a task the teacher considered as very important. For example, during the story entitled "Boo, Mama," Teacher 3 took what she termed a teachable moment to reflect with her students about the Civil Rights Movement. She commented that she was surprised about her students' naivete on the subject. The teacher recounted the event, which had occurred on the previous day, to the researcher following an observation. The teacher, aided by the picture of Dr. Martin Luther King provided for the PreP lesson, facilitated a classroom discussion that created a base of knowledge for her students. This one example illustrated the connections Teacher 3 made with prior knowledge and the stories for her students; she continued to connect
the events in the story with the PreP pictures, emphasizing the context of the stories.

Teacher 3's classroom became energized during the DR-TA activities. From the first story, the teacher encouraged premises and applauded attempts as students pieced together the events. The first premises were poor; the students who were capable of creating legitimate premises seemed apprehensive about participating. As student by student from the cool group began to suggest premises, though, the more capable students began building upon the suggestions. Teacher 3's accepting demeanor encouraged these responses and prompted other quiet students to join the discussion. Definite changes regarding motivation and participation were obvious by the third story; the atmosphere changed from one of passive disinterest to one of passionate participation. The change was phenomenal. In fact, one ordinarily quiet student was caught stealing a book; she said that she just could not wait to finish reading the last section on the following day. After reprimanding the student, Teacher 3 emphasized to her the importance of making an educated guess, or as she termed it, "an estimation of the ending." Teacher 3 documented the change in classroom culture that occurred so rapidly by recording the premise building on the chart she kept for such purposes. However, this change was not the only noted epiphany. Within the following story or two came a sense of competition unlike either of the other two
experimental classes. Not only were students making premises, but they were also arguing and defending their premises against those of their peers'. For example, one student, identified as being quiet yet capable of comprehending, wrote his hypothesis on his vocabulary sheet and documented, unassisted, the support for his prediction. He even directed his classmates to particular pages to support his claims. Surprised, Teacher 3 exclaimed that the students' actions were estimable, and suggested that he would likely become an attorney in the future. As a direct consequence of this positive reinforcement, others began emulating this student during later premise-building exercises.

The enlivened class discussion associated with the DR-TA paralleled the class's responses regarding the graphic organizers. There was an understood, yet unspoken continuum of need; the students followed this continuum from requiring extensive guidance to requiring less assistance. When introduced to the graphic organizer with the first story, the students were unsure and apathetic towards the activity; the teacher stated that getting them to think critically was like "pulling teeth." Although the organizers were scaffolded in an attempt to wean the students from the guided activity, the majority of students seemed unwilling to attempt to complete the graphic organizers. Several students complained about the assignment; all in all, the vocal students seemed disinterested and unconfident. The attitude of the students became more positive as the classroom discussions improved.
Although four students continued having difficulty completing the graphic organizers at the end of the intervention, the majority of the students were able to complete the activity with relative ease. One student was overheard saying aloud in class (regarding one of the final stories), "Let's finish this graphic organizer so that we can read another story!"

**Control Teacher 4**

Teacher 4 was the most experienced teacher in the control group. As such, Teacher 4 shared information regarding the history of curriculum development in reading in the district. Teacher 4, proud of her exposure to various reading programs through numerous inservices, stated that her fellow team teachers and she were instrumental in getting the district to adopt the vocabulary books for the middle grades. Vocabulary for Teacher 4 was crucial, and the most effective method of teaching it was through the use of a direct instruction model. In fact, Teacher 4 thoroughly aligned herself with the philosophy of direct instruction. Teacher 4, like the other fellow control team teachers, believed that explicit instruction was necessary for all reading skills, especially comprehension. The students, according to Teacher 4, needed direct instruction in metacomprehension exercises. To serve this need, Teacher 4 incorporated the district-mandated AR program and a T.A.A.S.-related reading program developed by Kamico (1992)
(Appendix P). Following this systematic method of teaching, Teacher 4 led her class in an organized, planned instructional method.

Each lesson began with a prereading activity referred to as a “focus” activity. The focus activities included short passages of three to five sentences followed by a series of comprehension questions; the questions included factual or literal questions. After allowing time—usually ten to fifteen minutes—for the students to finish the questions, Teacher 4 had the students check their answers in class. Students who the teacher called upon answered the questions; those in error were told to explain their answers. The teacher corrected any errors and attempted, at times unsuccessfully, to clarify the correct answer and to give evidence from the text supporting its selection. On all but one occasion, the focus activities were unrelated to the reading skills included within the daily lessons. Teacher 4 explained that the focus time allowed the students to practice skills they learned at the beginning of the year.

Prior to beginning the daily lessons, Teacher 4 often had the students check work in class. The method used during this evaluation portion of the lesson included various students naming answers; Teacher 4 quickly corrected incorrect answers by alerting the students that they were in error and calling on another student for the correct answer. During this evaluation time, the students would often check either vocabulary activities that had been assigned for homework or the
independent practice from the previous day's assignment. This type of evaluation lasted approximately ten minutes following the focus activity.

The daily lessons involved a variety of skills observed during the study including reading maps and graphs, drawing conclusions, and making generalizations, three skills tested on the T.A.A.S. test. The curriculum used by Teacher 4 and the control group colleagues included lessons developed and recommended by the creators of the T.A.A.S. test (Kamico, 1992). An example of these structured lessons included a reading passage two to three pages in length with between six to twelve questions focused on a particular skill.

A typical instructional day in Teacher 4's classroom involved a brief period of instruction in the form of guided practice. Occasionally, Teacher 4 would refer to prior instruction; however, this was not typically done. Rather, through guided practice, the students would answer questions concerning a sample passage placed on an overhead transparency. After this relatively brief activity, the teacher would direct the students to independent practice. Teacher 4 would alert the students as to whether or not the assignment was to be graded; additionally, the teacher was available for questions during the independent phase. Once the students completed their assignments, they were allowed to work on vocabulary homework or read their AR books. If time permitted at the end of the class period, the teacher
would direct the students to evaluate their work during class. The classroom culture embraced the importance of completing work and identifying textual evidence supporting answers by highlighting phrases within the text. However, the independent time was not utilized as instructional time. The students were directed to their tasks with the assumption that they would follow their directions independently. In fact, the teacher did not circle the room monitoring and assisting with student questions; instead, the teacher retired to her desk to check work from other class periods or to prepare for other lessons.

Finally, the students were dismissed without a review of the day's lessons. Teacher 4 exhibited those traits typically associated with traditional teachers: the teacher quickly corrected errors and expected the students to work independently. The students were responsible for their own learning and behavior; Teacher 4's role in the classroom setting was one of a stern yet caring teacher who expected her students to attain a high level of performance, largely through their own efforts.

Control Teacher 5

The teaching style of Teacher 5 permeated the classroom atmosphere; one had only to walk in the classroom to sense the feeling of mutual respect and caring. The teaching style of Teacher 5 could be characterized as following a direct instruction model. The lessons, similar among the team teachers, were structured and cumulative. Teacher 5 would often begin class by asking the students about their
weekend experiences, or by questioning their responses to the A.R. reading. Although Teacher 5's demeanor was considerate and accepting towards her students, there existed an unspoken code of behavior expected of the students. Teacher 5 was quick to use the discipline policy the team had adopted; the students knew that when they disobeyed one of the rules by either forgetting to get their reading log signed, leaving homework at home, or other infractions, they would be punished. Teacher 5 would smile at a disobedient student and shake her head, and the student would proceed to take his punishment. The students accepted and expected the classroom consequences.

Understanding Teacher 5's classroom culture is essential to understanding the structure inherent in her classroom. Although the control team teachers met daily and coordinated their lesson plans, each teacher implemented the plans differently. Teacher 5 made every attempt, as did her fellow team members, to instruct her students with the team plans; Teacher 5 related the team's concept that coordinated lessons helped the students move from teacher to teacher when schedule changes were necessary. The lessons were planned almost to the minute; however, unlike Teacher 4, Teacher 5 focused on and emphasized different aspects of the lessons for her students. Crucial components in Teacher 5's lessons were the guided practice and examples. The daily lessons mirrored the structure of Teacher 5's classroom.
After a brief two or three minute welcome and classroom routine, the lessons would begin. Occasionally, Teacher 5 would have her students check work from the previous day's assignments or their vocabulary assignments. This evaluation period was used as a teaching opportunity; Teacher 5, rather than simply calling on students to respond with a correct answer, read the answers aloud—a process taking no more than three minutes—and subsequently had a question and answer period of about five minutes. This time offered the students a chance to have the teacher pronounce difficult vocabulary words or request additional help with the previous day's assignments. Time was critical since transitions between activities were quick. Teacher 5 lost no time between the tasks. Even in the case of class discussions, Teacher 5 retained the importance of time. The few occasions during class discussions when a student's question would veer away from the focused instruction, Teacher 5 would answer the question and then gracefully guide the student back on task. The manner with which Teacher 5 guided the students was synchronized with the classroom atmosphere: the students knew what was expected of them and completed their tasks efficiently.

A majority of the class period in Teacher 5's classroom was focused on explicit instruction. Following a short introduction to the new skill, Teacher 5 reviewed pertinent skills on which the new skill would be based. For example, when teaching the concept of fact and
opinion and the differences between the two, Teacher 5 reviewed the method the students had previously learned for finding supporting facts within the text. The teacher guided the students to use their highlighters to highlight certain factual answers within the text, imitating the method they had studied in an earlier lesson. Each new skill was introduced in this way, with an emphasis on prior knowledge. Teacher 5 made certain that her students understood the placement for the new skill within the continuum of reading comprehension.

Following this instructional time, which included a substantial amount of guided practice and monitoring of the activities on the overhead projector, Teacher 5 assigned independent work. Before doing so, however, the teacher made sure that the students were comfortable with their ability to complete the task. She would often question them explicitly, saying, "Do you feel like you can do this on your own now?" After the students felt confident with their new abilities, then and only then would Teacher 5 allow them to work independently. And, even at this point, Teacher 5 continued to guide the students by monitoring them and answering questions as they worked. Explicitly and implicitly Teacher 5 stressed the process of comprehension rather than the grade associated with a particular assignment. Like her fellow team teachers, Teacher 5 gave no credit to students who failed to support their answers with examples from the text.
Control Teacher 6

Teacher 6 may be described as the most balanced, philosophically, of the control group. During her initial interview, Teacher 6 emphasized her balanced philosophy. Although she did believe in the necessity of providing quality literature to her students, her beliefs regarding the importance of structured lessons and her desire to remain within the parameters of the team concept prompted her to focus her instruction on more structured lessons. Teacher 6 brought to the team lessons a calm and supportive demeanor that created a sense of acceptance and order within her classroom. The teacher encouraged her students to ask questions; although there was an understood structure and order to both the classroom management and instruction, Teacher 6 emphasized her flexibility to accommodate her students' individual needs. Her expectations were high; like her fellow team teachers, Teacher 6 stressed the team rules and was consistent with her management system. The students were aware of her expectations and proceeded with their assignments maintaining the same demeanor as the teacher.

The methods used by Teacher 6 during the lessons were varied. On some occasions, the lessons were introduced through the process of evaluating the previous day's assignment. The method of evaluation used by Teacher 6 differed from her colleagues; rather than checking the work, Teacher 6 worked through the questions aloud, referring to different students for answers and support. The evaluation was used as
a process for the students to recall prior knowledge and for the teacher to assess the students' comprehension skills. Though this activity was complete in its effort to prepare for the introduction of new material, it lasted no more than fifteen minutes.

When the evaluative introductory method was not the best choice for a given lesson, Teacher 6 would select another method of introducing the new skill; however, each lesson would begin with a short review of relevant prior skills. Following this short review, Teacher 6 would present examples of the new material on an overhead projector. On several occasions, Teacher 6 presented additional material to supplement the lesson; this supplemental material, ranging from comic strips to interesting stories, was not included in the team teachers' instructional plans. The supplemental material was included for both motivational and academic reasons; the extra examples presented the students with more information and varied usages of the skill. The effect on the students was obvious; on several occasions, the teacher, when referring to a previously-learned skill, would refer to the example to activate the students' prior knowledge. One example, again from the team lesson involving differentiating between fact and opinion, included a transparency entitled “Uncle Albert’s Homeopathic Medicine.” The students read the information on the bottle and decided as a class which of the statements could be substantiated as factual and which involved opinion statements. Subsequent lessons involved references to
this transparency by teacher and students. Furthermore, the references
to this example were later used by Teacher 6 to emphasize the
importance of making informed judgments, a skill she knew was
difficult for middle school readers to apply.

After extensive and thorough guided practice, Teacher 6 assigned
her students activities geared toward encouraging independent thinking.
The activities included extended examples of the guided practice
activities. Often, the teacher allowed the students to work with partners
to complete the activity or to check their responses before the whole
class reconvened for evaluation. This intermittent transitory activity
gave the students a chance to practice independently yet with guidance
and immediate feedback. After the class worked through the activity
together, then the teacher would assign independent classwork. As the
majority of the classroom time was spent on instruction, the students
would often have time to begin their independent work in class.
Homework was expected and completed; the teacher stressed the
importance of the individual attempts and alerted the students to their
chance to ask questions the following day. Although Teacher 6 was
willing to assist, the students realized that she held high expectations
for them and expected their best performance on all assignments.

Emerging Themes

From the observational data of the control and experimental
team teachers and their classrooms emerged themes representing two
corridors of understanding: student affective performance, including attitudinal alterations, and teacher instructional style and content knowledge. Using Lincoln & Guba's (1985) method of unitizing and categorizing data, five prominent themes reflecting both affective performance and teacher style and content knowledge emerged. The five themes included student motivation, teacher interest, and the quality of instructional time as affected by teaching philosophy, classroom management, and teacher content knowledge. Interestingly, these themes occurred throughout the classrooms in both groups; additionally, the themes converged with the teachers' expectations for their students.

Affective Themes: Student Motivation and Teacher Interest

The teaching styles of the two teams of teachers varied with regard to the recognition and priority of student motivation. This differentiation created a juxtaposition of comparative views regarding motivation: for the control teachers, motivation was a side effect of instruction whereas for the experimental teachers, motivation was an intrinsic part of comprehension. The experimental teachers considered motivation to be one of the most important factors in their instruction; motivation, a quality many experimental students were lacking at the beginning of the study, was considered to be an important component of an instructional plan. The variety of instructional strategies and
varied reading materials used by the teachers prior to the intervention exemplified the teachers' resolve to motivate their students.

Interestingly, both teacher groups considered student motivation to be a measure of academic success. The control teachers responded to questions regarding the success of particular lessons by stating, "The kids really enjoyed it," or by recognizing that the students seem to like the chapter book taught at the end of the year. Reading the chapter book represented a finality of instruction: the students had achieved a level of comprehension where they could understand a more difficult text. In reality, other than the individualized A.R. books, the control students read only short passages tailored by the publishers with comprehension questions to imitate the T.A.A.S. passages. Teacher 4 described the reading of the chapter book as "relaxing and enjoyable for the students." As a tribute to their hard work throughout the school year, the students were rewarded with this text, usually the book *A Bridge to Terabithia* (Paterson, 1977). Indeed, as a reward for their hard work, the students were rather ironically rewarded with material that was motivating and interesting for them, as contrasted to the less interesting passages that were required reading during the remainder of the school year.

The experimental group also considered student motivation to be a critical factor in reading comprehension as was evident in their comments during the course of this study. Although they explicitly
stated the importance of student motivation and their desire to capitalize on their students' interest, they preferred that motivation be a side effect of their instruction. Noting the lack of student interest in reading in their students, the teachers spoke with dismay about their attempts to create interesting lessons that captured the attention of their students. The teachers mentioned the dearth of interesting reading materials that promoted the types of comprehension skills they envisioned as important for their students. Their instruction included materials from various sources including their assigned basal texts, trade books, the *Weekly Reader* magazines (Weekly Reader, 2000), and other supplemental instructional materials provided by the district.

**Instructional Themes: Quality of Instructional Time as Affected by Philosophies of Teaching Reading, Classroom Management, and Teacher Content Knowledge**

The quality of instructional time used by both groups produced differences in the academic environments. The differences, less obvious among the experimental teachers due to the control inherent within the intervention, emerged through the observational and interview data to form a common theme between the two groups. The differences in the quality of instruction occurred as a result of a combination of differences in teaching philosophies, organization and utilization of classroom management procedures, and teacher understanding of content material.
As the quantity of instructional time was controlled by the lesson outlines for the experimental group, the quality of that allotted time differed slightly among the experimental teachers. Each experimental teacher, while adhering to the requirements of the lesson outlines, added a personal teaching style to emphasize particular aspects of the lesson content. For example, Teacher 1 spent a substantial percentage of time on the DR-TA (Stauffer, 1969) strategy having the students discuss the premises they created and the likelihood of their correctness. During the same lesson, Teacher 2, after a class discussion, referred the students to their vocabulary lists and reviewed relevant vocabulary as a form for review. Teacher 3's method for the lesson included talking the students through the previous day's premises and encouraging them to recall their supporting evidence for the premises they had created. The quality of the instruction varied by degrees; although every attempt was made to control the quantity of the instruction, the individual teachers' methods of imparting the same content varied. Each teacher emphasized portions of the lesson outlines that he or she valued through his or her individual philosophy of learning. In this way, the variation of quality was dependent on the teachers' internalized priorities of the strategies and skills. The variations, some more effective than others, created nuances in the quality of instruction the teachers delivered.
Additionally, the experimental teachers differed in the quality of instruction because of the different uses of the team classroom management plan. Designed to reflect the combined behavior plan created by the team, the three teachers implemented management differently. Teacher 1 emphasized the team rules and routinely reminded the students of the expectations. Although the students exhibited more appropriate behavior with these reminders, the teacher seldom followed the reminders with tangible, team-designed reprimands. The verbal reminders, though effective at the time, depleted the lesson of adequate instructional time and affected the quality of the instruction by detracting the students' reflective opportunities during the use of the DR-TA strategy (Stauffer, 1969). Although the quantity of instructional time was identical, the quality was inconsistent.

The experimental teachers met daily to plan their lessons. These daily meetings allowed the teachers to enrich the quality of their instruction through group discussions related to implementation and content. Through these meetings, the team enhanced their lessons and provided one another with instructional ideas. For example, Teacher 3 described the information she had concerning the story of Bigfoot, a character in the PreP Technique for one of the stories. Teacher 3 had read a book on the topic and was able to share the information with the team; this sharing provided the team teachers with prior knowledge on
the subject so that they could answer specific questions regarding the myth. At other times, the teachers met and created accompanying materials for future lesson plans. During an informal meeting, Teacher 2 explained that the team felt that the lessons lacked vocabulary; to improve the quality of vocabulary instruction, the teachers created activities for the team’s use in improving the lessons for the following school year. Indeed, the quality of instruction was a priority to the teachers; their conscientiousness concerning the correct usage of the strategy supported the study and strengthened the quality of the instruction.

The theme of quality of instruction emerged through the control group observations and interviews, as well. As with the experimental intervention, the control teachers had lesson plans created among themselves regarding content and quantity of time for particular skill lessons. Although the teachers attempted to control quantity, and did to a degree by covering a specific content on a specific day, the quality of the instruction varied. Teacher 4 prioritized the independent work aspect of the lessons. To Teacher 4, quality instruction involved a brief introduction of material and student practice. Comparatively, Teachers 5 and 6 focused their efforts on the instructional aspect of the lessons. The quality of the instruction emerged through the lessons in the form of correct student responses merged with student attention. The instructional time spent on the lessons occupied a great deal of time for
the two teachers; they treated the independent practice portion of the
daily lessons as a final activity. The transition to the final activity was
smooth with an absence of pressure on the students to perform
accurately. Although the teachers undoubtedly perceived the definition
of quality instruction in different ways, it emerged as an important facet
of the learning experience.

The theme of prioritizing quality instruction emerged through the
control teachers' treatment of classroom management situations, as
well. Classroom organization was a science for the control teachers;
orderliness was expected at all times. The teachers adhered strictly to
the team rules and consequences. The efficient system, explained by
Teacher 5 during the interview as both expected and taught the first few
weeks of school, allowed the teachers to waste little time on
management issues. When the students misbehaved, they were directed
by a gaze from the teacher that directed them to an index card file. The
students quietly completed their forms; this method of discipline was
implemented in all three control classrooms. The only exception was an
emotionally disturbed student in Teacher 4's classroom who was
following a strict behavior plan. Otherwise, there was little disruption
during instruction. The superb management system developed by the
control team enriched the quality of instruction immensely.

The level of teacher content knowledge also affected the quality
of the lessons for both teams. The experimental team teachers, in the
process of discussing their daily lesson plans during their team meetings, discovered their personal level of prior knowledge. Sharing their thoughts while reflecting on their experiences and how their presentation would reflect examples from their lives, the teachers learned and expanded the repertoire of group knowledge, thus enhancing the quality of instruction. On one occasion, Teacher 3 shared her experience about a lesson involving the PreP Technique. During the process of listening to the students reflect on their knowledge of the Civil Rights Movement, an activity preceding the initial story, Teacher 3 realized that the students had no understanding of the era and the emotions of that turbulent time. When asked to explain the picture of Martin Luther King, Jr., and the protestors, the students responded by stating words including "Martin Luther King, Jr.", "blacks versus whites", etc. However, when the teacher guided them to think about the time period and why the protestors were marching in protest, the students could not respond. Since an understanding of the historical context was important to the setting and protagonists' actions in the story, the teacher spent time explaining the context of the famous march. The teacher expressed her frustration to the team members: she had not considered the lack of knowledge the students had pertaining to the topic. The teacher explicated how she had expected the students to have some understanding of the time period, a time period through which she had lived, and was astonished when they did not. The team
meetings encouraged these epiphanies; the teachers' content knowledge was enhanced and they were able to share their experiences with the group. From this example, the other two teachers learned the importance of not only the historical context through which they may or may not have lived, but also the risk of assuming students' knowledge. This assumption influenced the continued implementation of the PreP Technique for all experimental teachers as it surfaced through team discussions throughout the study.

The quality of reading instruction within the control teachers' team emerged in two separate spheres—those of process and content area knowledge. The teachers were well-versed regarding the process of teaching reading within their content areas. The teachers reported their continued professional development in the area of reading; Teacher 6 shared her experiences concerning a recent workshop—Carbo's Reading Strategies (see Carbo, 1997). The teachers remained abreast of current trends in reading. During the initial meeting, Teacher 5 questioned the definitions of direct instruction and whole language philosophies; a conversation ensued among the group members regarding various definitions within the current literature. The teachers were familiar with the practices involved within the two philosophies and had firm beliefs regarding their personal philosophical placement along the continuum of theoretical beliefs.
After seeking the knowledge of process, the teachers implemented the processes they considered to be the best practices. Their method of instruction included the explicit teaching of problem-solving activities through metacomprehension activities. After reading passages, the students worked through a series of comprehension questions ranging from factual to inferential. The teachers emphasized the process of thinking through the questions; this emphasis on process resulted in quality instruction delivered through this guided practice. As most students typically understood and were able to transfer the skills to the independent practice with ease, the lack of a variety of activities created a mundane atmosphere in the classrooms. The students were conditioned to follow the strategies and did so with few distractions; however, there was no indication of student interest in the passages. For the students, learning was separate from reading. They completed their daily worksheets and responded correctly to the teachers' questions, thus suggesting to the observer that the instruction was appropriately teaching the process of answering reading comprehension questions, not the enjoyment of reading.

A theme of content knowledge emerged, as well. Not only did the teachers require an understanding of the process of teaching reading comprehension strategies, but they also had to be knowledgeable of the content of the passages in order to answer students' questions effectively. As students' questions are spontaneous, teachers can only
prepare for the questions by having a thorough understanding of the content themselves. On few occasions, this area of content knowledge created a problem, because some of these unprepared responses were either confusing to the students or incorrect. An example of this type of unprepared response occurred during a lesson including the concept of differentiating facts from opinion, a lesson difficult for many sixth-graders. When a student requested clarification of a particular answer, the teacher guided the student to a passage, but this strategy proved to be unsuccessful. After class the teacher expressed frustration with this lesson, since she was typically a very prepared teacher who routinely and consistently reinforced the comprehension process in the classroom. Although not as convincingly as the instructional process regarding reading instruction, the theme of content knowledge emerged as an important component within the control teachers' classrooms.

**Interview Data**

The interviews were analyzed qualitatively using the Constant Comparative Method (Glaser & Strauss, 1967; Lincoln & Guba, 1985); interview transcripts were grouped into themes and organized. The pre-interview data offered explanations regarding the teachers' philosophies; the themes of personal philosophical beliefs, perceptions of the keys to student success, and beliefs regarding the important components of an effective curriculum emerged. The resulting themes from the experimental teachers' post interview data provided
descriptive evidence of the teachers' perspectives of the students' progress and the intervention's effectiveness. Themes embedded within the data included specific academic and affective successes and particular suggestions for improvement of the strategies.

During the pre-interview process, both teams of teachers expressed firm ideals regarding their individual teaching philosophies. The experimental team focused on an eclectic ideal: finding the best variety for their students. They stressed that the basal did not mesh with their eclectic plan; they preferred to select interesting texts and instructional materials. However, two of the teachers were concerned about the lack of interesting, T.A.A.S. related material that they considered to be useful for their students. The teachers were interested in finding new materials to capture the interest of their students. All the teachers focused their responses during the interview on the primary instructional factor they noted for student success: motivation. Responses during the interview included frustration on the part of the teachers, particularly Teachers 2 and 3, with enticing the students to read outside of class. If motivated, their students could perform, according to the teachers. Teacher 3 noted an unusual disinterest among this particular group of students. They seemed disinterested with the prevailing student motivator: grades. Instead, the teachers reported students who followed a popular crowd of students who performed below level. The students' expectations were not as high as
other classes of students before them. To counteract this lack of motivation, the teachers placed great emphasis on the strategies interspersed within the T.A.A.S. test. The teachers explicitly stated their intent not to teach the T.A.A.S.; Teacher 3 commented that, as a teacher who had been chosen to write and critique potential T.A.A.S. questions, she believed that many of the skills the T.A.A.S. included were important for students to know. The other teachers supported the statement through their comments, and stated that the curriculum, though not T.A.A.S.-driven, should include some of the same skills represented on the test.

Similar themes emerged through the control group interviews, but the emphases were very different. The teachers held firm beliefs regarding their teaching philosophies. Though Teachers 5 and 6 noted the importance of including various types of instruction during the interview, their questionnaires, various comments during the interview sessions, and classroom observations reveal a different scenario. The directed type of instruction implemented by the control teachers was systematic and sequential. These two descriptions of the lessons reflected the keys to academic success the teachers projected for their students. During the interviews, the control group teachers stressed the importance of considering the students and instructing them the best way possible. The comments during the interview dealt with the affective area of learning: the teachers wanted the students to “enjoy
reading." A logical assumption, acknowledging the expressed beliefs regarding the individual philosophies, is that the teachers used the knowledge concerning best practices for their students through the systematic instruction they utilized. The importance of curriculum emerged as a fundamental theme among the interviews. The teachers believed that their curriculum was effective and efficient. The teachers expressly stated during the interviews that by instructing their students using T.A.A.S.-related material, they were utilizing the best practices for their students. The control teachers recognized the importance of considering the students' interest, however their lessons were designed to be more aligned with their teaching philosophies rather than student-focused.

The final interview session included the experimental teachers' responses to the intervention. Since this team of teachers had worked cooperatively throughout the study, the decision was made to include the teachers in a focus group; the question categories followed the interview guide created prior to the study (see Appendix O). Additionally, the special education teacher asked to join the focus group. Because she had played an integral part in the modification and completion of lesson activities, her insight was appreciated and her comments included within the interview process. The themes which emerged through the interview focused on three separate areas: specific affective and academic benefits of the intervention, and
suggestions for future improvement and extension of the lessons. All
teachers were quick to reinforce each others’ positive comments with
examples of student improvement. Teacher 3 interjected an example
concerning a student who frequently misbehaved in class; after several
parent conferences, the teachers were becoming frustrated with the
students' lack of interest. A few weeks into the study, however, he
suddenly began reading in class, often getting to his seat before the bell
rang to begin reading early. The mysterious aspect of the stories caught
his attention; he had even requested a library visit and, when allowed to
go, selected a book that he continued to read. The teachers were very
complimentary of the motivation level of the students, which they
attributed to the intervention strategies. Students' discussion,
according to Teacher 2, were much more lively; students who had not
spoken in class voluntarily before were reading and creating premises.
The special education teacher reported improvement with her pull-out
students related to their abilities to keep up with the relatively shorter
passages and to attend to the text as they read. She also noted the
improvement in their comprehension, which she related to the graphic
organizer activities. One student who was often disorganized and
seldom had his assignments in Teacher 1's class had improved in his
ability to sequence the activities in his retellings, a true accomplishment
according to the teacher. Overall, there had been a significant increase
in student motivation, according to the teachers, and the result was
better grades, more completed assignments, and greater participation from the students.

Along with the positive statements, the teachers included comments regarding improvements for future lessons. Teacher 2 requested more activities including vocabulary, an area he considered to be a problem for the students. The teachers also requested more time for the DR-TA activities; at times, they found it necessary to discontinue student discussions because of the time constraints of the lesson outlines. Also, the teachers discussed the importance of adjusting the lessons to allow for different student levels. Though they all taught as similarly as possible for the purposes of the intervention, the teachers recognized differences among their classroom populations regarding behavior, ranges of ability, and interest level. These differences required adjustments in instruction and a variety of instructional methods. Teacher 1 suggested that future lessons include variations, such as games or collaborative work. The teachers stated that they planned to use the same lessons in the future and requested that the researcher create additional lessons dealing with similar literature for their group instruction.

Interpretation of Findings

Both the quantitative and qualitative findings reveal information that is useful in attempting to answer the research questions. The empirical results suggest a degree of effectiveness of the intervention
based on the data generated by the *Gates-McGinitie Reading Test* (1989) and cloze procedure. Paralleling these findings, the descriptive findings suggest specific information regarding implementation among the teachers and possibilities for affective changes resulting from the intervention.

**Quantitative Findings**

Overall, the experimental teachers implemented the strategy intervention with a mean accuracy of 92.42%. The mean accuracy represents an average of the implementation levels as reported on the observational checklists completed by both observers over the course of the study. Differences between the groups according to the *Gates-McGinitie Reading Test* were not significant (p<.05). However, differences between the groups according to the cloze procedure were significant (p<.05). Teacher main effects were not found for ANCOVA with the cloze procedure.

**Qualitative Findings**

Descriptive findings from the observation and interview data suggested differences among the groups regarding motivation, quality of instruction, time on task, and student responses to the instruction. Through the observational data five key themes emerged: student motivation, teacher interest, quality of instructional time as affected by teaching philosophy, classroom management, and teacher content knowledge. The pre-interview data for all teachers included themes
emphasizing teaching philosophies, beliefs regarding the keys to student success, and ideas concerning curriculum. The post interview data included themes surrounding the academic and affective development of the students along with suggestions for improvement of the lesson outlines.

**Conclusions**

Mixed-methodology allows a researcher to conduct an empirical study and support the findings with descriptive and explanatory data. Both quantitative and qualitative studies have attempted to explore various teaching strategies in the past. Quantitative studies have presented an empirical background for generalizing to populations; qualitative studies have described situations and surveyed informants for explanations. By utilizing both of these methods, the researcher gained an in-depth view of the setting and became assimilated into the culture of the two schools, enhancing the consistency and validity of the findings. Undoubtedly, mixed designs are not ideal for every situation. However, exploring the use of comprehension strategies in a school setting with this particular population of sixth-graders, a parallel mixed design presented the best framework for investigating instruction.

The data collected through this research design included both quantitative and qualitative perspectives. Empirical data supported the utility of the study by demonstrating the experimental group's improvement on the cloze procedure. However, the difference scores
on the *Gates-McGinitie Reading Test* (1989) were not significant. Simultaneously, the descriptive data offered perspectives regarding the themes that emerged through the observations and interviews.
CHAPTER 5

CONCLUSIONS AND LIMITATIONS

Introduction

The findings from this mixed-methodological study offer many possibilities for instructional practices as well as for future research. The empirical findings suggest that the strategy intervention can be effective for teaching particular skills—in this case, contextual clues. Furthermore, the data offer evidence of particular teacher responses to the intervention. Qualitatively, the themes that emerged through the observational and interview data suggest that the intervention offers affective areas of change within the classroom cultures.

Summary of Results

Empirical results from this study could be classified as mixed. The first research question investigated differences between the groups according to pretests and posttests from both the Gates-McGinitie Reading Test and a cloze procedure. Differences between the groups according to the cloze procedure were significant (p<.05). Although the findings from the standardized reading test were not significant (p<.05), the difference for the experimental group was higher in magnitude. One reason for the differing empirical results could be the format of the two test instruments. The control students were adept at test-taking; their lessons included explicit test-taking strategies that they practiced on a
daily basis. The experimental students, on the other hand, had not been instructed in test-taking strategies. Instead, the experimental teachers focused on the process of using contextual clues to aid in comprehension rather than the explicit teaching of test-taking strategies. The control students could quickly search for answers on the formal test using the strategies with which they were familiar. And, as the nature of the cloze procedure requires the use of contextual clues and knowledge of predictive insights in comprehension, the use of contextual clues aided the experimental students on the informal test. This difference in instructional material certainly altered the students' approaches to the tests.

A teacher main effect existed based on the data from the Gates-McGinitie Reading Test (1989); differences for Experimental Teachers 2 and 3 were significantly different, in this case lower, than Experimental Teacher 1 and the control teachers. This difference can likely be attributed to Teacher 1's classroom environment. Teacher 1 had the largest classroom with twenty-eight students, eighteen boys and ten girls. Much research exists supporting the logical assumption that class size effects student performance (Achilles, 1999). Compared with the other experimental classrooms, sixteen and twenty-two, respectively, Teacher 1 had the most challenging class in terms of behavior. A greater percentage of time was spent by Teacher 1 correcting student misbehavior as compared with the experimental group teachers. One
might suspect that the differences in Teacher 1's class may correspond with the research supporting small or medium class sizes. Contrary to logic, Teacher 1's class outperformed her counterparts'. The misbehaviors may be attributed to inherent differences in ability among the student population. Misbehavior is considered to be a common symptom of intelligent, creative children (Balk, 1995). Often, teachers assume that misbehaving children are less able than their peers. The students' misbehavior in Teacher 1's class may have been misconstrued as apathy when, in reality, it was the work of an intelligent student body. The informal observation within the other two classrooms suggested that Teacher 1's students may have been higher achievers than were their fellow schoolmates.

Another factor involved the performance level of the students in Experimental Teacher 1's class and the teacher's reaction to these responses. Prior to the study, the experimental teachers reported that their students were heterogeneously grouped; although this was the case, Experimental Teacher 1 indicated that there were several more creative students in her class than in her fellow teachers'. Experimental Teacher 1's style encouraged this creativity; often, students were out of their desks, talking among themselves or with the teacher. In this way, the classroom atmosphere and type of instruction differed from the other two experimental teachers who were more traditional in that the students remained seated and followed classroom protocol.
Fidelity observations conducted bi-weekly offered data to address the second research question: Will both the experimental and control teachers, respectively, appropriately implement the three reading comprehension strategies in their classrooms and the regular curriculum at least eighty percent of the time over the course of the study as measured by weekly fidelity observations? Table 6 illustrates the findings presented as teacher implementation levels. All three experimental teachers implemented the intervention greater than eighty percent of the time. Two of the control teachers implemented the curriculum more than eighty percent of the time; one control teacher did not achieve the eighty percent implementation level required by the research question.

Qualitative data in the form of fieldnotes and interview transcripts confirmed the effectiveness of the intervention on student affective performance and teacher attitude, thus satisfying the third research question. The themes that emerged through the data included affective themes of student motivation and student interest; additionally, instructional themes of quality of instructional time as affected by philosophies of teaching reading, classroom management, and teacher content knowledge were prevalent themes in the qualitative data.

Both empirical and descriptive findings offer suggestions for practice. Empirical data suggested that the intervention was not
significant according to the data yielded by the Gates-McGinitie Reading Test (1989). This was in contrast to the cloze procedure that yielded positive findings. The differences in magnitude including the difference scores for both groups suggested that the strategies might be at least as effective in increasing test scores as the traditional, directed model utilized by the control team. Both the empirical data recorded through the observation checklists and the descriptive data resulting from the observations and interviews supported the success of the strategy instruction on an affective level.

Discussion

The strategy intervention did not unequivocally demonstrate an affect on student performance as assessed by the Gates-McGinitie Reading Test (1989); differences were significant according to the cloze procedure. The intervention was deemed to be reliable according to a mean implementation level of approximately ninety percent among the experimental teachers. The control teachers implemented their lessons with a mean implementation level above eighty percent.

Differences on the cloze procedure suggest that the intervention was effective in increasing students' reading comprehension abilities. The significance found on this test could be attributed to several factors. For one thing, the nature of the cloze procedure requires students to use contextual clues to select appropriate vocabulary. The importance of context is apparent for this type of test; the use of
context is no a skill that can be readily taught. Rather, students acquire the ability to reason and select vocabulary based on their reading abilities and independent comprehension abilities. This method of testing differs from a formal reading test like the Gates-McGinitie 
Reading Test (1989) that includes multiple-choice questions, a type of test that requires test-taking techniques such as sifting through various choices to arrive at a particular answer. The significance found on the cloze procedure offers evidence of the intervention’s effectiveness on the behaviors required for effective cloze assessment. In other words, the intervention impacted the experimental students' ability to answer the type of questions that utilize contextual clues, and, in this way, benefited the students in their acquisition of the comprehension strategies. Also, considering the nature of the two tests and the performance of the students on each measure leads the reader to view the two tests as complementary: rather than contradicting each other, the data supports student acquisition in different areas. The cloze procedure positively impacted students' abilities to use contextual clues to answer questions whereas the formal reading test did not impact students' abilities to use test-taking clues.

Also, the training of the experimental teachers was sufficient for the teachers to implement the intervention with at least eighty percent accuracy. A number of previous studies have neglected to include specifics regarding training of experimental teachers. Others have
mentioned training and fidelity observations but have failed to expound on the feasibility of such training. The training sessions were effective in aiding the teachers in their endeavors to appropriately implement the intervention.

In the affective domain, the strategy implementation positively affected student motivation and participation. Likewise, student academic performance improved according to graded assignments and observational data. Overall, the students responded favorably to the lessons. The lessons included aspects of the reading curriculum designed to encompass skills considered as necessary by the district, state, and personal beliefs of the teachers.

Through the observations and post interviews, specific challenges regarding the lesson implementation emerged. For example, all three experimental teachers focused on different aspects of the intervention: one preferred the discussion component of the DR-TA, another the process of comprehension instruction taught through the graphic organizers, and yet another preferred vocabulary and the comprehension checks that emphasized relevant terminology.

**Limitations**

During the course of the study, several limitations became evident. First, the decision to include the teams was made because the teams of teachers were familiar with each others' styles and regularly shared information including instructional ideas and materials. In an
effort to preempt any validity concerns, the teams were grouped and randomly assigned to either the control or experimental group.

Another limitation included inherent differences within the population that were present prior to the study. As discussed in Chapter 3, the groups showed significant differences with regard to academic achievement. Because the student population was identified by the school district as heterogeneously grouped, these differences could not have been predicted prior to the study. Controlling for the differences using the statistical procedure ANCOVA was an attempt to counteract this weakness in the design.

Furthermore, practical concerns on the part of the school administrators concerning the timing of the study and its impact on the student performance on the T.A.A.S. examination, a test given in early April, dictated the length of the study. The study, which began in January, was to be concluded by the second week of March, allowing a total of eight weeks for the intervention. To accommodate the interests of the schools, the study was conducted within their time parameters. The abbreviated length of the study may possibly have limited its scope; the improvements witnessed with the experimental group would likely have continued with an extended research period.

Although both groups worked daily with short stories of approximate readability levels, they did not use the same stories. The control school teachers instructed using lessons they developed
explicitly for training students to take the TAAS test. The teachers stressed the pattern and sequence of the lessons; as such, they were unwilling to alter the lessons. Had the two groups used the same stories, the design would have been strengthened and the findings would have offered more evidence regarding the effectiveness of the intervention.

Furthermore, the quasi-experimental assignment of the students both within the schools and classrooms hindered the benefits of a true experimental design. The study was conducted during the middle of the school year; upsetting the arrangement of the students was not feasible.

A final limitation involved the differences among classrooms regarding class sizes. The experimental teachers had considerably larger student enrollments than the control teachers. Research in class size has shown that smaller class sizes produce more individualized attention for learners, thus increasing student learning (see Achilles, 1999; Egelson, Harman, & Achilles, 1996).

**Suggestions for Future Research**

Extension of the lessons is a necessary step for future research investigating reading comprehension instructional strategies. The suggestions that emerged through both the teachers' and researcher's experiences with the lesson outlines should be used to create lessons that extend the explicit teaching of strategy instruction to include more sources of literature. These lessons could also be enhanced by
including various types of learning strategies that would encourage student motivation and personal reading.

In the larger realm of comprehension strategy research, the three selected strategies should be considered in other contexts and for longer periods of time. Replication of the strategy intervention design could be reconceptualized to include the three strategies in combination with other interesting literature. Further, extension of the research design to include other popular strategies is crucial.

Continuing the search for instructional strategies supported through research-based experimental designs is a task scholars in the field of reading education must face. Both researchers and teacher educators must familiarize themselves with the instructional methods demonstrated to positively impact student learning. As researchers continue to hear the advice of Durkin (1979) and others, the value of using research-based instructional strategies will become more evident.
REFERENCES


Herber, H.L. & Nelson, J.B. (1976). Questioning is not the answer. In Reading in the content areas: Improving classroom


APPENDIX A

INTRODUCTORY LETTERS TO TEACHERS
Dear Teachers:

As a Nederland Bulldog myself, I’m very excited about having the opportunity to work with you at C.O. Wilson!  As part of my doctoral program at Louisiana State University, I am conducting a research study; I hope that you will be willing to assist me as I research the impact of reading comprehension strategies on sixth-grade readers.

The preliminary plan involves the time frame of January 3, 2000 through March 10, 2000.  My plan is for your school to be the control group with Central Middle School as the experimental group.  At Central Middle School, I plan to ask the teachers to incorporate different instructional methods for teaching reading comprehension.  For your school, I hope to include three reading classes for each of three different teachers.  I plan to test the students at both schools at the beginning of the study and again at the end.  Also, I hope to visit weekly to observe the instruction in all the classrooms.  These observations would involve my taking notes; the purpose of these notes is for documentation of each teacher’s teaching style and instructional methods.  Additionally, I hope to interview each teacher.

So that you will have some idea of my background, I have included my resume for you to peruse; please leave a message at 722-3037 or e-mail (eschorl@lsu.edu) any questions or concerns.  The questionnaire that follows will allow me to plan the comparison groups across schools.  I appreciate your time in completing it.  These questionnaires, along with all tests, observational data, etc., will be anonymous.  Lastly, I have included an envelope for you to mail your questionnaire to me.  Thanks, again, for your time.

I hope that you are agreeable and as excited about this as I am!  I look forward to meeting with you in the near future.

Sincerely,

Emma McCall Schorzman, M.A.
Doctoral Student
Louisiana State University
Thank you for completing this short questionnaire! Emma 😊

1. What system/method do you use to teach reading?
   _________________________________________________

2. How many students are in your reading class?_______

3. How many boys? _____ Girls? ______

4. What is the racial composition of your classroom?
   ______ White _____ Black _____Other Ethnic

5. Do you implement a full inclusion model in your classroom?__________________________

6. Are you interested in participating in this research study?___________

7. How many years have you been teaching?______________

8. Is reading your specialty or area of concentration?_______

9. Do you hold advanced degrees? If so, in what area(s)?
   ____________________________________________________________________________

10. What time of the day do you teach reading? ____________

11. Please mark an “x” according to your philosophy of reading instruction.
    ___________________ ___________________ ___________________
    whole balanced direct
    language instruction
12. Are you willing for Emma to interview you concerning your philosophy for teaching reading? _____________________________

13. Will you mind if Emma observes your classroom on a weekly basis? ____________________________________________

14. Please check the following comprehension strategies you have used in your reading classroom.

  _____ QAR  _____ Advance Organizers  _____ PReP
  _____ D-RTA  _____ Anticipation Guides  _____ Imagery
  _____ I-Chart  _____ Explicit Teaching  _____ Text
    Previews  _____ Graphic Organizers  _____ Other

15. Do you have any questions or comments about the research study?

________________________________________________________________________

________________________________________________________________________

Please return this questionnaire in the enclosed envelope. Thanks so much for your time!
December 8, 1999

Dear Parents:

Your student is invited to participate in a research study entitled *Evaluating Alternative Instructional Strategies for Teaching Reading Comprehension* that will be conducted through Louisiana State University. As a reading specialist and certified teacher, this research study will serve as my dissertation research.

In an effort to examine the effectiveness of several research-based strategies, your student’s teacher has agreed to instruct your student’s class using prescribed lessons targeted at improving sixth-graders’ reading comprehension ability. Following an achievement test, your student will be instructed using these special lessons for a period of six weeks from January through March, 2000. The research study will conclude the first week of March, allowing your student’s teacher ample time to prepare her students for the T.A.A.S. test. Following the six week time period, the students will be tested again so that their improvement can be documented. Also, I plan to observe the classroom to evaluate the effectiveness of the lessons.

The lessons should offer your student innovative ways of comprehending while reading. Please understand that your student’s participation is entirely voluntary, and you may withdraw consent and terminate participation at any time without consequence. Additionally, students and all test results will remain strictly confidential and will be used only anonymously when referring to the group of students. Test scores will be available to you and your student’s teacher after the study concludes.

Thank you for considering this invitation. The strategies we will use are supported through other research findings; I look forward to working with your student’s teacher to offer your student alternative ways to comprehend text. If you have any questions regarding this project, please call 722-3037 or e-mail eschorl@lsu.edu. My research will be supervised by my dissertation director, Dr. Earl H. Cheek, Jr. (225) 388-6867. Please sign your name below if you accept this invitation and have your student return it to his or her teacher. Thank you for your time!

Sincerely,

Emma Schorzman, Ed.S.
Doctoral Candidate
Louisiana State University

“I have been fully informed of the above-described procedure with its possible benefits and risks and I give my permission for my student’s participation in the study.”

____________________  ___________________  ____________
Parent Signature      Parent Name (printed)      Date
December 8, 1999

Dear Parents:

Your student is invited to participate in a research study entitled Evaluating Alternative Instructional Strategies for Teaching Reading Comprehension that will be conducted through Louisiana State University. As a reading specialist and certified teacher, this research study will serve as my dissertation research.

The research study will consist of an achievement test administered to the whole class during one class period. The achievement test will be the Gates-McGinitie Reading Test, a multiple-choice test assessing reading comprehension and vocabulary. Following this achievement test, I plan to observe the classroom twice per week. After a six to eight week period, the students will again take the achievement test so that their improvement can be documented. The research study will conclude the first week of March, so as not to interfere with the T.A.A.S. test. Your student’s individual achievement test results will be presented to you and your student’s teacher only.

Please understand that your student’s participation is entirely voluntary, and you may withdraw consent and terminate participation at any time without consequence. Additionally, students and all test results will remain strictly confidential and will be used only anonymously for research purposes when referring to the group of students.

Thank you for considering this invitation. The measurement data we obtain will be useful to you and your student’s teacher as we all prepare for T.A.A.S. If you have any questions regarding this project, please call 722-3037 or e-mail eschor1@lsu.edu. My research will be supervised by my dissertation director, Dr. Earl H. Cheek, Jr. (225) 388-6867. Please sign your name below if you accept this invitation and have your student return it to his or her teacher. Thank you for your time!

Sincerely,

Emma Schorzman, Ed.S.
Doctoral Candidate
Louisiana State University

"I have been fully informed of the above-described procedure with its possible benefits and risks and I give my permission for my student’s participation in the study."

_________________________  ____________________________
Parent Signature  Parent Name (printed)  Date
May 15, 2000

Dear Parents and Students:

Thank you for your participation this semester in the Louisiana State University reading comprehension research study. Your participation has contributed valuable knowledge to the field of education by allowing your teachers and me to study the effects of a research-based series of lessons. The results of the study will be used to create instructional materials for teachers and to inform pre-service teachers of effective instructional methods at the university level. The academic effects of the study are positive as I hope the motivational ones have been for your student.

Overall, the students improved in both vocabulary and reading comprehension, the two areas tested. Though the students improved at the rate we planned they would according to the multiple-choice portion of the tests, their scores improved significantly on the portion of the reading comprehension test that utilized comprehension in context. This improvement documents your student’s thorough understanding of the passages they read. This improvement can be attributed to your student’s hard work and your student’s teacher’s diligent efforts in conjunction with your supportive reinforcement at home.

The anonymity and confidentiality of your individual student’s scores will be maintained; the scores will only be presented in the context of group performance. For this reason, I will not examine individual students’ scores unless you request the individual information for yourself. **If you would like to know your student’s scores for the test, please return the bottom portion of this letter to your student’s teacher or call or email me.** I will mail your student’s confidential results to the address you request.

Thank you again for your participation. Please know how fortunate your student has been to have had a team of knowledgeable and effective teachers such as Ms. Hillsten, Ms. McKeever, and Mr. LeBlanc working with him or her. If you have any questions regarding the study, please feel free to contact me at (409) 321-0954 or email eschorl@lsu.edu.

Sincerely,

Emma McCall Schorzman, A.B.D.
Doctoral Candidate
Louisiana State University
May 15, 2000

Dear Parents and Students:

Thank you for your participation this semester in the Louisiana State University reading comprehension research study. Your participation has contributed valuable knowledge to the field of education by allowing your teachers and me to study the effects of a research-based series of lessons. The results of the study will be used to create instructional materials for teachers and to inform pre-service teachers of effective instructional methods at the university level.

Although the students at C.O. Wilson continued receiving instruction from the teacher, the students’ progress was documented by way of the tests. The group performance included improvements in both the vocabulary and reading comprehension subtests. This improvement can be attributed to your student’s hard work and your student’s teacher’s diligent efforts in conjunction with your supportive reinforcement at home.

The anonymity and confidentiality of your individual student’s scores will be maintained; the scores will only be presented in the context of group performance. For this reason, I will not examine individual students’ scores unless you request the individual information for yourself. If you would like to know your student’s scores for the test, please return the bottom portion of this letter to your student’s teacher or call or email me. I will mail your student’s confidential results to the address you request.

Thank you again for your participation. Please know how fortunate your student has been to have had a team of knowledgeable and effective teachers such as Ms. Kowalik, Ms. Molina, and Ms. Hall working with him or her. If you have any questions regarding the study, please feel free to contact me at (409) 321-0954 or email cschorl@lsu.edu.

Sincerely,

Emma McCall Schorzman, A.B.D.
Doctoral Candidate
Louisiana State University

Please send my student’s confidential individual information to:

Student’s Teacher: _______________________________________________

Parent’s Last Name: ____________________________________________

Address: _____________________________________________________

City, State, Zip: ______________________________________________

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APPENDIX G

INFORMAL PRE-TEST
Marching Out of Burma

"By the time we get out of here, many of you will hate me. But I'll tell you

_________ thing. You'll all get ____________ ."

General Joseph Stilwell paused __________ surveyed his group of __________ and women under his __________. Among them were American __________ officers, Burmese nurses, Chinese guards, __________ cooks. They were in __________ in the middle of __________ War II. If Stilwell didn't __________ his people to India __________, they would be caught __________ the Japanese Army.

Thousands __________ people were trying to __________ to India. They filled __________ roads and made easy __________ for the Japanese. Stilwell __________ to take his people __________ different way. They would __________ the road to India. __________ travel northwest on a __________-known path through the __________.

Stilwell and his group __________ their 140-mile trip. The __________ was hot and steamy. __________ would have to cross __________ and climb a 7,000-foot __________ range. They would have __________ walk at least 14 miles __________ day. The group had __________ one thing in its __________—Joseph Stilwell. At age 59, __________ was a skilled leader __________ a strong will. He __________ a three-star general, __________ he dressed and behaved __________ the soldiers under his __________. "Uncle Joe" was known __________ being tough but fair.

_________ knew supplies were low, __________ he rationed the food. __________ person would get only __________ small amount each day. __________ the end of the __________ day, Stilwell sent his __________ radio messages. One was __________ to an American officer __________ India. Stilwell told him __________ their route and asked __________ officer to send provisions __________ the town of Homalin __________ the Indian border. Then __________ radio was destroyed. It was almost 200 pounds—too much to carry.
Trouble By The Tracks

Susan Wills looked out the window then quickly dropped the snowshoe she had been repairing. "Tim!" she called to ________ brother. "It's Stapleton! He's ________!

Trudging slowly across the ________ fallen snow, the large ________ shepherd limped toward the ________ door. "What happened to ________?" Susan asked when she ________ the shallow gash in ________ dog's leg. "He's been ________ some type of fight, ________," she said with concern. "_______ saw him with Abe's ________ earlier today. They were ________ up toward Windy Gulch. ________ must have met up ________ trouble there."

Susan was ________ by the ringing telephone. "_______ do you mean he ________ your dog?" she asked ________ irate neighbor. Abe Simpson ________ declared that Stapleton had ________ attacked his beloved hound, _________. Abe said he had ________ the dogs go off ________ around dawn. Soon after, Dusty ________ come crawling back only ________ die on his doorstep. ________ to Abe, the facts ________ indisputable. The dogs had ________ a squirrel or rabbit, ________ Stapleton, unwilling to share, ________ killed Dusty for it. ________.

Susan gave little response ________ hung up.

"Stapleton wouldn't ________ that, Sis!" exclaimed Tim ________ the two discussed the ________ call. "I don't know ________ did happen, but Stapleton ________ kill Dusty. Sorry old ________ was so unpleasant to _________. He's been under a ________ of strain lately. As ________ engineer, the railroad is ________ life. The train wreck yesterday ________ at Snake Junction was ________ second one this month. ________ sure it upset him."

"_______, no one was hurt ________ those incidents," said Susan ________ she looked up from ________ and wrapping Stapleton's wound.

"_______ now people are reluctant ________ travel the new route ________ to Harper's Mill. It's a shame because it's really nice to be able to conveniently visit another town besides ours.
APPENDIX I

EXPERIMENTAL OBSERVATIONAL CHECKLIST
Observation Checklist

Rating Scale: 1=event occurs, 0=event does not occur; N/A=not applicable.

PreP
____ 1. Teacher presents picture or phrase for student response.
____ 2. Teacher has students quickwrite or brainstorm ideas.
____ 3. Teacher has students share thoughts aloud.
____ 4. Teacher provides insight when needed.

DR-TA
____ 1. Teacher introduces new story.
____ 2. Teacher has students brainstorm for hypotheses from title.
____ 3. Teacher records initial hypotheses on chart.
____ 4. Teacher reads brief introduction aloud.
____ 5. Teacher relates new story to prior knowledge by referring to ideas from PreP Technique.
____ 6. Teacher has students read passage silently.
____ 7. Teacher has students reconsider hypotheses and amend them through discussion.
____ 8. Teacher records amended hypotheses on chart.
____ 9. Teacher provides new and necessary vocabulary to students.
____ 10. Students record new vocabulary on their individual papers.
____ 11. Teacher provides instruction on a particular skill (summarization, inference)
____ 12. Students complete comprehension activity.
____ 13. Teachers provide oral feedback regarding comprehension activity.
**Graphic Organizers**

1. Teacher reviews concepts briefly by either modeling the summarization process or initiating class discussion.
2. Students complete a partially-created graphic organizer.
3. Students create a graphic organizer using the information provided.
4. Teacher provides oral feedback regarding accuracy of the organizers.

**Overall:**

1. Teacher reviews prior lesson briefly.
2. Teacher monitors work while students work independently.
3. Teacher briefly summarizes current lesson at the end of class period.
Observation Checklist—Control School

School: ________________________ Teacher: ______________________
Date: ________________________ Obs. Number: ____________

Rating scale: 1= event occurs; 0= event doesn’t occur.

I. Review/ Preview

_____ Teacher activates students’ prior knowledge of content material by reviewing previously learned material or calling upon life experiences.
_____ Teacher prepares students for new material by introducing new concepts.

II. Instruction

_____ Teacher instructs students concerning new material.
_____ Teacher models instruction through guided practice.
_____ Teacher facilitates independent student practice.
_____ Teacher answers questions and helps students individually, as needed.

III. Evaluation/ Review

_____ Teacher/ students evaluate work during class time
_____ Teacher provides feedback for errors.
_____ Students/ whole class corrects errors during or after class.

IV. Review

_____ Teacher briefly reviews lessons, concepts

preview_________%

instruction_________%

evaluation_________%

Total rating: _______/ ________
Comprehension Check for “The Conjure Brother,” pp. 87-103

Directions: Complete each question by either circling or listing the correct answer. Be sure to read each question carefully—some may be tricky!

1. Why was Josie concerned that she wouldn’t have a baby brother?
   A. None of her friends had little brothers
   B. She knew her mother did not want one
   C. Her mother stayed skinny
   D. She thought the conjure lady didn’t like her

2. What problem occurred that Josie had not considered when she asked for a brother?
   A. That he might be older than she was
   B. That Madam Zinnia might not grant her wish
   C. That Adam might be jealous of her
   D. That a potion might kill her

3. What one mistake did Josie make when she tried to conjure a brother?
   A. She used the wrong salve
   B. She forgot the directions
   C. She called out the wrong name
   D. She conjured her brother too early

4. Which of the following is the best definition of the word conjure as used here:
   Then she gave the girl a formula to conjure a brother.
   A. to wish for something
   B. to create by casting a spell
   C. to help another person
   D. to blame a person

5. Name two things Adam did that bothered Josie.
   1.)
   2.)
6. Which of the following happened after Josie asked Madam Zinnia to take Adam back?

A. Madam Zinnia said “No”
B. Madam Zinnia offered to turn him into a gremlin or a rock
C. Madam Zinnia offered to trade him in for a sister
D. Madam Zinnia gave Josie ideas about how to beat Adam at his own game

7. Which of the following best describes the moral of the story?

A. It’s important to share your things
B. Being the youngest kid is hard work
C. Good always overcomes evil
D. It’s never safe to visit a conjure woman

8. After Josie talked with the mailman at the end of the story, the reader can infer that:

A. Madam Zinnia had lied to Josie about Adam
B. It was possibly just a dream
C. Madam Zinnia took Adam on a trip
D. Josie’s mother had spoken with Madam Zinnia

9. At the end of the story, the reader learns that Madam Zinnia probably created Adam so that:

A. Josie would stop being sad about not having a brother
B. Josie’s friends would not feel sorry for her
C. Josie would finally have a brother
D. Josie would be prepared to have a younger brother
APPENDIX L

EXAMPLE WEEKLY SET OF LESSON OUTLINES
Lesson Outline for Monday, January 31, 2000

Objective: The student will make predictions about a reading selection and test the predictions by reading independently.

Story Title: "The Conjure Brother" in The Dark Thirty, pp. 87-92

TEKS Objectives

Short Summary: A young girl longs for a brother. After consulting a conjure lady, she gets what she has wanted—except that the brother is older than her. She struggles with her conjure brother; after several trying days, the spell is released and she receives a new baby brother instead.

Lesson Length: 40-45 minutes

1. Pre-reading Plan (5-8 minutes)
   b-1,4, 10A

Teacher shows picture of "The Gypsy." Students discuss what they know about the subject. Teacher mentally notes students’ prior knowledge.

2. DR-TA (10 minutes)  
   b-1,2,6,9

Teacher reads introduction aloud; students create hypotheses about the story.

3. DR-TA (10 minutes)  
   b-2,6,7,9

Teacher introduces new terms: conjure, salve. Students record definitions on their papers.

4. DR-TA (10-15 minutes)  
   b-6,7,8,10

Students read story silently, recording new words on individual papers as they read.

5. DR-TA (3-5 minutes)  

Students share new words from today’s reading; teacher reviews hypotheses briefly. b-6,9,10
Lesson Outline for Tuesday, February 2, 2000

Objective: The student will make predictions about a reading selection and test the predictions by reading independently.

Story Title: "The Conjure Brother" in The Dark Thirty, pp. 93-99

TEKS Objectives

Lesson Length: 40-45 minutes

1. DR-TA (8-10 minutes) b-1,2,6,9

Teacher reviews hypotheses with students; students adjust hypotheses as needed.

2. DR-TA (30-35 minutes) b-6,7,8,10

Students continue reading independently, noting new terms on individual papers.

3. DR-TA (3-5 minutes)

Students share new words from today's reading; teacher reviews hypotheses briefly. b-6,9,10
Lesson Outline for Wednesday, February 3, 2000

**Objective:** The student will make predictions about a reading selection and test the predictions by reading independently.

**Story Title:** “The Conjure Brother” in *The Dark Thirty*, pp. 100-103

**TEKS Objectives**

**Lesson Length:** 40-45 minutes

1. **DR-TA (5 minutes)**  
   b-1,2,6,9  
   Teacher guides students to adjust hypotheses as needed.

2. **DR-TA (15-20 minutes)**  
   b-6,7,8,10  
   Students continue reading independently, noting new terms on individual papers.

3. **Focus on vocabulary (10 minutes)**  
   b-6,7,8,10  
   Teacher guides students to discuss new vocabulary terms; students include these new definitions on their vocabulary sheets.

4. **Comprehension Check (10-15 minutes)**  
   b-10  
   Students complete short comprehension check.

5. **Review (2-3 minutes)**  
   b-6,9,10  
   For tomorrow: think about the sequence of events in the story.
Lesson Outline for Thursday, February 4, 2000

Objective: The student will make predictions about a reading selection and test the predictions by reading independently.

Story Title: "The Conjure Brother" in The Dark Thirty, pp. 92-103

TEKS Objectives

Lesson Length: 40-45 minutes

1. Review (5 minutes)
   b-1,2,6,9

   Teacher reviews story plot and new vocabulary terms with students.

2. Focus on summarization (10 minutes)
   b-6,9,10

   Teacher reviews process of summarization including selecting the main points of the text and placing them in sequential order.

3. Graphic organizer (25-30 minutes)
   b-6,9,10

   Students complete a graphic organizer by summarizing the story and organizing them sequentially.
APPENDIX M

FORMULA FOR STORY SELECTION
<table>
<thead>
<tr>
<th>Story Title</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boo Mama</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>The 11:59</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>The Conjure Brother</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>The Gingi</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Priscilla and the Wimps</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Future Tense</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>14</td>
</tr>
</tbody>
</table>

A=Length
B=Vocabulary
C=Complexity
D=Sum

Scale 1-5
1=least, 5=most
Standard Open-ended Interview Guide for Teacher Interviews (Pre)

I. What types of teaching experience have you had?

II. What are some of your teaching beliefs or philosophies?

III. Have you attended any helpful workshops or inservices? How were they helpful?

IV. How do you feel about the current curriculum?

V. What do you believe are the keys to student success?

VI. How do you feel about your students' achievement and motivation?

VII. Which types of activities do you use in your classroom?

VIII. Anything you would like to add?

Thank you!!
Closing Interview Guide—Experimental Teachers

I. Students' reactions to stories, lessons

II. Personal reactions to stories, lessons

III. Effectiveness of previewing strategy

IV. Effectiveness of DR-TA strategy

V. Effectiveness of graphic organizers

VI. Suggestions for improvement of lessons
VITA

Emma McCall Schorzman completed the degree of Bachelor of Arts in English from Lamar University in December of 1992. After teaching English, French, special education, and reading for almost six years at the middle school level, she attended Louisiana State University where she received a master of arts degree in curriculum and instruction and an Educational Specialist certificate in reading. She currently resides in The Woodlands, Texas, with her husband Bryan. Immediately following graduation, she will continue in her position as an adjunct assistant professor at the University of Houston and conduct independent research in the field of reading. Her research interests include reading comprehension instruction, the affective domain of reading, and middle school issues.
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Major Field: Curriculum and Instruction

Title of Dissertation: Evaluating Alternative Instructional Strategies to Improve Sixth-Graders' Reading Comprehension

Approved:

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Date of Examination: September 26, 2000