THE INFLUENCE OF EXPLICIT CUEING STRATEGIES INSTRUCTION ON THE READING DEVELOPMENT OF SECOND GRADE STUDENTS

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CHAPTER I

Introduction

Improved reading achievement in the very early grades is now a major national goal. President George W. Bush (2001) has declared, "too many of our neediest children are being left behind". The Reading First Initiative, one component of the No Child Left Behind Act of 2001, states that every effort should be made to ensure that all children become readers by the end of third grade. Many federal dollars have already been and will continue to be expended on the fulfillment of this decree. School districts nation-wide will be looking to the latest research in reading education to determine how to best increase the reading achievement of their young children, as they will be held accountable for that reading achievement or lack thereof. Is there one pre-packaged program or set of techniques that is the panacea for all reading ailments? What must children be able to do to become proficient readers? In order to determine best practices for teaching children to read successfully, the reading process, instead of the product, should be closely examined.

Theoretical Perspective

Reading is a message getting, problem solving process (Clay, 1991). Unfortunately, many educators of today and years past believe that reading primarily involves calling words correctly; that it is simply an accumulation of correct responses. In fact, Flesch (1955) asserted that the reading process essentially consists of first learning letters, then sounds, and then words. He described reading as getting meaning from certain combinations of letters, proposing that simply teaching the child what each letter stands for would enable him to read. While learning to break the code of unknown words is an important component of reading, it cannot be viewed as the overall goal. Reading is understanding, not accuracy. Comprehension is the primary goal of reading. It is a complex, multifaceted process in which readers bring what they already know to the printed page in order to construct meaning (Opitz & Rasinski, 1998).

The psycholinguistic model of reading was brought to the forefront by Kenneth Goodman (1967). K. S. Goodman (1973, 1996), in his extensive studies, has concluded that reading is a language process that involves the integration of three language information systems. Readers use various sources of information, or cueing systems, to construct meaning as they read. Goodman states that reading is an active process in which "the reader selects the fewest cues possible from those available to him and makes the best choices possible." (K. S. Goodman, 1970).

The three language systems involve the graphophonic system, the syntactic system and the semantic system. The graphophonic cueing system includes spelling, sound, and phonic relationships. More specifically, it refers to the relationship between

the symbol systems of oral and written language. The oral language system is known as the phonological system, while the written language system is known as the orthographic system. The relationship between the two is known as phonics. There can never be a perfect relationship between phonology and orthography, although the English spelling system is quite regular. Readers must learn the relationship between how the orthographic print is organized and his or her own oral language in order to make use of the graphophonic language cueing system (Y. M. Goodman & Watson, 1998).

The syntactic cueing system involves the grammar or structure of the language. It refers to the relationships of words, sentences and paragraphs. Word order, tense, number and gender are all included in the syntax, or grammar, of the language. Most rules for grammar are internalized and used intuitively by children by the time they are of school age. Children notice when things do not "sound right." Young readers are best able to use syntax knowledge when the structure of the text closely matches their own experiences with syntax (Y. M. Goodman & Watson, 1998).

The semantic/pragmatic system deals with the personal and social meaning in the situational context. It is actually the very core of language because it involves the relationship between language and meaning. The semantic system includes words and their meanings, whereas the pragmatic system includes the relationship between these meanings and the social, cultural, and historical context of language as it is used. The semantic/pragmatic system takes into account the reader's prior knowledge and how it influences his understanding of the events occurring within the text (K. S. Goodman, 1970).

Research documents that this reading process, intent on constructing meaning, is used by all readers, both proficient and nonproficient (Y. M. Goodman & Marak, 1996). All readers use reading strategies that incorporate these three cueing systems, although readers do not use all of the available cues all of the time. Reading strategies include, but are not limited to, predicting, confirming, and self-correcting during reading. Strategies that integrate the cueing systems allow students to predict and confirm language using the semantic and pragmatic systems while at the same time selectively making use of graphophonic and syntactic information. All readers miscue or make unexpected responses. They may substitute, omit, or insert words. These miscues are evidence of strategies the reader is employing during the reading process. Good readers are more experienced readers, but the reading process is no different for them than for less proficient readers. Good readers simply have better control over the process and are able to orchestrate it more proficiently (Martens, 1997).

Teachers are responsible for helping children become independent, successful readers. As noted by K. S. Goodman (1996), all children do not access these cueing systems efficiently. Proficient readers are able to balance their use of strategies and integrate use of language cueing systems, while struggling readers may over-rely on one cueing system and neglect others. Therefore, the teacher must facilitate the effective use of these cueing systems by providing both explicit instruction (Pearson & Dole, 1987) and scaffolded instruction (Beed, Hawkins, & Roller, 1991).

Explicit instruction is accomplished by explanation and modeling of specific reading strategies followed by appropriate scaffolding. Explicit teaching of reading strategies involves taking the guesswork out of reading. Hancock (1999) says that many

students are left to guess how they should behave and what to do to become successful readers. Explicit teaching occurs when a teacher structures a literacy lesson so that students are focusing on part of the whole, then begin to develop the ability to talk about that part and its relation to their reading success (Wilkinson, 1999).

The concept of scaffolding was developed by Soviet psychologist L. S. Vygotsky (1978). He contended that guided interactions between children and adults could facilitate the child's development of psychological functioning. Adults who provide this assistance allow the child to work within the "Zone of Proximal Development", which is the area between which the child can work with assistance and the level the same child can work without assistance (Beed et al., 1991). With appropriate scaffolding experiences, the child may be able to internalize these reading strategies, allowing them to appropriately access the language cueing systems and use them in the future without assistance (Staton, 1984). Explicit teaching combined with supportive scaffolding experiences can provide students with opportunities to learn about and develop appropriate language cueing system awareness and usage.

Cueing strategies can be divided into two categories: strategies for correcting and detecting errors, and strategies for problem solving new words (Fountas & Pinnell, 1996). Encouraging children to correct and detect errors includes asking questions during the reading event that encourage the reader to access one or more of the three language cueing systems in order to notice and fix miscues. Noticing and fixing miscues are formally known as monitoring and self-correcting (Clay, 1991). Children begin to monitor and self-correct during reading when teachers ask questions such as: Did that make sense? (semantic) Can we say it like that? (syntactic) Did that look right?

(graphophonic). The teacher primarily aids the child in noticing that a miscue was made and tries to point the child in the direction of a cueing system that might assist them toward a more appropriate response (Fountas & Pinnell, 1996).

Strategies for problem solving new words include using the meaning of the story to anticipate the word, then confirming it with the visual information of the text. This strategy is called cross-checking, or using two or more of the language cueing systems to make a decision about a word. Repeating the line up to the problem word and making the sound of the first letter in the problem word is another strategy for problem solving a tricky word. Although this is a very early strategy, it does need to be taught and used in the first stages of reading as it promotes maintaining and utilizing the meaning of the story in order to figure out a difficult or unknown word. Finding patterns in words or recognizing little words within bigger words is another valuable strategy for figuring out tricky words, as is decoding by analogy. Other strategies include thinking about the story as a whole when attempting to problem-solve new words and using any picture clues that might be available. Keeping the gist of the story in mind assists students in making better decisions about unknown words. These cueing strategies speed up the process of solving new words and are much more efficient than sounding out each sound in a word. Strategic reading involves both the incorporation of monitoring, self-correcting, and problem solving new words to read new texts efficiently and independently (Clay 1991).

Statement of the Problem

Poor readers rely primarily on graphophonic/visual cues during reading (K. S. Goodman, 1996). Studies of reader miscues in high and low groups reveal that good readers make more errors that incorporate all three of the cueing systems and are better able to extract the author's meaning from the text than do readers in lower groups. It is important to provide demonstrations and activities that allow children to successfully orchestrate the integration of the visual, syntactic, and semantic cueing systems. When readers learn to use these strategies to monitor their own learning, they develop "self-improving systems" (Clay, 1991) which allow them to become more effective readers, independent of instruction (Short, 1991). This self-extending, or self-improving system is one that allows students to approach texts strategically and continue to learn to read by reading (Smith-Burke & Jaggar, 1994). Students who develop self-improving systems are confident in their ability to tackle new reading situations and enjoy the act of reading.

Reading Recovery, a reading intervention program developed in 1972 by Marie M. Clay and first implemented in New Zealand, has made training teachers in strategic cueing strategies an integral part of its staff development program. Reading Recovery has consistently documented reading gains for children involved in the program who learn to efficiently and appropriately access the three language cueing systems during reading. The program includes daily, one-on-one lessons for each child that continue until the child is able to use the kinds of strategies that good readers use on a consistent basis (Lyons, Pinnell, & DeFord, 1993). Because Reading Recovery is an individualized program, it cannot be automatically deduced that when these same strategies are

explicitly taught in a classroom setting the effectiveness will be as great. However, the possibility of such effects merits further research. Therefore, this study sought to determine if explicitly teaching cueing strategies in the regular classroom would increase student awareness and knowledge about these strategies. The study also attempted to determine if training in cueing strategies would increase a student's reading proficiency when compared to students receiving traditional reading instruction.

Purpose of the Study

The purpose of this study was to determine if explicit teaching of cueing strategies in a regular second grade classroom would increase student awareness of reading strategies. The study also sought to determine if students who had been explicitly trained in cueing strategies exhibited increased reading achievement on standardized measures of reading performance when compared with students who received traditional reading instruction. Cueing strategies were taught by explicit instruction, in which explicit explanations were accompanied by supported scaffolding experiences. Specifically, this study addressed the following research questions:

1. Are there differences in reading achievement between students who are exposed to explicit cueing strategy instruction versus traditional reading instruction?
2. How does student awareness of cueing strategies change as a result of explicit cueing strategies instruction?

Significance of the Study

It is known that improved reading achievement is a top priority on the national agenda (Bush, 2001). Research has consistently documented gains in student achievement when students are taught to use reading strategies in an individualized setting (Clay, 1991, Lyons et al., 1993). As this study examined the effectiveness of teaching these cueing strategies to regular education students in the classroom setting, results may provide valuable insight into instructional methodologies that increase student achievement. In addition, results may encourage teachers to actively assist students in becoming strategic readers who can make positive contributions toward their own reading success. Participants in this study were first semester second grade students. Generally, reading development at this stage begins to concentrate on word patterns and parts (Walker, 2000), drawing the child's attention to the graphophonic cues in the text. An emphasis on all three cueing systems could guard against the child becoming overly dependent on the printed text and encourage readers to integrate the language cueing systems effectively and efficiently.

Definition of Terms

The following terms have been defined for the purposes of this study.

Explicit instruction (Pearson & Dole, 1987) is the instructional method that was used in this study. It involves explicit explanation and modeling of the mental processes

that good readers use. Explicit instruction will be explained in full in the methodology section of this paper.

Miscues are referred to as unexpected responses by the reader during an oral reading episode (K. S. Goodman, 1996).

Cueing Strategies in this study refer to those strategies that encourage children to access the graphophonic, semantic, and syntactic language cueing systems. Strategies will include, but are not limited to thinking about the story, looking for chunks, checking the picture, getting the mouth ready and thinking about what makes sense, sounds right, and looks right.

Strategic prompting entails the use of specific verbal prompts or responses that encourage students to access the language cueing systems (Kinnucan-Welsch, Magill, & Dean, 1999). This technique is employed by teachers of Reading Recovery who work one-on-one with struggling readers to help them become strategic, independent readers. Reading Recovery teachers use a special language, or repertoire of prompts and responses, at the student's point of error and at other times during the reading event (Short, 1991) to encourage appropriate strategy use.

Strategic/Supportive scaffolding (Beed et al., 1991) is an instructional process in which the teacher chooses the appropriate level of cueing to be used during a child's reading event, based on an estimate of the child's zone of proximal development. He then provides the appropriate amount of support necessary to foster the development of the child's independent reading strategies.

Zone of Proximal Development is the area in which the child cannot yet learn independently, but can learn with appropriate adult support (Clay, 1991).

Summary

Kenneth Goodman's (1973) psycholinguistic model of reading provides the framework for this study. It is believed that proficient reading involves the integration of three language information systems: the graphophonic, the syntactic, and the semantic cueing systems. Clay (1991) states that the integration of these cueing system leads to a self-extending system, which allows the reader to read increasingly more difficult texts without assistance. Dissention exists as to the most appropriate manner in which to encourage effective language system access, as Clay proposes that these cueing strategies are not to be explicitly taught, only scaffolded. This study is designed to determine if explicit teaching of cueing strategies combined with scaffolding will increase student awareness of the three-cueing systems. The study also seeks to determine if explicit cueing strategy instruction will increase student reading achievement as measured by a standardized test of reading achievement.

Assumptions

This study is based on the following assumptions:

- Students have not been previously trained to access the language cueing systems.
- Reading achievement can be assessed through multiple methods.

Limitations of the Study

This study is subject to the following limitations:

- The cueing strategy instruction will be limited to second grade students in one classroom. Although the students in this classroom are fairly representative of the community population, the results of this study cannot be generalized to other populations.
- The study will be limited to second grade students in one elementary school, providing a relatively small sample size.

Organization of the Study

This study is presented in five chapters. Chapter I provides an overview of the study including background information, a formal statement of the problem to be investigated, the purpose of the study, an explanation of the significance of this research, definition of terms to be used and the assumptions and limitations of the study.

Chapter II reviews the literature and the related research in the areas of traditional teacher talk or feedback, explicit strategy instruction, supportive scaffolding and effective early literacy programs. Chapter III presents the methodology of this study, including relevant information to describe the participants, instructional setting, the instruments and materials used, and the research design and procedures of the study. Data analysis is reported in Chapter IV and Chapter V includes a summary the findings, discussion of the findings, teaching implications, and implications for further research.

CHAPTER II

Review of the Literature

Introduction

The purpose of this chapter is to review the research that is relevant to this study. Research relevant to the study will include a review of past research in the areas of traditional teacher talk, explicit strategy instruction, supportive scaffolding and a review of two effective early literacy programs.

Traditional Teacher Talk

It is known that children use the language cueing systems as they read, although some do not access the cueing systems equally and efficiently. Perhaps this inability to access the cueing systems appropriately stems from the manner in which teachers respond to children during the reading process. Several important studies of teacher verbal feedback have been reported in past years. Allington (1978, 1980) studied interruption behaviors of elementary teachers to determine if teachers responded differently to the miscues of "good" and "poor" readers. Teacher interruption behaviors were categorized and the results of the study revealed that the most common type of

interruption behavior was simply providing the word. Results also revealed that teachers tended to prompt poor readers to use graphemic cues slightly more than they did the good readers. It was concluded that this differential treatment of poor readers might be contributing to their reading problems. Hoffman and Clements (1984) devised a study to characterize teacher verbal feedback using FORMAS, a miscue analysis system taxonomy (Hoffman, Gardner, & Clements, 1981). Researchers videotaped reading group sessions of eight second grade teachers. Results of this study indicated that the poorer readers in this study were most often given the word immediately or shortly after the students paused. The study also concluded that poorer readers had less engaged time, less teacher contact, and fewer successful experiences during reading than did the good readers. In addition, results revealed that the quality of the interaction between poor readers and their teachers was inferior to that of good readers and their teachers. These authors concluded that teachers, in truth, did little to encourage the poor reader to emulate the characteristics of the good.

Explicit Strategy Instruction

While the previously mentioned studies were intended only to characterize traditional teacher responses, the next body of research provides information of student responses when explicit instruction is used to teach reading strategy instruction.

Roehler and Duffy (1984) first proposed a model of teaching that emphasized teacher explanations. They refer to the process as mental modeling, which involves showing students explicitly what a strategy is and exactly how to apply it by thinking

aloud. Duffy et al. (1986) conducted a study to determine whether teachers who were more explicit in their strategy instruction would be more effective than teachers who were less explicit. Twenty-two teachers of fifth grade students were assigned to treatment and control groups. Treatment group teachers were taught how to convert basal skills into useful strategies, how to make explicit statements about reading strategies to be taught, and how to organize the strategies for presentation. Results indicated a strong positive correlation between teacher explicitness and student awareness of lesson content. A follow-up study by Duffy et al. (1987) sought to determine the effects of explicit explanation of the mental processes associated with strategic reading. Participants in the study were 20 third grade teachers and their low reading groups. The treatment group of teachers received training on the reasoning associated with strategic skill use, not on the performance of isolated skills. The study continued over the course of a year. Results of the study revealed explicit explanations increased low-group students' awareness of the need to be strategic with the lesson content and increased their use of strategic reasoning. Students in the explicit explanation group also outperformed control group students on standardized measures of reading, including a measure of reading achievement given one year after the direct explanation intervention had been administered.

Previously mentioned studies involved reading strategy instruction of some kind, most often reading comprehension strategies. Reading comprehension strategies focus on comprehension of the text as a whole, not necessarily strategies for figuring out difficult words. It is important to note that none of the studies included thus far have examined the effects of cueing strategy instruction at the word identification level. Very little research in the area of strategies for problem-solving words has been conducted, other than studies

of word identification by decoding or word analogy. However, Brown, Pressley, Van Meter, and Schuder (1996) conducted a study to validate transactional strategies instruction that closely relates with this study. Transactional strategies instruction (Pressley, 2000) involves explicit explanation and teacher modeling and scaffolding of strategies. Participants included six groups of low-achieving second graders who received transactional strategies instruction in areas of overall text comprehension and fix-up strategies. Fix up strategies included skipping words, substituting or guessing, using picture or word clues, rereading, and breaking words into parts. When compared with six groups of low achieving students who were taught more conventional reading instruction, students receiving transactional strategies instruction evidenced greater strategy awareness and strategy use, greater content knowledge, and superior performance on standardized reading tests.

Benchmark School in Media, Pennsylvania, is well known for successfully preparing students who are at risk of school failure to return to regular education classes. In an interview study of the faculty, Pressley et al. (1991) interviewed 31 academic teachers, asking them one 150 objective questions about their instruction. Interviews were conducted in face-to-face situations, with teachers having the opportunity to elaborate on their objective answers. Results revealed that Benchmark teachers strongly endorsed direct explanation and modeling. Teachers believed explicit explanations were integral components to effective strategy instruction. Teachers also considered it very important to provide information as to when and where strategies should be used, as these strategies were not acquired automatically, rather through extensive explanation and student practice.

Scaffolding/Coaching of Reading Strategies

The model of explicit teaching used in this study includes four components which will be outlined in the methodology section of this paper. Explicit teaching not only involves direct explanation, as the name implies, but also the act of supportive scaffolding. Supported scaffolding is closely related to Vygotsky's (1978) view that reading is a socially based action. Palinscar and Brown (1984) have applied this concept with their method of "reciprocal teaching". Reciprocal teaching is dialogue based. It is an active learning approach in which teachers and students question themselves during reading events in order to facilitate reading comprehension. Lysynchuk, Pressley, and Vye (1990) conducted a study involving 36 fourth graders and 36 seventh graders who participated in 13 sessions of reading strategy training or a control situation of reading practice. Results indicated that students receiving the strategy instruction by the reciprocal teaching approach showed a greater increase in scores on standardized measures of reading achievement than did students in the control group. This study replicated the results of the original Palincsar and Brown (1984) study. Subsequent studies of reciprocal teaching have revealed striking effects on cognitive process measures, such as summarizing and self-questioning (Rosenshine & Meister, 1994).

Anderson and Roit (1993) designed a research project in which nine experimental teachers participated in self-evaluative workshops as they learned to foster strategic reading in their students. Authors of the study assert that this instruction was similar to transactional reading strategies instruction. However, upon close inspection of the techniques that were used, the explicit explanation of the comprehension strategy was not

greatly emphasized. Rather, peer support, problem-solving discussions, and fostering active reading among students were the main avenues for strategy instruction. Students of these teachers reported increased use of strategic reading and improved scores on a standardized test of reading achievement.

Peer coaching, as described by Mathis (2001), involves pairing low-achieving and high-achieving first graders to complete word identification and comprehension activities. After 14-weeks, low achieving students in three classrooms who participated in the three, 30-minute partner lessons per week exhibited significantly higher standardized reading achievement scores than did students who participated in traditional reading instruction not involving peer coaching.

In addition to the above mentioned programs that utilize coaching or scaffolding, much of the research on exemplary teachers reveals that, either intuitively or by previous training, good teachers scaffold and coach their students toward learning. Taylor and Pearson (2002) report that in an evaluation of 11 schools from eight different school districts, teachers determined to be "accomplished" preferred the teaching style of coaching, as opposed to telling and tended to engage students in higher level thinking related to reading than did other teachers. In a study of outstanding first grade teachers in New York, (Wharton-McDonald, Pressley, & Hampston, 1998) sought to characterize effective teaching. Researchers observed ten teachers, five who had been deemed outstanding by their supervisors and five who were considered more typical. After ten observations and two in-depth interviews, researchers compared and contrasted the aspects of instruction that each deemed necessary for student achievement. Unique characteristics of the outstanding teachers regarding literacy instruction were an

exceptional balance of whole language techniques and the explicit teaching of skills, active scaffolding of student learning, and encouragement of self-regulation and self-monitoring. Pressley et al. (2001) studied literacy instruction in five first grade classrooms. They found that effective teachers were characterized by scaffolding and matching of demands to student proficiency and encouragement of student self-regulation. This finding is in accordance with the recent wave of research on exemplary teachers that found exemplary teachers: 1) encourage student use of strategies and self-regulation in reading, 2) monitor student progress and encourage student improvement, and 3) provide scaffolded instruction to help students improve their use of reading strategies (Taylor & Pearson, 2002).

Effective Early Literacy Programs

As stated, this study sought to determine the influence of cueing strategy instruction on the reading development of second grade children. The cueing strategies used in this study were derived exclusively from an individualized, early intervention program called Reading Recovery (Clay, 1985). However, techniques used in Reading Recovery programs are not regularly attempted in the regular classroom. In addition, Reading Recovery is generally limited to first grade children who have been identified as at risk of not learning to read. Another highly successful program for literacy development is Success for All (Slavin, Karweit, Wasik, Madden, & Dolan, 1994). In contrast to Reading Recovery, this program calls for intensive reading strategies instruction within the regular classroom. As this study incorporated the use of Reading

Recovery techniques as intensive strategy instruction within the regular classroom, a review of Reading Recovery and Success for All are included below.

Reading Recovery

Past research has consistently proven the effectiveness of Reading Recovery on the reading development of low achieving first grade students (Lyons et al., 1993). Reading Recovery is an individualized early intervention program for students identified as having trouble learning to read after one year of school. The daily, one-to-one, 30-minute lessons focus on teaching students to become independent readers and writers through lesson components that foster strategic thinking and decision making during reading. The teacher provides a scaffold for the child's learning; just enough support to help the child accomplish tasks needed and lead to more independent learning (Lyons et al., 1993). Students who participate in Reading Recovery are taught to access the three language cueing systems in a simplified manner. Reading Recovery teachers encourage effective use of graphophonic, semantic, and syntactic cues by using specific prompts during student reading. Students are prompted to see if what they read "looks right", to see if it "makes sense" and to see if it "sounds right". A complete list of the prompts used by teachers in the Reading Recovery program is included in Appendix A. It is important to note that Marie Clay, founder of Reading Recovery, upholds that although students are to be scaffolded in their use of the cueing systems, this orchestration and effective access to the cueing systems is not to be systematically taught. She asserts that the child begins

to internalize these strategies only as a result of proper modeling, strategic questioning, and practice with the act of reading (Clay, 1991).

Research support for Reading Recovery is provided by a longitudinal, comparative study involving three groups of children. The initial study included a group of Reading Recovery children, a group of comparison children, and a random sample of average first graders. Students in the reading recovery program had varied program lengths due to students entering and leaving the program throughout the year. However, Reading Recovery students participated in an average of 60 lessons. Students in the control group received daily assistance for the entire year by an instructional assistant. For assessment, the Diagnostic Survey (Clay, 1955) was administered, which includes tests to measure letter identification, word knowledge, concepts about print, writing vocabulary, dictation, and text reading. The Comprehensive Test of Basic Skills (1981) was also administered, which measured reading vocabulary and reading comprehension. A random sample of students who did not qualify for any remedial program was also tested.

Results indicated significant differences between Reading Recovery children and the comparison children. Reading Recovery children excelled on all measurement instruments. It was also found that 90 percent of the children who discontinued the Reading Recovery program that year met or exceeded the average range on text reading, letter identification, word test, and dictation. Finally, on the nationally normed, standardized test of reading achievement, which tend to be most difficult for struggling readers, Reading Recovery children once again out-performed the comparison group and performed within the average band of the random sample group (Lyons et al., 1993).

Longitudinal data show that, as a group, discontinued Reading Recovery children continued to perform at or above grade level in reading even three years following the intervention (DeFord, Pinnell, Lyons, & Place, 1990). Another study involved ten districts in Ohio and compared several intervention programs, including Reading Recovery, Reading Recovery with Limited Training, Reading Recovery working with groups of students, and a skills-based tutoring program. Results showed that the traditional Reading Recovery program had the greatest impact on student success (Lyons et al., 1993).

Success for All

Another successful literacy program to date is Success for All (Slavin et al., 1994). Success for All is a comprehensive reorganization of elementary schools designed to ensure success for all children. The reading program within Success for All has three components: innovative curriculum and instruction in reading, tutorial support, and regrouping for reading instruction so that students are reading appropriately leveled reading material. A major principle of the reading program at the beginning level is the instruction of comprehension strategies during text reading and also during teacher read-alouds. Creators of Success for All promote that students should succeed the first time they are taught, thus eliminating the need for special education classes and remedial education. The program calls for "neverstreaming", a concept in which there would never be a need to mainstream learning disabled students into the regular classroom as they would have experienced reading success along with the rest of the students in the first

place (Slavin, 1995). Through explicit instruction, children are taught to effectively use metacognitive strategies to help them become successful readers (Wasik & Slavin, 1993).

Research has shown consistent positive effects of the program on student reading achievement as measured by both individually administered reading assessments and standardized measures (Slavin, 1995). In 15 schools in different states, the students who participated in Success for All outperformed the control groups on measures of reading grade equivalents. Results also indicate that students who have participated in the program for more that one year continued to experience success in reading, as opposed to those in the control group. These findings illustrate the belief that prevention and early intervention must take place within the classroom, not just in pull-out remedial programs. The developers of Success for All assert that the best way to keep kids from falling behind is to offer quality instruction in the regular classroom (Slavin et al., 1994).

Conclusion

Children are constantly attempting to construct meaning from the printed page (Goodman and Goodman, 1994). When that meaning is disrupted, the student pauses. The teacher's reaction to that pause determines what kind of reader that child will become. Research has shown that students who receive scaffolding in reading strategies will use those reading strategies to construct meaning from the text (Anderson & Roit, 1993; Duffy et al., 1987). However, it is also documented, teachers do not generally give strategic prompts to students. In most cases, the teacher simply supplies the problem word or phrase (Allington, 1978; Hoffman & Clements, 1984). Critiques of effective

early literacy intervention programs reveal that teaching children, especially those who struggle, to become independent, successful readers requires helping them efficiently access the language cueing systems and cognitive processes necessary to construct meaning (Hiebert, 1994). In addition, although Clay (1991) portends that these cueing strategies are not to be "taught", only modeled and encouraged, there is a growing body of research that indicates explicit instruction has positive effects on student learning (Pressley, 2000; Slavin et al., 1994).

Research regarding the teaching of cueing strategies to second grade students is limited. Most research on reading strategies is concentrated on the teaching of text comprehension instead of word identification. Favorable findings for teaching cueing strategies were indicated in the research, but the research was conducted only on delayed readers or readers in an individualized setting. Moreover, those studies were designed as programs to correct problems in reading rather than to prevent reading difficulties and facilitate early strategy development (Pikulski, 1994). Finally, none of the studies were designed using the explicit teaching model to teach students to access the language cueing systems during text reading. This study was designed to examine the influence of explicit cueing strategic instruction combined with appropriate scaffolding experiences on the strategy awareness and reading achievement of first semester second grade students in the regular classroom, possibly providing implications for the inclusion of cueing strategies instruction into existing second grade curricula.

CHAPTER III

Methodology

Introduction

This study examined the influence of explicitly teaching second grade students how to access semantic, syntactic and graphophonic language cueing systems. The study also explored student growth in reading strategy awareness and how this awareness impacted overall reading performance.

Participants

Participants in the intervention group for this study included 20 students from a self-contained second grade classroom in a rural midwestern town. This class included four students with Limited English Proficiency, 13 Caucasian students, and two Native American students. The mean age of the instructional group was 7.70 years. Fifty percent of these students qualified for the free or reduced lunch program. Participants in the control group included 19 students from another second grade classroom in the same elementary school. This class included two students with Limited English Proficiency, 15 Caucasian students, and one Native American student (See Table 1). Demographic data

for one student in the control group was not available. There were two students who were repeating second grade in the control group. These two students were retained for both academic deficits and maturational lags.

Table 1

Participant Demographics

	Number	Mean Age at Start of Study	Percent Caucasian	Percent Hispanic	Percent Native American	Percent Asian	Percent Receiving Free/Reduced Lunch
Experimental Group	20	7.70 yrs.	65%	15%	15%	5%	50%
Control Group	18*	7.92 yrs.	78%	11%	1%	0%	28%

*demographic data missing for one student

Parent and student permission was obtained by describing the research project in a parent/child consent form. Parents were asked to accept or decline participation on the part of their children by signing the letter. Separate consent forms, detailing student involvement in the study, were provided for the intervention group and the control group. To ensure that students understood the purpose of the study and that participation was voluntary, the consent form was read aloud to students in both the intervention and control groups. At that time, the researcher discussed questions or concerns that students had. Students were then asked to sign the portion of the consent form that was designated for participants in the study.

A second grade classroom provided the instructional setting for this study. In an attempt to avoid researcher bias, the researcher did not serve as teacher-researcher. The instructional program was provided by Rhonda Peters (pseudonym). The researcher served as teacher trainer and as observer within the classroom. Mrs. Peters was specifically chosen because of her qualifications. At 30 years old, she was beginning her first year as an elementary school teacher. Mrs. Peters received three semester hours of

training in the area of guided reading (Fountas & Pinnell, 1996) during her recently acquired Bachelor of Arts degree in elementary education. She was eager to incorporate this and other strategy instruction into her teaching. Mrs. Peters was not bound to traditional teaching methods that she found comfortable, therefore she was determined by the researcher the best candidate to deliver the explicit cueing strategies instruction in the manner in which the study was designed. In addition, her interaction style was characterized as warm and caring.

Materials

Data collected in this study consisted of the following: reading interviews adapted from the Reading Interview for Young Readers (Y. M. Goodman et al., 1987), running records as measured by the Developmental Reading Assessment (Beaver, 1983), the Group Reading Assessment and Diagnostic Evaluation (Williams, 2000), videotapes of whole group lessons and guided reading lessons, and teacher observations during independent reading events.

Interviews

Initial awareness of cueing strategies and student perceptions of themselves as readers were measured by interviews, which were conducted by the researcher. The Reading Interview (adapted for young children), developed by Yetta Goodman et al. (1987), is a series of questions designed to determine what the child thinks about his own

behavior as a reader and what strategies he most often employs when faced with a difficult word (See Appendix B). The interview provided information regarding the child's awareness of any strategies that he uses or that could be used when encountering difficult words. The interview also required the student to judge his perception of himself as a reader and what he perceived necessary to be a good reader. The student was also asked to name a good reader that he knew and discuss what this reader would do when faced with something he didn't know. This interview was also given as a post-study interview to assess change that may have occurred as a result of cueing strategy training.

Developmental Reading Assessment (DRA)

It is possible that a child may not be aware of or be able to verbalize reading strategies as measured by the Reading Interview, but may respond differently during the actual reading event. To collect more information regarding student strategy use and understanding, the Developmental Reading Assessment (DRA), developed by Joetta Beaver (1983), was administered to students in the training group. The DRA is an informal reading inventory designed to document students' development as readers over time. It is to be used in kindergarten through third grade classrooms and conducted during one-on-one reading conferences as students read specially selected assessment texts. The DRA contains a specialized book list, increasing in difficulty. Teachers select the book level they feel is appropriate for each individual student and begin the assessment process. Teachers document student responses as the child reads the text. Student responses are evaluated in terms of the student's use of strategies and overall

comprehension of the story. Students continue to read stories until the teacher determines the student's independent, instructional, and frustration reading levels.

This assessment, as it is an assessment of oral reading behavior, provided useful information as to what strategies the child might actually choose to employ or was aware that he could use before the training and at the conclusion of the treatment period. Follow-up questions, such as "What could you try to fix that?" and "How did you know there was a problem?" were asked of each student. Student responses were recorded and transcribed. The DRA, along with the above-mentioned follow-up questions, were administered prior to the study and again at the conclusion of the study to assess any growth in oral reading performance and strategy awareness that occurred as a result of the training. Each student's instructional reading level, as determined by the DRA assessment, was recorded both prior to the study and at its completion as further evidence of individual student change.

As this study primarily sought to document the influence of explicit instruction on cueing strategy awareness in those students receiving the training, the above-mentioned data sources of interviews, DRA's, videotapes, and teacher observations were collected only on students in the experimental group, or those receiving the strategy training.

Group Reading Assessment and Diagnostic Evaluation (GRADE)

As this study sought to determine if explicit training in cueing strategies significantly increased reading achievement when compared with traditional methods of teaching reading, the Group Reading Assessment and Diagnostic Evaluation (Williams,

2000), was administered to both the experimental group and the control group. GRADE is a group administered, norm-referenced test of silent reading. The subtests included word identification, word reading, sentence comprehension, and passage comprehension. Testing was not timed. The word reading test measured decoding and word recognition. There were 25 items in which the teacher read the target word aloud, and the student determined the correct word from four choices. Split-half reliability ranged from .96-.97. Alpha reliabilities ranged from .88-.90. The sentence comprehension subtest measured the ability to comprehend a sentence as a complete thought. Each item consisted of a sentence with a word missing. Students chose the missing word from a group of four words provided. There were 15 items. Split-half reliability ranged from.90-.91. Alpha reliabilities ranged from .88-.90. The passage comprehension subtest measured students' ability to comprehend extended texts as a whole. The student read a passage and answered multiple choice questions related to the passage. Six to eight authentic and synthetic passages were included at each level. Split-half reliability ranged from .88-.91. Alpha reliabilities ranged from .88-.90. These subtests were administered as pre-tests (Level 2, Form A) and post-tests (Level 2, Form B) for both the treatment group and the control group in order to determine if reading achievement of those students who received the cueing strategy training was higher than those receiving traditional reading instruction. This was the only instrument administered to the control group.

Videotapes

Every two weeks the researcher videotaped the class during a whole group strategy lesson or during guided reading instruction. These videos assisted the researcher in accurately observing the responses made by students and the manner in which the strategies were explicitly taught then scaffolded by the teacher. Videotapes were viewed repeatedly, then transcribed to triangulate the data for similar themes found in student interviews and DRA questioning regarding student awareness of cueing strategies. Videos of whole group lessons provided evidence of both explicit instruction and scaffolding prompts. Videos of whole group lessons also gave evidence to student changes in awareness of various cueing strategies. Videos of guided reading instruction provided evidence of strategy scaffolding by the teacher, individual student awareness or use of cueing strategies, and any explicit instruction in cueing strategies that may have occurred during the guided reading lesson. Three whole group lessons and three guided reading lessons were targeted for analysis, one each from the very beginning of cueing strategy instruction, one each from lessons midway through the instructional period, and one each near the end of the twelve week instructional program.

Teacher Observation

Throughout the 12-week instructional program, Mrs. Peters monitored her students as they read independently. Approximately every two weeks, she listened to each student as he or she was reading independently. Notations were made of any

strategies the students used or mentioned during the reading event. Teacher prompting or scaffolding was also noted. At the conclusion of the study, this data were compared with that of the videotapes, student interviews, and DRA questioning using the constant comparative method (Glaser & Strauss, 1967; Lincoln & Guba, 1985) to describe patterns of change in reading strategy awareness throughout the study.

Design and Procedures

The pre-test, post-test control group design and the non-equivalent control group design provided the framework for this study quasi-experimental study. It was not possible to randomly assign participants to either the treatment or control group or to randomly assign which class would receive the experimental treatment of explicit cueing strategies instruction. Thus, threats to external and internal validity were anticipated and accounted for in the analysis of data. A 12-week instructional program in explicit cueing strategies instruction was administered to the experimental group, while the control group received 12-weeks of traditional reading instruction. Procedures within the experimental and control groups, as well as how the teacher of the experimental group was trained, are detailed below.

Experimental Group

Students in the experimental group were administered the Group Reading and Diagnostic Evaluation (Williams, 2000) at the beginning of the study and again at its

completion. The results of this test were compared with those of the control group at the conclusion of the study to determine if the treatment showed significant increases in reading achievement. In addition to the GRADE test, students in the experimental group were administered the Reading Interview (Y. M. Goodman, Watson, & Burke, 1987) and the Developmental Reading Assessment (Beaver, 1983). Student responses were recorded and transcribed in order to document student awareness of cueing strategies both before and after the instructional program.

The instructional program to be used in this study was adapted from the Pearson and Dole (1987) model of "explicit instruction". Explicit instruction involves four phases: 1) teacher explanation and modeling of the strategy, 2) guided student practice of the strategy, 3) independent student practice of the strategy, and 4) student application of the strategy in various reading situations. The explicit strategy training procedures were as follows.

1) The teacher modeled and explained a strategy.

Explanation and modeling of cueing strategies occurred twice each week of the study. During shared reading activities, the teacher explained the appropriate use of cueing strategies by using think-aloud procedures. Cueing strategies modeled included: thinking about what makes sense, thinking about what sounds right, noticing the specific chunks and patterns within words, getting the mouth ready for the problem word, checking the picture and thinking about the story. These cueing strategies were taken from Marie Clay's (1991) prompts used during individual Reading Recovery lessons. The teacher intentionally arrived at a "problem" in the text, then talked through the different strategies she could use to fix the problem. The teacher used the "Helping Hand" (Kinnucan-Welsh,

Magill, & Dean, 1999) as she taught these strategies. The Helping Hand is a chart that was displayed in the area of the whole group lessons. The chart showed a visual reminder of each of the five strategies, one atop each finger, that were explicitly taught throughout the study.

2) The students received guided practice as they gradually became more responsible for strategy use.

Students practice the use of reading strategies during small group guided reading instruction. Each reading group met three to four times each week. The teacher provided prompts (See Appendix A) to facilitate student use of strategies while reading texts at the instructional level (Fountas & Pinnell, 1996).

3) Students practiced the strategy independently with teacher feedback.

Students participated in daily independent reading, at which time the teacher monitored students, praised effective strategy use and intervened with prompts when necessary.

4) Students applied the strategy in real reading situations.

After several weeks of strategy training, students began to incorporate the strategies and use them effectively during the various reading events that occurred in the classroom.

Control Group

During the 12-week study, students in the control class received traditional reading instruction that consisted of whole group lessons to introduce each story, round-robin reading, phonics lessons, and end of book tests. The control group was included in the study to determine if the strategy training significantly impacted student reading

achievement as measured by the GRADE standardized test of reading achievement (Williams, 2000). Therefore, both the experimental and control groups were administered GRADE tests as pre- and post-measures. Results served to compare the differences in reading achievement between those students who received cueing strategy training versus those students who received more traditional reading instruction.

Teacher Training

To accomplish the goals of this study, the teacher was trained by the researcher. The training consisted of the following: sharing of relevant research articles, research-facilitated workshops, and daily debriefings.

Prior to teacher training sessions, three research-based articles were shared with the teacher. Journal articles pertained to the relevance of teaching for strategies, effective teaching programs that emphasize strategic teaching, and the use of explicit teaching (Beed, et al., 1991; Duffy, Roehler, & Herrmann, 1988; Kinnucan-Welsch et al., 1999). The teacher reviewed and discussed the findings of these articles during workshop sessions facilitated by the researcher.

The researcher conducted four two-hour workshops in order to train the teacher in the instructional program used in the study. The first two workshops took place prior to the beginning of the study, while the final workshops occurred at the end of the second and sixth week. A primary resource used during these training sessions was *Guided Reading: Good First Teaching for All Children* (1996) by Irene Fountas and Gay Su Pinnell. These sessions emphasized: (a) understanding the relationship of the three

language cueing systems; (b) explicit explanation and modeling of reading strategies during whole group instruction; (c) scaffolding and supporting effective strategy use during guided and independent reading; and (d) assessing students' reading strategy use. Daily contact was made with the teacher throughout the study in order to discuss any problems or questions that arose between workshop sessions.

Data Analysis

Both quantitative and qualitative measures were used to analyze the data from this study. Data analysis for each research question was as follows:

1. Are there differences in reading achievement between students who are exposed to explicit cueing strategy instruction versus traditional reading instruction?

A comparison of student scores on the GRADE test (pre- and post-) for both the control group and the treatment group was conducted. Means and standard deviations were used to document pre-test and post-test differences in reading performance. Analysis of covariance was conducted to assess differences in post-test scores in each subtest area and total test scores in order to adjust for individual pre-test differences.

2. How does student awareness of cueing strategies change as a result of explicit cueing strategies instruction?

Student responses to the Reading Interview and the Developmental Reading Assessment were carefully read and reread, then analyzed for patterns of strategy awareness. Using the constant comparative method (Lincoln & Guba, 1985)) student

awareness of strategies demonstrated in the interviews and DRA assessments were carefully compared with the strategy awareness demonstrated in videotaped lessons and teacher observations.

The constant comparative method begins with recording and classifying initial observations. Therefore, data from student interviews and DRA questioning transcripts were categorized by two coders (the researcher and a certified Reading Recovery teacher who served as research assistant). Coders formed a category each time the student made reference to a different reading strategy. Reading strategies were defined as any plan of action mentioned by the reader to make sense of printed material (Pressley, 2000). The initially formed categories were then discussed individually. Any discrepancies in categories were discussed until consensus was reached. Results depicting strategies mentioned both before and after the study and the number of students who made reference to particular strategies were recorded and described (See Appendix C).

The next step in constant comparison is to integrate categories and their properties (Lincoln & Guba, 1985). Therefore, a list of all strategies mentioned, either before or after the study, was compiled. Categories that were extremely similar, such as "look at it" and "look at the word" were collapsed. As with the initial categorization, any collapse in categories was discussed by both coders until consensus was reached. Student responses during teacher observations and videotaped lessons were reviewed to determine if further refinement of categories was needed or if students mentioned awareness of strategies that were not included in student interviews and DRA questioning. These comparisons led the researcher to formulate certain themes, or observational statements, regarding student awareness of cueing strategies both prior to and at the completion of the study.

CHAPTER IV

Findings

Introduction

The purpose of this study was to determine if explicit teaching of cueing strategies significantly increased the reading ability of first semester second grade students as compared to those students receiving traditional reading instruction. Additionally, the study sought to determine the awareness of cueing strategies demonstrated by students both before and after explicit cueing strategies instruction.

Data were collected by means of the following instruments: Group Reading And Diagnostic Evaluation (Williams, 2000) in which Level 2, Forms A and B were used as pre-test and post-test measures, respectively; the Reading Interview (Y. M. Goodman et al., 1987), which was administered to the experimental group before and at the conclusion of the study; Developmental Reading Assessments (Beaver, 1983), which were administered to the experimental group both prior to and at the conclusion of the study; and teacher observations and videotaped class sessions, which were transcribed to triangulate data with student interviews and DRA questioning for emerging themes of student strategy awareness.

Both quantitative and qualitative measures were used to analyze the data. To determine whether a significant increase in reading achievement occurred as a result of cueing strategies instruction, means and standard deviations were computed for the control and experimental groups, both before and after the treatment period. Analysis of covariance was conducted to determine if there were significant changes in reading achievement.

In order to describe students' cueing strategy knowledge both prior to the study and at its conclusion, transcripts were made of the pre- and post-interviews and pre- and post-DRA questioning. These two data sources were targeted as the best overall means of detecting student awareness of cueing strategies both prior to and at the conclusion of the study. However, in order to verify that students were actually aware of these strategies, data from the interviews and DRA questioning was triangulated with student references to strategies as evidenced in videotaped guided reading lessons and teacher observation of independent reading. Student awareness of cueing strategies was reported collectively and through individual examples, both prior to and at the conclusion of the study. The constant comparative method (Lincoln & Guba, 1985) was used to categorize and refine student strategy awareness until two overall themes emerged from the data that appropriately described strategy awareness both before and as a result of the strategy instruction.

Research Question #1

Analysis of Group Differences in Reading Achievement. The participants in this study were not assigned randomly to the experimental or control group, as random assignment is rarely practiced when principals, counselors and teachers devise class lists. Because randomization was not possible, it cannot be assumed that differences in reading achievement are due to the treatment, as selection differences are likely. Therefore, using raw scores, group means were compared for each subtest area and for total test scores by analysis of covariance, using pre-test total test scores as the covariate in order to increase precision of the test and reduce the size of error variance. Subtest areas were word reading, word meaning, vocabulary composite, sentence comprehension, passage comprehension and comprehension composite.

To determine the difference in reading achievement as a result of cueing strategies or traditional reading instruction, F-tests were performed on post-test group means on each individual subtest area and for total test scores, using pre-test total test scores as the covariate. Table 2 shows group means, standard deviations, and F-tests for each subtest and for the total test scores. The ANCOVA result revealed statistically significant differences for the vocabulary but not for the comprehension measures. Thus, in word reading, students in the experimental group made significant progress when compared with the control group ($F[2,38] = 5.59$, $p = .024$). Statistically significant gains in word meaning were also found for the experimental group ($F[2,38] = 7.98$, $p = .008$). These two subtests combined made up the vocabulary composite, which also revealed significant gains ($F[2,38] = 7.94$, $p = .008$).

However, students in the experimental and control groups did not show significant differences in sentence comprehension (F[2,38] =.030, p = .864), passage comprehension (F[2,38], = 1.12, p = .297), or comprehension composite (F[2,38] = .618, p = .437). Neither were there any significant differences in total test scores (F[2,38] = 3.54, p = .068).

Table 2

Analysis of Covariance Results for Differences in Reading Achievement

	Experimental			Control				
	N	Mean	SD	N	Mean	SD	F[2,38]	p>F.
Post-test word reading	20	26.25	2.12	19	25.11	3.70	5.593	.024
Post-test word meaning	20	26.20	1.32	19	25.21	2.78	7.983	.008
Post-test vocabulary composite	20	52.50	2.65	19	50.37	6.36	7.940	.008
Post-test sentence comprehension	20	14.65	4.30	19	15.42	4.57	.030	.864
Post-test passage comprehension	20	18.85	3.94	19	18.74	6.31	1.120	.297
Post-test comprehension composite	20	33.45	7.69	19	34.16	10.00	.618	.437
Post-test total test	20	86.00	9.89	19	84.47	15.38	3.548	.068

Research Question #2

In order to assess student awareness of cueing strategies, the constant comparative method was employed (Dye, Schatz, Rosenberg, & Coleman, 2000; Lincoln & Guba, 1985). After categorization of all data was accomplished, two themes emerged regarding student strategy awareness prior to the study and as a result of cueing strategy instruction.

Theme 1: Before explicit cueing strategies instruction, students most often demonstrated awareness of one primary strategy, that of "sounding out" words. The response offered most by students prior to strategy instruction was "sound it out." Fourteen out of 20 students made reference to sounding out difficult words. Out of all the responses given, "sound it out" occurred 53 times during interviews and 32 times during DRA questioning (See Table 3). Sounding it out was mentioned a total of 85 times prior to strategy instruction. The next most offered response was "ask for help" which occurred 17 times during pre-study interviews (mentioned by 13 students) and three times during pre-study DRA questioning for a total of 20 references to "asking for help". Six references were made to looking for chunks during the pre-study interview, while five references were made to chunks during pre-study DRA questioning, for a total of 11 total references. The next most often mentioned strategy was to "tell the word", mentioned ten times in all prior to cueing strategies instruction. Finally, although not mentioned on the student interview, students responded with "I don't know" eight times during pre-study DRA questioning. Other strategies mentioned prior to the study were "figuring it out, giving a hint, trying it again, guessing, using the picture, looking at the word, skipping the word, thinking about the word, and using the word wall". These strategies were mentioned eight or fewer times by students during pre-study interviews and DRA questioning.

After reading and rereading the transcripts of videotaped lessons and teacher observations, these additional data sources confirmed a heavy reliance on graphophonic strategy awareness prior to cueing strategy instruction; in particular, sounding out the words.

Table 3

Strategies Mentioned by Students During Reading Interviews and DRA Questioning

	Reading Interviews		DRA Questioning		Total Responses	
Strategies Mentioned	Pre	Post	Pre	Post	Pre	Post
Ask for help	17	3	3		20	3
Figure it out	8				8	
Get mouth ready/Beginning sound	1	10	3	4	4	14
Give a hint	5				5	
Go back and try again/Many attempts	1		2		3	
Guess			1		1	
How the word looked			5		5	
I don't know			8	3	8	3
Look at picture	4	24	1	6	5	30
Look at word	2	1		5	2	6
Look for chunks	6	45	5	19	11	64
Meaning/Thinking about story		41	8	16	8	57
Pay attention			1		1	
Saw word elsewhere			2		2	
Sentence structure		6		1		7
Skip or go on	6				6	
Sound it out	53	29	32	10	85	39
Spelling		1		1		2
Take your time			1		1	
Tell the word	10	8			10	8
Think about it/word	5	6			5	6
Use a strategy		13		1		14
Use helping hand		18				18
Use word wall	1				1	
Using letters				1		1
Word popped in			1		1	

Theme 2: After cueing strategy instruction, students shifted in their awareness of strategies and consistently referred to alternate strategies when faced with difficult words. At the conclusion of the 12-week instructional period, students were once again administered the Reading Interview and the Developmental Reading Assessment. On the post-study reading interviews, an average of six strategies per student were reported. The most often mentioned strategy by students after cueing strategy instruction was "looking

for chunks". Looking for chunks was mentioned 45 times on post-study interviews and 19 times during DRA questioning, for a total of 64 references.

Next, students reported "thinking about the story" or the "meaning" of the story a total of 57 times, with 41 references during post-study interviews and 16 references during DRA questioning. Students made reference to "sounding out" 29 times during the post-study interviews and ten times during post-study DRA questioning for a total of 39 references. Twenty-four references were made to "using the picture" to figure out difficult words during post-study interview, while pictures were mentioned six times during post-study DRA questioning for a total of 30 references.

The next most reported strategy on post-study measures was "using a strategy" or the "helping hand", referenced 32 times, followed by "looking at the word", mentioned 24 times; and "getting your mouth ready", mentioned 14 times. "Asking for help" was mentioned three times in all during post-study measures. For a clearer representation of change in student strategy awareness, a histogram is included depicting the strategies mentioned most often prior to the study compared with those same strategies at the conclusion of the study and strategies most mentioned after the strategy instruction (See Figure 1).

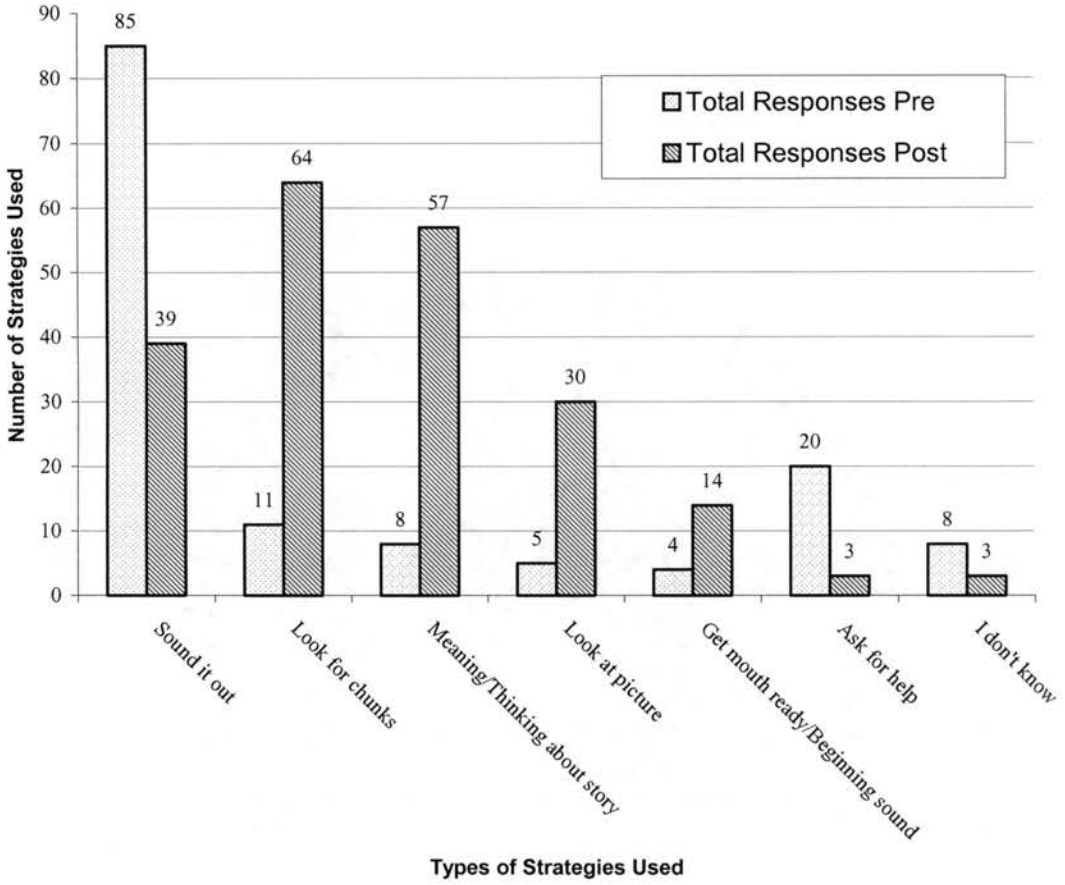

Figure 1. Total student responses during pre- and post-interviews and DRA questioning.

As in the pre-study analysis, data from videotapes and teacher observations were read and reread to confirm the finding that cueing strategies instruction increased student awareness of alternate reading strategies that could be employed at points of difficulty during text reading.

Individual Changes in Knowledge and Use of Cueing Strategies

When reviewing the overall responses to pre- and post-interviews, it is apparent that there were changes in student awareness of cueing strategies. Those findings were

reported for the entire group of students with results such as "the most used strategy and the least used strategy". It is also important to note some of the individual changes that occurred in students as a result of the study. The following section consists of three individual accounts, including excerpts from pre- and post-interviews and DRA questioning, in hopes that individual changes that occurred as a result of the cueing strategies training can be better demonstrated. These descriptive accounts also report the individual's instructional reading level both before and after the study as further evidence of student change. Student responses are bolded.

Student Example #1 – Kevin (pseudonym)

Kevin was a lively second grade boy who enjoyed reading, although the process was at times difficult for him. He began the study on DRA level 18, which is considered on grade level for a beginning second grader, albeit lower than many students in his class. As is noticed in his pre-study interview, he was quite adamant about the strategy that he believed to be the most helpful when approaching a difficult word.

Researcher: When you are reading and come to something you don't know, what do you do?

Student: Sound it out.

Researcher: Do you ever do anything else?

Student: Nope.

Before the strategy training, Kevin was aware of one way to figure out unknown words—sounding it out. He made no attempt to even create another possibility. In contrast, he referred to three strategies that he could use to figure out a difficult word at the conclusion of the study, suggesting his awareness of the ability to use alternate

strategies to figure out difficult words. When the same question was asked during the post-study interview, he responded as follows:

Researcher: When you are reading and come to something you don't know, what do you do?

Student: I look for chunks and cover up half the word and look for another word.

Researcher: Do you ever do anything else?

Student: I check the picture and I think about the story.

During DRA text reading prior to strategy instruction, Kevin was asked how he figured out a word that he had just self-corrected. He responded, "It just popped into my head!" At the conclusion of the strategy instruction, the researcher took Kevin to a place in the text in which he read "newspaper roasted" instead of "newspaper routes". He realized what he had said, then began to laugh.

Researcher: Why are you laughing?

Student: Because you can't roast a newspaper! (reference to meaning)

He was then asked what he might try to fix the problem. He immediately responded, "I can look for chunks", which he proceeded to do. Kevin was able to laugh at his mistake that did not make sense and come up with a plan to help fix the problem. Kevin finished the study reading at Level 44, which is the highest level included in the DRA assessment, an increase of eight book levels.

Student Example #2 – Stephanie (pseudonym)

Stephanie was a quiet, tentative student who was experiencing great difficulty with reading. She was placed in second grade with the fear that testing for a reading disability might be in the near future as she had already participated in one year of

transitional first grade and one year of regular first grade. Stephanie began the study reading with an instructional reading level of 14, which is one reading level lower than is expected of students entering second grade. During the pre-study interview, Stephanie mentioned several options for problem-solving a difficult word. It is unclear what Stephanie meant by "figuring it out", but her other responses mirrored those of many students: sound it out or ask for help.

Researcher: When you are reading and come to something you don't know, what do you do?

Student: I figure it out. I ask a friend to give me a hint. I sound it out.

Researcher: Do you ever do anything else?

Student: No.

In the post-study interview, Stephanie was able to discuss a variety of strategies, all of which were cueing strategies emphasized during the strategy training.

Researcher: When you are reading and come to something you don't know, what do you do?

Student: I look for chunks. Sometimes I do think about the story.

Researcher: Do you ever do anything else?

Student: Well, I just think about the helping hand that my teacher has on the wall and I use all the strategies. There's check the picture, there's look for chunks, and think about the story.

Stephanie made explicit reference to the "Helping Hand" on the wall, which indicated that she had an alternate plan of action if what she tried initially did not work.

Stephanie's instructional reading level at the end of the 12-week strategy instruction was

Level 24, four levels higher than her pre-study instructional level and on grade-level for a mid-year second grader.

Student Example #3 – Brady (pseudonym)

Brady was a confident child, quite proficient in reading. His instructional level on the DRA assessment prior to the study was Level 44, the highest book level assessed with the DRA. According to K. S. Goodman (1996), Brady intuitively and efficiently used the language cueing systems during reading prior to the study, although he seemed to have no idea they existed.

Pre-Interview:

Researcher: When you are reading and come to something you don't know, what do you do?

Student: I go to the next word

Researcher: Do you ever do anything else?

Student: I don't think so.

In fact, several times throughout his pre-study interview, Brady mentioned asking someone else for help or skipping the word.

Researcher: What if your mom (Brady named her as a good reader that he knows) comes to something she doesn't know. What do you think she would do?

Student: She'd ask for help or pass the word.

Brady did not mention sounding out words during this interview, but during pre-study DRA questioning, when asked what he could do to fix a problem word he stated that he would sound it out. When asked if there was anything else he could try he said, "I'd just stop and go ask a teacher." After the strategy training, Brady's reading level was much

higher. Since there were no higher DRA levels with which to assess his instructional reading level, the Jerry Johns Basic Reading Inventory passages (Johns, 1997) were used to determine an approximate instructional level. Brady read the eighth grade passage with 97% accuracy, which would actually be considered his independent reading. Brady's post-study interview revealed that he was aware of the many different strategies available to him. When asked what he would do if he came to something he didn't know in the text, he immediately listed all of the strategies that had been taught throughout the instructional program. It is known that Brady's reading proficiency allows him to read many texts without difficulty. However, at the conclusion of the study, Brady demonstrated an increased awareness of reading strategies that he could employ should the need arise.

There are many examples much like the ones mentioned above that could be included in the text of this report. Time and time again, at the beginning of the study, students reported they would sound out the word or just ask for help, knowing little else to try. However, students at the conclusion of the study were able to confidently discuss several strategies that could be used at a point of difficulty when reading. It was also noticed that students rarely mentioned asking for help after the strategy training. This indicates that students who received the training were now better equipped to independently handle their own reading situations, without relying on help from others.

Conclusion

Both quantitative and qualitative measures were used to analyze the data from this study. Analysis of covariance revealed that significant differences in word reading and word meaning achievement were found between the group that received cueing strategies instruction and the group that received traditional reading instruction. Students who received the cueing strategies instruction made significant gains on the vocabulary portions of the GRADE test as compared to the control group, while both groups made similar progress on comprehension sections. Qualitative data sources revealed two prevalent themes regarding student strategy awareness: 1) students were primarily aware of one reading strategy prior to the cueing strategy instruction, and 2) students were aware of alternate strategies at the conclusion of the study. These themes were evidenced repeatedly throughout all data sources both when student responses were analyzed collectively and through descriptive accounts of individual students.

CHAPTER V

Summary of Findings, Discussion of Findings, Conclusions, and Recommendations

This study sought to examine the influence of explicit instruction in cueing strategies on student reading performance of second grade students. The study also examined student awareness about cueing strategies both prior to and at the conclusion of the study. Both quantitative and qualitative measures were used to answer the research questions posed in the study. This chapter will include a summary of the findings, a discussion of the findings, conclusions about the results of the study, and implications and recommendations for further research.

Summary of Findings

The findings of this study are summarized as follows:

1. Explicit instruction in cueing strategies significantly increased reading achievement when compared with traditional reading instruction in the areas of word reading, word meaning and vocabulary composite test scores on the Group Reading and Diagnostic Evaluation. Both groups made similar progress in the areas of sentence comprehension, passage comprehension,

comprehension composite scores and total test scores, regardless of the method of instruction.

2. Prior to cueing strategy instruction most students were aware of one reading strategy that could be used to problem solve difficult words. Pre-study data sources revealed that sounding out words was the reading strategy most often mentioned by students.
3. After cueing strategy instruction, students reported alternate strategies for problem solving difficult words. Alternate strategies most often mentioned were looking for chunks, thinking about the story, looking at the picture, and thinking about what would make sense.
4. Individual descriptive accounts of students both prior to and at the conclusion of the strategy instruction confirmed the shifts and increases in strategy awareness reported for all students. With this shift to alternate strategies, students exhibited more independence and confidence in their abilities to problem-solve difficult words.

Discussion of the Findings

Research Question #1

It was understood at the time this study was designed several limitations beyond the researcher's control might negatively affect its findings. First, it was not possible to randomize the groups for this study. In a public school setting, principals, teachers and

parents make recommendations about student placement within classes. Therefore, analysis of covariance was performed to increase precision and reduce error. Second, the sample size used in this study may have affected its power. The control group only had 19 students while the experimental groups contained 20 students.

Students in the control group and experimental group differed significantly from pre-test to post-test on word identification subtests, but not on sentence or passage comprehension subtests. This indicates that the cueing strategies instruction did significantly increase word reading ability but not overall reading achievement on a standardized reading test when compared with students who received traditional reading instruction. It was found that students in both groups made similar progress in overall reading achievement, regardless of the method of instruction.

The average amount of change that students in each group experienced throughout the 12-week study revealed interesting results. Students in the experimental group began the study with an average total score of 69.30 and ended the study with an average total score of 86.00. Those students in the control group began the study with an average score of 74.84 (slightly higher than the experimental group) and ended the study with an average total score of 84.47 (slightly lower than the experimental group). When the mean total test scores (pre- and post-) are entered into a profile plot (See Figure 1), it appears that the experimental group started at a lower point then surpassed the control group by the time the post-test was given. An instructional period longer in duration, perhaps 18 or 20-weeks, could have resulted in a significant difference in the control and experimental groups on post-test total scores. A similar study of transactional strategies

instruction (Brown, et al. 1996) reported gains in standardized reading achievement after one year of strategy training.

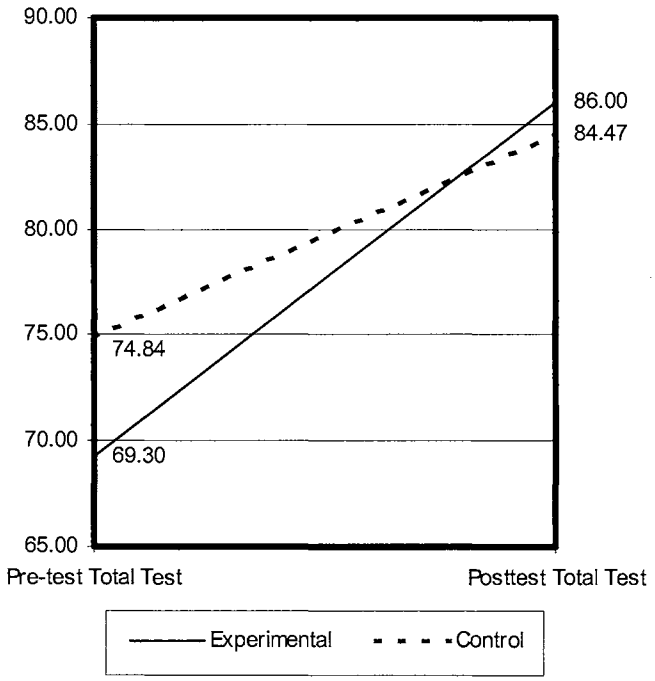

Figure 2. Comparison of pre- and post-total test scores.

Finally, using standardized, group-administered tests of reading performance may not be the most appropriate manner in which to assess reading performance in light of student reading strategy use (Allington, 2002; Mokhtari & Reichard, 2002). These tests do not provide information as to which strategies were employed during test-taking, if any. Although this particular test, GRADE, was chosen for its similarities to natural text reading selections, it is still composed primarily of fill-in-the-blank items on short pieces of text, which are not closely aligned with natural reading processes. However, because reading achievement in today's elementary schools is measured by means of standardized tests, the researcher felt it necessary to use an equivalent testing instrument when measuring the reading performance of both the control group and the experimental group.

Many teachers assess the reading performance of their students using informal, reader-centered assessments that can better guide instruction. Unfortunately, standardized tests, also called "high stakes tests" (Allington & Cunningham, 2002), are the only measures deemed acceptable by school districts, states, and the national government to indicate student achievement.

Research Question #2

Pre- and post-study differences in knowledge and use of reading strategies were apparent. Prior to the study, students who were interviewed relied primarily on attempting to sound out difficult words. Sounding out was mentioned 85 times during pre-study measures. This finding is in agreement with Walker (2000) when she stated that students at this age tend to rely most heavily on graphophonic cues. It is also suspected that parents, caregivers and even peers of young children seem to automatically say "sound it out" as soon as a child pauses at a difficult word. Traditional phonics-based instruction, prevalent for decades, is deeply embedded in those who were taught that the goal of reading is to decode the printed text.

The second most prevalent response given by children during the pre-study interview was to "ask for help". It appeared that, aside from sometimes faulty attempts to decode difficult words, many students simply had no other known strategy to use. Therefore, they appealed for help.

Allington's (1978, 1980) research on teacher verbal feedback indicated that teachers most often simply provide the problem word when the student pauses. Perhaps

teachers and students alike are at a loss when sounding it out does not work. It is also important to note that during actual text reading situations (as evidenced by DRA questioning), the second most recurring response was "I don't know". It was apparent that the majority of this group of students had but one strategy to try, that of accessing the graphophonic system (sounding it out). When that strategy failed, they had little recourse but to seek outside help or simply give up. In addition, student lack of strategy knowledge and feelings of guilt were apparent with responses such as "I just need to pay more attention" and "I'd just have to try harder." Several students made mention of a variety of other strategies, which indicated that some students were attempting to access other cueing systems, but results showed that prior to the study, the semantic and syntactic cueing systems, or the combination of either of these systems with the graphophonic system, were largely ignored.

At the conclusion of the study, student responses to the interview questions and to DRA questioning were quite different. Although statistical tests were not run on this data, one can determine by simply viewing the data that students used a variety of reading strategies in both the interviews and DRA questioning, instead of relying primarily on graphophonic cues as they did prior to the study. In Figure 1 the histogram represents some of the responses given by students both before and after the instructional period. Sounding it out decreased from 85 references to 39 references, less than half than were made prior to cueing strategies instruction. A large increase in "looking for chunks", from 11 references prior to the instruction to 69 references at the completion of the study indicates that students were using more efficient alternatives to sound by sound decoding. Decoding sound by sound, which was prevalent prior to the strategy instruction requires

more short-term memory than breaking words into chunks. As recognizing word chunks requires less effort, there is more capacity in the short-term memory for comprehension (Pressley, 2000). The major difference in post-study interviews is that students seemed to have built a repertoire of alternative strategies, encompassing all the language cueing systems, to use when attempting to figure out an unknown word. Figure 1 also denotes that during pre-study measures students referred to sounding it out, asking for help, along with a few hit or miss strategy attempts. In contrast, the figure shows the wide range of strategies mentioned by students at the completion of the cueing strategies instruction, with the need to ask for outside assistance greatly diminishing. Students mentioned an average of seven strategies during reading interviews at the completion of the study. Students also made reference to "reading strategies" and the "Helping Hand", which were terms explicitly taught by the teacher during the 12-week study. It follows that students not only learned the cueing strategies through explicit instruction and scaffolding experiences, but also could verbalize their knowledge of these strategies. These students evidenced qualities of confident, self-extending readers, readers able to construct meaning by accessing cueing systems on increasingly difficult texts (Clay, 1991).

Individual student accounts of strategy awareness confirmed this shift from having only one option at the point of difficulty to an awareness of alternate strategies. The three students detailed in the results section mirrored many other students who participated in the study. At the beginning of the study, whether struggling readers or proficient readers, there was very little awareness that they could do anything to figure out difficult words other than sounding out the word or getting help from an outside source. Even the highest reader in the class, Brady (pseudonym), believed if sounding out

didn't work, he would have to go and get the teacher to help him. By the end of the strategy training, Brady, along with other students expressed confidence in his ability to independently problem-solve words as he spouted several strategies that could be employed to figure out tricky words. Perhaps the most striking example of the effects of strategy training can be seen by Kevin's (pseudonym) example. Kevin adamantly stated that sounding out was his only option at the beginning of the study and when he was asked how he knew to self-correct during the pre-study DRA, he said that the word just "popped into his head." In contrast, at the conclusion of the strategy training, Kevin was able to laugh about his miscues that did not make sense and employ useful strategies to fix them. He spoke confidently about the strategies he had learned during the training and increased his instructional reading level from 18 to 44, an increase equivalent to two grade levels.

Conclusions

Based upon the findings of this study, the following conclusions were reached and are presented below. These conclusions are limited to subjects with characteristics similar to those in the present sample.

1. In this study, explicit instruction in cueing strategies had significant effects on the reading achievement of the students in the areas of word reading, word meaning, and vocabulary composite scores.
2. Although students who received cueing strategy instruction began the study with slightly lower total scores than those students in the control group, they

finished the study with slightly higher scores than the control group. An instructional period longer in duration or an increase in the amount of instruction given per week could provide even greater increases in reading achievement.

3. Based on the findings of this study, first semester second grade students relied primarily on graphophonic information, specifically sounding out, when difficult words were encountered prior to treatment. If attempts to sound out, or decode, the word were unsuccessful, students generally appealed for help, although an occasional reference to semantic or syntactic cues was reported.
4. After explicit instruction in cueing strategies, students referenced a wide variety of alternate strategies from all three language cueing systems during reading events and responses to interviews. Students no longer relied primarily on sounding out, but were able to generate an average of six different strategies to try when faced with a difficult word. Therefore, cueing strategy instruction increased awareness of strategies in students participating in the study.

Implications for Teaching

This research study examined the effects of explicit cueing strategy instruction on reading achievement and awareness of cueing strategies in first semester second grade students in the general education classroom. Based on the findings and conclusions reported, the following implications for teaching are presented.

As students with cueing strategy training as opposed to traditional reading instruction performed significantly better on word identification portions of a standardized reading achievement test but not on comprehension portions, it is not recommended that cueing strategy instruction replace effective methods of teaching reading. However, students who received the training scored slightly higher on the post-test after having begun the study slightly lower than the control group. Therefore, strategy instruction was beneficial to those students who received it.

This study included 12-weeks of explicit cueing strategy instruction, combined with appropriate scaffolding experiences during guided reading lessons and individual reading events. As evidenced by the change in student awareness of strategies and student ability to verbalize quite a variety of strategies at the conclusion of the study, it is recommended that teachers include these whole group lessons, combined with scaffolding through prompting and discussion, throughout the school year so that students continue to develop self-extending systems. These self-extending systems will allow students to confidently attempt more and more difficult texts.

Although many students will begin to develop this self-extending system through appropriate scaffolding experiences, it was evidenced in this study that the explicit explanation of the cueing strategies and how to apply them influenced students positively. Students used many of the same phrases and terms that had been explicitly taught throughout the study. Explicit explanation of the strategies through whole group lessons should be incorporated into the existing curriculum in addition to scaffolding that occurs during guided reading groups and individual reading events.

Teachers should be cognizant of the tendency of young children to over-rely on graphophonic cues at certain times during reading development. In addition, teachers should monitor their responses to student miscues. Every attempt should be made to lead children in the direction of appropriately using a variety of reading strategies during reading events.

Studies of exemplary teachers reveal that both explicit instruction and scaffolding of student learning are integral parts of an outstanding teacher's daily routine (Pressley et al., 2001; Pressley, 2002). If exemplary teachers are made aware of the three language cueing systems and their influence on proficient reading, incorporating explicit instruction and scaffolding of cueing strategies will occur naturally in their classrooms.

Recommendations for Further Research

Based upon the present study, the following recommendations are made:

1. This study should be replicated on a larger sample that has been randomly assigned. The size of the sample in this study, coupled with the non-randomization of groups, may have seriously affected the power and precision of the study.
2. In order to better investigate knowledge and use of reading strategies both prior to and after cueing strategies instruction, similar studies in which reading interviews and DRA's are performed on both the control group and the experimental group should be conducted.

3. A longitudinal study to evaluate the effects of explicit cueing strategies on reading achievement and knowledge and use of cueing strategies should be conducted. Impressive studies documenting long-term student achievement include the research of Reading Recovery (Lyons et al., 1993) and Success for All (Slavin et al., 1994).
4. As this study found that student awareness of reading strategies is increased by explicit teaching and supportive scaffolding, future studies should be designed to document actual student use of strategies in response to this type of cueing strategies instruction. Analysis of miscues and self-corrections (Clay, 1991) and student think-alouds (Pressley & Afflerbach, 1995) could be used to document actual strategy use.
5. Studies examining the influence of cueing strategy instruction on standardized reading achievement should be longer in duration. The 12-week instructional period employed in this study was long enough to demonstrate growth in strategy awareness and on test of word identification portions of standardized tests of reading achievement, but students may not have been able to apply those strategies in a manner that would demonstrate overall increased reading achievement as evidenced by total test scores. When this type of instruction was delivered to second grade students in a yearlong study conducted by Brown et al. (1996), students receiving the instruction outperformed those who did not on tests of standardized reading achievement. This study and the results of the present study add to knowledge base that strategy instruction is

long-term and should not be attempted in the classroom as a quick fix to reading difficulties (Pressley, 2002).

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Appendix A

Reading Recovery Prompts to Promote Strategic Reading

Fountas, I.C., and Pinnell, G. S. (1996) *Guided reading: Good first teaching for all children.* Portsmouth NH: Heinemann.

To support the reader's use of all sources of information:

- Check the picture.
- Does that make sense?
- Does that look right?
- Does that sound right?
- You said (...). Can we say it that way?
- You said (...). Does that make sense?
- What's wrong with this? (repeat what child said)
- Try that again and think what would make sense.
- Try that again and think what would sound right.
- Do you know a word like that?
- Do you know a word that starts with those letters?
- What could you try?
- Do you know a word that ends with those letters?
- What do you know that might help?
- What can you do to help yourself?

Appendix B

Yetta Goodman's Reading Interview (Revised for age appropriateness)

Goodman, Yetta M., Watson, Dorothy J., and Burke, Carolyn L. 1987.Reading Miscue Inventory: Alternative Procedures. Datonah, NY: Richard C. Owen Publishers, Inc.

Name _____ Age _____ Date _____

Grade in School _____

Sex _____ Interview Setting _____

Teacher's name _____

1. When you are reading and come to something you don't know, what do you do? Do you ever do anything else?

2. Who is a good reader you know?

3. What makes _____ a good reader?

4. Do you think _____ ever comes to something she/he doesn't know?

5. "Yes" When _____ does come to something she/he doesn't know, what do you think she/he does?

   "No" Suppose _____ comes to something she/he doesn't know. What do you think she/he would do?

6. If you know someone was having trouble reading how would you help that person?

7. What would a/your teacher do to help that person?

8. How did you learn to read?

9. What would you like to do better as a reader?

10. Do you think you are a good reader? Why?

Appendix C
Pre-Interview Coding

Student ID Number	Skip or go on	Sound it out	Look for chunks	Figure it out	Ask for help	Beginning Sounds	Think about it	Look at it	Go back and try again	Look at the picture	Use word wall	Tell the word	Give a hint
1	1	3			1								
2		4	2										1
3		7		1	1								
4		4		2			1						
5	1	3	1		1				1				
6		3								4	1		2
7		4	2									1	
8		4		2	1	1		2					
9	2				1							2	1
10		3			1							2	
11					2		1					1	
12					3							2	
13		2			2		2						
14		3			1								
15		3	1	1	1							1	1
16					1		1						
17		3		2	1								
18		3											
19													
20	2	4										1	
Total	6	53	6	8	17	1	5	2	1	4	1	10	5

Student ID Number	I don't know	Sound it out	Beginning sound	Look for chunks	How the word looked	Thinking about story	Saw word elsewhere	Take your time	Pay attention	Meaning	Guess	Many attempts	Word popped in	Use picture	Ask teacher
1		2	1	1	1	1									
2	1	1		2						1		1	1		
3		4				1				1		1			
4		2													
5					1	1	1	1	1						
6	2	2	1											1	
7		2													
8		2	1		2										
9		2													1
10	1	3													
11						1				2	1				
12	2	1													
13		2		1											
14		3		1											1
15	1	1			1										
16							1								
17		2													1
18		2													
19	1	1													
20															
	8	32	3	5	5	4	2	1	1	4	1	2	1	1	3

Student ID Number	Sound it out	Look for chunks	Beginning sound	Look at picture	Use helping hand	Use strategies	Think about story	What makes sense	Think about word	Sentence structure	Ask for help	Tell the word	Look at word	Spelling
1	1	2	1	1	2	1	1							
2	1	5		2			4	1						
3		3		1	5	2	2							
4		2		1			1	1	4	1				
5	2	1	2	2		3	3	1	1	1	1	1	1	
6	4	2		1			1	1				1		
7	3	2	1	1		1	2	1				1		
8	1	2	2	3		1	2	2		1		1		
9	1	2							1					1
10	4	3		1			2							
11	1	3		1		1	1	1		1				
12		1	1	1	3		1	1						
13	3										1	1		
14	2	5	1	3			1							
15		2		1	2	2	1	1						
16	1			1			3					2		
17	1			1							1	1		
18	4	4	1	1	1		2							
19		6	1	2	5	2	2	2		2				
20														
	29	45	10	24	18	13	29	12	6	6	3	8	1	1

Student ID Number	Look for chunks	Use picture	Get mouth ready/Beginning sound	Using letters	What makes sense	Thinking	Sound it out	I don't know	Sentence structure	Look at word	Use a strategy	Spelling
1	1				1		2					
2	2		1		1							
3	1	1				2				1		
4		1			1	1		1		1		
5				1		1			1			
6	2		1			2					1	
7	1					1	2					
8	1											
9	1											1
10	2	1	1									
11	1				1	2	2					
12							2	1				
13	1				1							
14	2	1			1		1					
15								1		1		
16		1	1									
17	1				1		1					
18										1		
19	2	1										
20	1									1		
	19	6	4	1	7	9	10	3	1	5	1	1

Appendix G

Institutional Review Board Approval

Principal Investigator(s):

Callie Fortenberry
15782 E. 112th St. North
Owasso, OK 74055

Dr. Kouider Mokhtari
248 Willard
Stillwater, OK 74078

Reviewed and Processed as: **Expedited (Spec Pop)**

Approval Status Recommended by Reviewer(s): **Approved**

Dear PI :

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

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

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

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 203 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,

Carol Olson, Chair
Institutional Review Board

VITA

Callie Lea Fortenberry 2

Candidate for the Degree of

Doctor of Education

Thesis: THE INFLUENCE OF EXPLICIT CUEING STRATEGIES INSTRUCTION ON THE READING DEVELOPMENT OF SECOND GRADE STUDENTS

Major Field: Curriculum and Instruction

Biographical:

Education: Graduated from Mt. Pleasant High School, Mt. Pleasant, Texas in May 1986; received Bachelor of Science degree in Curriculum and Instruction from Texas A&M University in College Station, Texas in December 1989; received Master of Education in Educational Administration from Texas A&M University in Commerce, Texas, in May 1994. Complete the requirements for the Doctor of Education degree at Oklahoma State University in December, 2002.

Experience: Employed as 6-12 grade English as a Second Language teacher in Garland, Texas from January 1990 to October 1992; employed as first grade English as a Second Language teacher and Reading Recovery teacher in Mt. Pleasant, Texas from August 1993 to December 1995; employed as Title I reading Specialist in Owasso, Oklahoma from August 1998 to June 2002.

Professional Memberships: International Reading Association