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Collaborative, retrospective miscue analysis with second, third, and fourth graders.

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COLLABORATIVE, RETROSPECTIVE MISCUE ANALYSIS WITH SECOND, THIRD, AND FOURTH GRADERS

by

CATHY LYNN WOODRUFF

A DISSERTATION

Submitted to the graduate faculty of The University of Alabama
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ABSTRACT OF DISSERTATION
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This study was an investigation of the interactions that occurred during collaborative retrospective miscue analysis (CRMA) sessions with a multiage group. The purpose of the study was to examine the effectiveness of CRMA as an instructional strategy with young elementary students, as evidenced by the Reading Miscue Inventories (RMIs) done throughout the study, to determine whether there was a change in the quality of miscues, as measured by the analysis of the RMIs over time, as students participated in CRMA; to examine the interactions that occurred among the students during CRMA sessions; and to determine whether children's perceptions of themselves as readers, as measured by the Goodman Reading Interview, changed as a result of participation in CRMA.

The subjects were 8 second, third, and fourth graders who were identified by their teachers and an alternative miscue analysis procedure to be struggling readers at least one grade level below their peers. The sample consisted of 3 second graders (all males), 2 third graders (1 male, 1 female), and 3 fourth grades (1 male, 2 females). The subjects came from classrooms of teachers holding widely varied philosophies regarding reading instruction.

The subjects completed a Goodman Reading Inventory at the beginning and the end of the study, and were audiotaped during the 16 CRMA sessions. The early sessions included instruction in CRMA. Later sessions consisted of student discussions and dialogue, with the researcher acting as a participant observer.

A qualitative data analysis of the interactions that took place during the CRMA sessions revealed that (a) the strategy was an effective instructional tool, as evidenced by the increase in the quality of miscues on the RMIs over time; (b) the students built a sense of community through the caring talk, discussions, and dialogue that occurred during the sessions; and (c) the students revalued themselves as readers through participation in CRMA.

Conclusions drawn from the study were that (a) CRMA can be an effective instructional strategy in the elementary classroom; (b) CRMA is a valuable tool for changing students' perceptions of themselves as readers; and (c) elementary students are able to engage in caring talk, discussions, and dialogue that focus on the reading process during CRMA sessions.

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CHAPTER 1

INTRODUCTION

> A "Copernican revolution" in understanding reading starts with a new respect for language and for children as language learners who have already learned to make sense of oral language in one or more languages before they come to school, and who use their language competence in learning to make sense of the written language.
>
> In the pre-Copernican world of understanding reading, we thought accurate rapid word recognition was the center of the process and somehow comprehension followed. When we understand that reading is about making sense of print–not accurately recognizing words–then we can see the miscues that readers at all ages and proficiencies produce as windows on the reading process. (K. Goodman, 1996, p. 56-57)

Many children learn to read with programs based on a pre-Copernican understanding of the reading process, but many do not. Most basal programs break reading into individual skills and teach these skills sequentially. Smith (1985) contended that "breaking down reading makes learning to read more difficult because it makes nonsense out of what should be sense" (p. 6). Isolated skills instruction often impedes children's reading. It does not allow them to develop their own meaningful transaction with text (Brown, 1996).

When children are taught skills in isolation, many come to think that reading is "knowing all the words" and believe they must sound out words correctly in order to read. These children do not think of reading as making meaning from the text; they view reading as only recognizing words, which limits their development as readers (K. Goodman, 1996).

Students who view reading as only word recognition frequently become struggling readers (K. Goodman, 1996). These students believe reading consists of the skills and drills they have been taught in school. Most believe the failure to read lies within themselves. Their view of reading, then, is inherently negative. Unless they change their point of view, they will not willingly read to gain information or pleasure.

There is a significant correlation between reading instruction and children's understanding of what reading is and what it involves (Freppon, 1991; Weaver, 1994). Reading instruction is guided by the teacher's underlying assumptions about the reading process. For example, if a teacher believes the purpose of reading is merely identifying words, his or her primary instructional approach will focus on word identification. This method of reading instruction emphasizes isolated phonics and the recognition of words as wholes (Weaver, 1994).

On the other hand, a teacher who holds a psycholinguistic philosophy of reading views the reading process as meaning centered. He or she believes that reading is a process of constructing meaning and will use every strategy possible to accomplish it.

The socio-psycholinguistic model is based on the premise that reading is not merely word calling, but rather a socio-psycholinguistic process, because the reader-text transaction occurs within a social and situational context (Weaver, 1994). This research is based on a socio-psycholinguistic model of reading and focuses on struggling readers participating in collaborative retrospective miscue analysis of their own reading within a group setting. Miscue analysis, a term defined by Goodman (1976), focuses on what readers do during the act of reading. Collaborative retrospective miscue analysis (CRMA)

allows a group of readers to examine their reading process, analyze their comprehension, and improve their performance and understanding of their own reading process.

Theoretical Rationale

Reading is an active process in which both the reader and the author are active in constructing and building meaning (Goodman, Watson, & Burke, 1987). The text is the medium through which the reader and author transact. The reader's existing schema influences his or her transaction with text and is also changed as new meanings are constructed and alter what the reader knows (Weaver, 1994).

Reading is viewed as a process in which the reader uses a variety of strategies and cuing systems to make meaning of texts. A successful reader uses them simultaneously. For the purposes of this research, the strategies will be addressed individually. The three cuing systems–graphophonic, syntactic, and semantic–form the basis from which a reader builds strategies.

During the reading process, the reader reacts to the way the print looks. He or she may look at the first few letters of a word or the first few words in the sentence to help make a prediction of what the author is trying to say. The graphophonic cuing system tells the reader what the word or words look or sound like. The syntactic cuing system helps the reader determine how the words sound and whether the words sound right in the sentence. The semantic cuing system helps the reader determine whether the word has meaning within the sentence.

As the reader transacts with print to make meaning, he or she uses these three cuing systems–graphophonic, syntactic, and semantic–to create strategies for making sense of the print. The reader automatically uses the way the words look, sound, and fit in the sentence to confirm there is meaning to the text. Prediction, therefore, is the first of the strategies a reader must develop to read effectively. If the prediction is confirmed, the reader continues. If meaning cannot be constructed, the reader must go back and look for a deeper structural sense to help with constructing meaning. K. Goodman (1996) called this process the *psycholinguistic guessing game*.

Sampling, another reading strategy, is used to help confirm the prediction made about the text. The first few letters of a word, as well as the first few words of a sentence, are used to "try on" the meaning. If the prediction fits the sampling, the meaning is confirmed. If the prediction does not fit, the reader must go back to the text and try once again to gain meaning. These strategies and the way the three cuing systems are used provide an insight into the reader's proficiency when examined carefully through a process called *miscue analysis*.

K. Goodman (1996) began conducting his research on miscue analysis in the 1960s in an effort to understand the reading process. During a dissertation study, Goodman discovered that studying "reading as language" provided insights into the reading process and chose to study real readers reading real texts (K. Goodman, 1996).

K. Goodman (1996) found that children's oral response differed from the expected response in some ways. He found that children brought an incredible amount of knowledge about language to the task of reading an unfamiliar text, that mistakes are part

of the process of making sense of print, and that children use all kinds of cues and strategies at the same time. Goodman termed the unexpected responses to the printed text that were made when reading orally as *miscues*.

To analyze the miscue at several levels and in several aspects, K. Goodman (1996) developed the Goodman Taxonomy of Miscues. Through the taxonomy, he identified the language cuing systems as graphophonic, syntactic, and semantic. The strategies readers were using to produce their personal meaning during their transactions with text were initiating and sampling, predicting, and confirming.

Miscue analysis is the process of evaluating, categorizing, and explaining the miscues, or unexpected responses, that students make when reading orally (Goodman et al., 1987). Careful examination of the reader's control of the cuing systems and reading strategies through miscue analysis is a useful means of monitoring the reader's proficiency level. Miscue analysis is a window on a reader's use of the reading process and reveals strengths as well as plateaus and stumbling blocks the reader might encounter (Goodman, 1981).

Goodman's process analyzes the degree to which miscues change, disrupt, or enhance the meaning of a written text (Goodman et al., 1987). Through miscue analysis, the taxonomy can be used to examine and evaluate each of the reader's consecutive miscues through a series of questions designed to gain the greatest amount of information about the causes of miscues and their influences on readers' comprehension. The questions are concerned with linguistic qualities of each miscue and the strategies the reader uses to make sense of the text in relation to the miscues (Goodman et al., 1987).

The Goodman taxonomy was lengthy and complicated to apply with individual readers in the classroom. It was generally beyond the scope of most classroom teachers. Therefore, Goodman and associate's(1987) research presented several procedures to use as an alternative instructional and research tool. These researchers developed the alternative Reading Miscue Inventory (RMI) procedures based on the work of Goodman and his taxonomy of the reading process. The RMI Procedure 1 included nine questions from the Goodman taxonomy that provided information about readers and language that helped teachers use and understand miscue analysis.

A typical miscue analysis procedure, using RMI Procedure 1, occurs with an individual student. During a RMI Procedure 1, the student is audio-taped while orally reading a selection. Later, the researcher listens to the tape and codes the miscues made on a written transcript of the text. The miscues are transferred to a coding system that categorizes the miscue under six types: (a) syntactic or semantic acceptability, (b) meaning change, (c) corrections, (d) meaning construction, (e) grammatical relationships, and (f) graphic similarity or sound similarity. Once the miscues are coded, the researcher completes a reader profile sheet, giving percentages and strengths of the various miscues. During the taping session, the student also retells the text. The retelling is scored after the text has been marked for miscues. The information on the reader profile gives the teacher-researcher a detailed idea of what strategies and cuing systems the reader is using.

Weaver (1994) reported on work with fourth- and fifth-grade students and teachers, highlighting three different students. The classroom teachers, who used miscue analysis, agreed that constructing meaning was more important than reproducing the text

exactly. They were more concerned with reading strategies than with reading speed or accuracy. The teachers reported that attention was focused on reader's strengths as well as their possible weaknesses. Miscues were considered in context, and a distinction was made between those made appropriately and those that were not. Teachers gained insight into the reader's process and strategies and of how well the reader used context to predict what was coming next. The teachers gained insight into the reader as a person (Weaver, 1994).

With the development of the RMI, miscue analysis became a valuable tool to highlight and build upon a reader's strengths and to gain insight into the reading process (Weaver, 1994). A natural progression occurred when Weaver (1994), Marek (1987), Goodman et al. (1987), and others began to use a variation of miscue analysis called retrospective miscue analysis (RMA).

RMA involves the reader in the analysis process. After a reader tape records an oral selection, the teacher selects miscues for discussion, and the reader and teacher consider the miscues together, either by looking at the miscues marked on a copy of the selection, by listening to the tape, or both. They consider, in retrospect, the reader's miscues and the reading strategies they reflect (Weaver, 1994):

> By looking into their miscues, readers begin to appreciate their own contributions to the reading act. They become aware of their correcting strategies including what prompts the correction, when it is necessary to correct, and when it is inefficient to do so. Readers' own strengths become obvious when they can make appropriate substitutions based on text information combined with their own knowledge. (Goodman & Marek, 1996, p. 160)

Collaborative, retrospective miscue analysis (CRMA) evolved from the early student and teacher RMA. Costello (1992), Marek (1987), and Worsnop (1980) extended

RMA from a one-on-one situation to a small group of high school students or adults. All three researchers worked individually with small groups of students or adults in a collaborative setting. The structure chosen for research purposes used one student who recorded the reading of a text, followed by group discussion of miscues selected by either the teacher or the reader. Members of the collaborative groups took turns recording themselves and participated in the discussions of miscues. The collaborative nature of the various groups led to each individual's ability to reflect and revise personal thought processes about reading, which is a critical skill for readers to develop in order to assess their reading strategies and to determine the real purpose of reading.

Using CRMA in reading research, Marek (1987) found that adult readers improved their reading performance significantly. Costello (1992) and Worsnop (1980) found that the information CRMA provided gave middle and high school students valuable insights into their own reading processes. In *Retrospective Miscue Analysis: Revaluing Readers and Reading*, Goodman and Marek (1996) cited the findings of Costello (1992) that, when CRMA sessions were embedded into a classroom structure where discussion of the reading process was part of the ongoing language arts curriculum, the proficiency of readers increased dramatically. Costello believed that the instructional value of CRMA in elementary schools had been largely untapped. Therefore, the purpose of the present study was to extend the research scope to include elementary students, to determine the effectiveness of CRMA as an instructional strategy with young students, and to examine the interactions among elementary students as they participated in CRMA.

Statement of the Problem

When elementary school students are asked "what makes a reader a good reader?" their answers most often focus on individual word calling. Educators frequently hear phrases such as "good readers get all the words right." If asked what good readers do when they come to an unfamiliar word, an elementary student will frequently answer, "they sound it out." These answers are common descriptors of what elementary students think are good reading behaviors (Brown, 1996). The works of the Goodmans and others revealed that good reading has, in actuality, little to do with individual words. Instead, good reading has to do with the interaction between text and the reader's thought processes (Goodman, 1973). Through the body of research conducted on miscue analysis, educators are able to analyze an individual reader's strengths and assess the strategies the reader brings to the process of constructing meaning of print. Classroom teachers across the United States use miscue analysis as an assessment instrument of the reading process.

As teachers began to realize the value of miscue analysis as an assessment tool and started using it to design reading strategy lessons to help readers improve, researchers began to explore miscue analysis as an instructional tool, both with individual readers and with small groups. Several researchers, Marek (1987) and Worsnop (1980) among them, had already worked successfully using CRMA with adults and high school students, but Brown (1996), in a 1993 study, worked with fifth graders. While examining fifth graders' level of knowledge about language learning and thinking processes, Brown found that the students had very sophisticated levels of knowledge about language learning and thinking processes.

Three years later, Brown (1996) conducted research with four fourth-grade students–two struggling readers and two fluent readers. In CRMA sessions during the school day, these readers participated in discussions about their taped miscues made on previously recorded readings. The two efficient readers acted as more knowledgeable peers, guiding the struggling readers toward new insights into their reading process.

Although Brown (1996) investigated fifth graders' knowledge of language learning and thinking, her work with fourth graders focused on using CRMA; therefore, little attention has been given to the ability of young elementary students to understand their own reading process and to intentionally shift their focus away from individual word production toward constructing meaning. Little is known about the effects of CRMA as an instructional tool with young elementary students and how CRMA would affect young elementary students' ability to understand their reading process and shift their focus from word production toward constructing meaning, nor have the interactions within a CRMA group of young elementary students been studied.

Significance of the Study

The significance of this study was its contribution to the body of knowledge concerning the interaction of lower and middle elementary students as they participated in CRMA. This study examined CRMA as an instructional strategy for struggling readers aged 7 through 10. The use of CRMA as an instructional strategy allowed students to revalue themselves as readers at an age young enough to affect a large part of their school experience. This study examined the interactions that took place in a collaborative setting

among multiaged, struggling readers as they worked to take control of their own reading process. The examination of the interactions among the students provided additional insight into the structure of small group CRMA sessions within multiage settings.

This study was guided by the following research questions:

1. To what extent is CRMA effective as an instructional strategy, as evidenced by the RMIs done throughout the study?

2. How does the quality of miscues change, as measured by the analysis of the RMIs administered to the students over time, as students participate in CRMA?

3. What types of interactions occur among the students and between the students and teacher-researcher during CRMA sessions?

4. How do students' perceptions of themselves as readers, as measured by the Burke Reading Interview, change as a result of participation in CRMA?

Definitions of Terms

The following terms are defined as used for the purpose of this study.

Miscue refers to the reader's unexpected response to a text. Y. M. Goodman (1996) coined the term to refer to any mistake or error that a reader makes when reading text aloud. The deviation might be a substitution, such as *home* for *house*; an omission such as leaving out a word or words that appear in the text; a repetition of words in the text; or any other deviation that the reader makes when reading a text.

Miscue analysis refers to the procedure developed by K. Goodman (1996) that examines a reader's miscues through the use of a taxonomy of linguistically based

questions. Such things as the graphophonic, syntactic, and semantic acceptability of the reader's miscues are analyzed. Through miscue analysis, the reader's strengths and weaknesses in processing text become apparent.

Reading miscue inventory (RMI) refers to the procedure developed by Goodman et al. (1987) to simplify the miscue analysis process. It enables teachers to evaluate the reading strategies of their students using coding sheets and retellings.

RMI Procedure1 refers to the most detailed miscue analysis procedure that was developed by Goodman et al. (1987). RMI Procedure 1 gives the user the most detailed information about the student's reading strategies. A reading profile sheet is completed for the reader to document for the user what strategies the reader is using.

Reader profile refers to the summary of the data collected during the RMI Procedure 1 process. It is the final step in the RMI Procedure 1 process, and it documents for the user the strengths and weaknesses in the reader's strategies when processing text.

Retrospective miscue analysis (RMA) refers to the process a reader and a teacher or researcher use as they examine the reader's individual miscues relative to the whole section. Together, they discuss and analyze various tape-recorded miscues that occurred while the student read a selection of text as a means of building on the strengths the reader brings to the process. Both teacher and student use copies of the text to mark miscues to examine. Either can be initiators in the process, depending on the teacher's focus.

Collaborative retrospective miscue analysis (CRMA) refers to the process used when a group of peers come together to listen to and discuss the miscues of one of the

group members. Accompanying, on-going instruction is aimed at grounding this discussion in knowledge about language cuing systems and reading strategies (Brown, 1996). The goal is for the students to revalue their own reading strategies and abilities through collaborative discussion.

Revalue refers to the positive changes in perspective and self-esteem that occur when a student realizes that he or she can succeed as a reader.

Struggling reader, for the purposes of this study, refers to a reader whose miscues interfere with comprehension of the text he or she is expected to read at grade level, as identified by the student's teacher and confirmed by an RMI procedure administered by the teacher-researcher.

Assumptions of the Study

The major assumptions of this study were as follows:

1. The silent reading strategies of the participants are reflected in their oral reading behaviors.

2. All of the participants had a sincere desire to assist their troubled peers and to improve their own performances as they interacted in the CRMA sessions.

3. The participant readers were honest about their perceptions of the reading process and themselves.

Limitations of the Study

The personalities and attitudes of the participants also are limitations to the study. Each individual brought personal likes or dislikes and perceptions to the sessions. Because sessions were held directly after school, events of the day sometimes influenced the willingness of the participants to interact in a given session.

Summary

CRMA is a procedure that has been developed on the basis of the work of K. Goodman (1996), Goodman et al. (1987), and many other teacher-researchers. Its theoretical basis lies in the work of Goodman and the socio-linguistic research in reading process. CRMA has proven to be successful with adults, high school, and middle school children. However, little research has been done at the elementary level to determine its effectiveness with younger students.

Organization of the Study

Chapter 1 presented the rationale and need for the study. Chapter 2 provides a review of the literature regarding the reading process, miscue analysis, metacognition, and collaborative learning theory. Chapter 3 discusses the research design. A discussion of the results follows in Chapter 4. Chapter 5 provides a summary and discussion of the findings, as well as implications for future research.

CHAPTER 2

LITERATURE REVIEW

Four areas of study form the theoretical basis for this research. The reading process is at the heart of the study; miscue analysis was the instrument used to study the reading process. As the students worked and discussed their own reading process, it became apparent that their metacognition, or personal knowledge, of their own process affected their views on the process, as well as the process itself. The study was purposely collaborative; hence, the review of literature focuses on collaboration in the classroom. This literature review is divided into four categories: reading process, miscue analysis, metacognition, and collaborative learning theory.

Reading Process

Elementary students have been making reading errors, and school administrators, teachers, and parents have been concerned with eradicating these errors for decades. In our society, reading facility is the most significant single accomplishment on which all other accomplishments are based (Wilde, 1996).

K. Goodman (1996) regarded reading as one of the two receptive languages. When children read, they use language to construct meaning. Readers construct meaning while trying to comprehend; therefore, reading is a constructive process. Language is the means by which communication among people is brought about, whether written or oral.

It is always, therefore, in close relationship to meaning. When language becomes divorced from meaning, it is no longer language. If that intriguing system is fragmented into sounds or letters or patterned pieces, it quickly loses its power even to intrigue and instead becomes a collection of abstractions (Goodman, 1976).

Regarding language as the means and meaning as the end in language use helps to explain why language is learned easily; why young children are able to treat language as if it were part of the concrete world; and why meaningful language is easier to learn, to remember, and to manipulate. This concept also helps to explain why instructional reading programs that begin with bits and pieces abstracted from language, like words or letters, make learning to read much harder. The sequencing that was thought to make the learning simpler turned language into something that was not language anymore. Children taught to read in that manner looked upon reading not as concrete learning, but as an abstraction (Goodman, 1976).

Literacy must be learned in the same process as other learning takes place. Cambourne (1988) followed the language development of a group of infants for 3 years. At the end of the 3 years of study, the author defined seven essential conditions of learning: immersion, demonstration, engagement, expectations, responsibility, approximations, and employment are essential for learning to take place whether it is the infant learning to talk or the student learning to read. Cambourne's (1995) later research concluded that children must engage in language and literacy to become successful in literacy acquisition.

When the conditions are translated into classroom practice, the following processes can be observed: transformation, discussion and reflection, application, and evaluation. Transformation enables learners to "own," or be responsible for their learning. Discussion and reflection allow the learner to explore, transact, and clarify meaning. Application is inherent in the conditions of employment. Students must be allowed to apply new knowledge (Cambourne, 1995).

Cambourne (1988) stated that the child is likely to learn how to read from a natural incentive to communicate, just as the child learns to speak in its normal environment and at its own pace, with no other incentive than its own natural urge to communicate. Goodman (1973), Mason (1993), and Smith (1978) also wrote of the naturalness that is essential in learning to read. These authors stated that a child must act like a reader, and a learner needs an environment where reading is a normal daily activity long before he or she is able to read fluently.

Reading is the process that makes sense of written language. The reader's act is creative, too; meaning is created in response to the text (Goodman & Marek, 1996). Texts exist in the context of culture, personal experience, and situation. They are syntactically structured, semantically cohesive, and coherent (Goodman & Marek, 1996).

Effective and efficient readers are those who get to meaning by using the least amount of perceptual input necessary. Readers' language competence enables them to create a grammatical and semantic prediction in which they need only sample from the print to reach meaning. They already have the language competence in place to do that. Psycholinguists have demonstrated for years that readers cannot possibly be reading

language a letter or a word at a time, because the time it takes to do that far exceeds the time the reader actually devotes to the given sequence.

Reading is cued by language and personal experience; it is not simply random uncontrolled behavior (Goodman et al., 1987). Reading is a process in which thought and language transact in a social context as the reader builds meaning. The reader predicts and infers where the meaning is going, what sentence patterns are coming, what words and phrases are expected, and what the text will look like. Meaning, then, is not only in the text or in the learner, but also in the transaction of the learner with the text (Botel, Ripley, & Barnes, 1993; Rosenblatt, 1985). Readers are effective if they make sense of print (K. Goodman, 1996).

Every act of reading, writing, and talking is an interpretive experience based, in part, upon the learner's prior knowledge and belief systems. Reading, writing, and talking are best regarded as interactive, reciprocal, and constructive processes (Botel et al., 1993). Comprehension during the reading process involves the interaction of the reader, the text, and the contextual situation. Reading performance is increased as comprehension becomes an active part of the reading process (McLain, 1991). An interactive model of reading is one in which sensory, syntactic, semantic, and pragmatic information is used. These sources provide information simultaneously, rather than serially. According to Garner (1988), Rumelhart's definition of reading as the simultaneous joint application of multiple knowledge sources is a good articulation of the interactive model of reading.

K. Goodman (1996) described this simultaneous application of multiple knowledge sources as a cyclical process. The visual-perceptual part of the cycle is that

part of the cycle in which the reader uses his or her sensory perceptions and organs to bring meaning to the transaction with the text. The reader also uses the visual information received and the information received from his or her peripheral field.

The reader uses the distinctive features of the print he or she expects to see as well. The student's knowledge of language and the visual shape of letters help the student to predict what forms the print will take and to adjust his or her expectations before seeing the print (K. Goodman, 1996).

A reader instantly turns the visual input received into perceptual images. The reader gives perceptual values to the visual input received; similar lines and curves become different letters, and letters are formed in the reader's perception differently than the font on the page, depending on the experiences the reader takes to the transaction with the text (K. Goodman, 1996).

Not only do readers use the visual input they receive, they also use the way that the letters sound to predict and transact with print. These two systems, visual and auditory, make up the graphophonic cueing system or cycle of reading (K. Goodman, 1996).

In the syntactic cycle of reading, a reader uses the perceptual images received to create language. The reader assigns sentence patterns to create meaning. Although the reader must deal with the wording of the text, K. Goodman (1996) emphasized that the reader must deal with the text as language, sentences, and paragraphs: "The view of reading as word recognition is not acceptable: It can't explain that the meaning of a text is far more than the sum of the meanings of the words" (p. 98).

From the surface structure, the reader assigns a deep structure that enables the individual to construct meaning from the way the sentences or clauses relate to each other (K. Goodman, 1996). A reader generates new surface structure from the predictions made from the deep structure. If the patterns and wording cause no problems in constructing meaning, there is no reason for the reader to reprocess or regress. If there are problems, the reader should try alternative strategies or regress to gain more input.

The last segment of the cycle is the semantic process. In this segment of the cycle, the reader shifts from processing language to processing meaning. The reader builds meaning for the text as he or she moves from visual-perceptual to syntactic structure and wording (K. Goodman, 1996). During this phase of the cycle, the reader moves forward in the text. When the reader cannot make sense of the text, he or she must rethink, regress, or suspend the transaction.

A reader must apply several cognitive strategies to construct meaning from print: (a) *initiation or task recognition*–the overt decision to initiate reading, sometimes inspired by the recognition that something in the visual environment is readable; (b) *sampling and selection*–the efficient selection of information to process during reading, based upon "everything the reader knows relevant to language, to reading and to the particular task" (K. Goodman, 1996, p. 104); (c) *prediction*–the ability to anticipate what language may be coming; (d) *inference*–the strategy of using what is known to guess the unknown; (e) *confirming and disconfirming*–the self-monitoring strategy used to decide whether predictions and inferences have been validated; (f) *correction*–the ability to reconstruct

text when predictions and inferences have been disconfirmed; and (g) *termination*–the deliberate decision to discontinue reading.

As a student comes to realize the text is making sense, an accommodation takes shape in which graphophonic, syntactic, and semantic cues are used selectively to the extent that they are useful (Goodman & Marek, 1996). Greene and Ackerman (1995) stated that using context is a critical strategy that proficient readers use in building representations of a text. Readers use cues from a given text, prior knowledge and experience, and knowledge of discourse conventions to infer and discard hypotheses, make predictions, and question assumptions.

The work of the Goodmans has been influenced by a socio-psycholinguistic transactional view of the reading process (Goodman & Marek, 1996). Each reader brings to the reading process a wealth of knowledge about language and about the world. The reader's knowledge about the world and expectations about people and events have been shaped by the social and cultural contexts in which he or she has lived. Each reader has misconceptions about the reading process; has been and continues to be influenced by the instructional models he or she has experienced in school; and has the potential for understanding the complexity of the reading process, the qualitative nature of making miscues, and the importance of reading for meaning. Each reader has the ability to become a more proficient reader (Goodman & Marek, 1996). The key to helping struggling readers is to help them revalue themselves as language users and learners and to revalue the reading process as a transactive, constructive language process (Goodman & Marek, 1996).

Miscue Analysis

Miscue researchers view reading as a very special manifestation of the language process. Thought and language comprise two distinct but definitely interrelated processes, and each of these processes can be modeled or represented by a structural design. Any specific piece of overt behavior must fit into these designs or become the cause for adjustments to the models (Wilde, 1996).

Reading, even for the most proficient reader, is not an exact process. The operations of the thought process, as well as those of the language process, insure the occurrence of some variation. Proficient readers sample and predict from the printed page (Wilde, 1996).

Students' revaluing themselves as readers is an important part of the process of CRMA. Gottfried (1983) stated that, "when children attribute the cause of their behavior to their own efforts, competence, or self-selection of goals, intrinsic motivation is likely to be enhanced" (p. 65). Uhlemann and Plater (1990) acknowledged that positive self-statements and images, internally, have positive effects on stored knowledge of self and influence subsequent positive behaviors. K. Goodman (1996) stated that readers' beliefs about themselves as readers often influence their literacy development.

The insights into the reading process gleaned from miscue are as follows: (a) The purpose of reading is constructing meaning; (b) in the process of constructing meaning, all readers make miscues; (c) there is only one reading process in which three types of information (graphophonic, syntactic, and semantic) are related within an integrated way; (d) this integration is achieved through the process of sampling, inferring, predicting,

confirming, and self-correcting; and (e) highly proficient, average, and nonproficient readers all use the same processes. The differences in their success at constructing meaning from print are a consequence of how the reader controls the semantic and, to a lesser extent, the syntactic information. There are few differences in the degrees of control that children at different levels of reading proficiency display over the grapho-phonic information (Goodman & Marek, 1996).

The Goodman taxonomy-correction is that category in the Goodman taxonomy of miscues which is used to determine what a reader does with a miscue in oral reading. When readers self-correct, they are indicating they recognize a miscue has been made and they possess the necessary competencies and strategies to correct the miscue.

Correction attempts by a reader indicate that reading is a process of scanning and guessing. As the reader processes the material, he or she is required to anticipate what will come next. Correction is a natural part of the reading process and is indicative of the reader's strengths. Corrections indicate that the reader is getting meaning from print. When the reading attempt fails to produce meaning, the reader goes back, or regresses, and corrects for meaning.

Readers' reflections on their own reading process is what Goodman called retrospective miscue analysis (RMA, Y. M. Goodman, 1996). RMA involves readers' listening to, thinking about, and discussing the miscues they made during a previous oral reading (Goodman & Marek, 1996). RMA occurs when an RMI is taken. The student reads a selection, then retells the selection without help from anyone. Either the teacher or the student may select miscues to discuss. Over several sessions, the teacher and student

examine miscues and reading strategies, giving the student a greater awareness of the reading process and his or her own reading strategies (Y. M. Goodman, 1996). RMA helps readers become overtly and consciously aware of their own use of reading strategies, thereby valuing their knowledge of the linguistic systems they control as they transact with written texts (Goodman & Marek, 1996).

Costello (1992) first used the term collaborative retrospective miscue analysis (CRMA) to refer to the practice of letting students work in small groups, listening to a student's audiotaped reading and retelling, then discussing it in a small group. After students are experienced with the procedures, the teacher is involved only for a few minutes at the end of a session to answer questions or raise issues that push students to consider other aspects of their reading that they may have missed. If the teacher is not continuously part of the CRMA group, he or she often presents strategy lessons to the whole class during which the students discuss the nature of the reading process (Goodman et al., 1987).

Students who engage in CRMA become articulate about the reading process and their abilities as readers. To feel comfortable to make mistakes, ask "silly questions," and experiment in ways that are not always considered conventional, readers must feel supported in the CRMA session. Confident readers who develop a curiosity about how reading works and are willing to take risks in employing "keep going" strategies are most likely to become fluent readers. They are willing to risk struggling with a text at times because they are confident that eventually their meaning construction will be successful (Y. M. Goodman, 1996).

CRMA provides an environment for students to become capable of talking and thinking about the reading process. When students are made to feel that what they have to say about their reading and the reading of others is taken seriously, the language that is necessary to discuss the issues emerges (Goodman & Marek, 1996). CRMA lets readers get to know themselves as readers, to observe and evaluate their transactions with texts, to talk about their views with others, and to revalue their strengths as learners and language users (Goodman & Marek, 1996).

Collaborative Learning

Botel and Lytle (1990) approached the question of learning in terms of four theory-based perspectives, they called *lenses*. The four lenses for learning assume that learning is meaning-centered, social, language-based, and human or personal (Botel et al., 1993). Learning takes place in social contexts. A community of learners is appropriate because we know that purposeful talk about experience through interaction, speculative talk, collaboration, problem solving, and sharing are facilitative of language and learning in our lives (Botel et al., 1993). Learners who feel worthy, interested, successful, and in control of their lives are more likely to be effective in constructing meaning, respecting the ideas of others, and using language.

Brown and Palincsar (1988) proposed that cooperative learning arrangements can aid comprehension through their extension of the locus of metacognitive activity by providing triggers for cognitive dissatisfaction outside the individual. A cooperative learning model follows the following process:

1. Conditions are created to encourage cooperation;

2. Increased cooperation results in greater discussion of essential task content among group members;

3. These discussions provide group members with knowledge and skills they might not acquire independently; and

4. The knowledge and skills acquired from cooperative interactions should then be demonstrated independently (Meloth & Deering, 1992).

Consistent associations between talk and learning have been identified. Webb (1989) found that students who provide elaboration and explanations of problem-solving learn more than students who provide correct answers or request assistance from group mates.

"In everyday life, talk is the primary medium for learning, and for that reason, talk is an essential part of learning community life" (Peterson, 1992, p. 47). Peterson argued that community, itself, is more important to learning than method or technique. The author stated that the strength of a learning community is the members' ability to accept one another as they are and to help one another make changes they value. When children collaborate, they expand their choices and opportunities for action. The teacher's role is to stir the ideas and feelings that support students in perceiving, making connections, and taking the initiative. A teacher must foster a dialogue among students that has a focus and that participants join for the purpose of understanding, disclosing, and constructing meaning (Peterson, 1992).

Metacognition and Language

Thinking is a process of evoking a symbol into active memory and relating it to another symbol. Beyond this, it has to do with retrieving information from memory, generating plans, and reviewing and monitoring one's own processes. The ability to think is a complex process that goes beyond the simple recording of information. It builds knowledge structures, interprets incoming information, and relates it to other knowledge (Harrison, 1992).

Metacognition refers to one's ability to understand and control the cognitive processes. It involves thinking about thinking and making necessary changes in how we think during cognitive processing (Brown, 1980). Marzano and Costa (1988) described metacognition as "being aware of our thinking as we perform specific tasks and then using this awareness to control what we are doing" (p. 9).

Swanson (1990) has shown that high levels of metacognition compensate for weaknesses in other domains of processing. The author found that children with relatively high metacognitive skills can compensate for the limitation of academic ability during problem solving by accessing a certain "knowledge" about cognition. Highly metacognitive students were more likely than low metacognitive subjects to monitor right and wrong answers correctly. These differences occurred despite the matching of subjects on relevant cognitive factors, suggesting that metacognition is a construct that may compensate for general cognition:

> An individual's cognitive goals, metacognitive knowledge, metacognitive experiences, and cognitive actions may influence their efficiency and effectiveness during communicative endeavors. These four cognitive components interact with

> each other and influence how individuals monitor their communications. (Flavell, 1981, p.39)

Flavell (1981) further stated that cognitive goals refer to "tacit or explicit objectives that instigate or maintain the cognitive enterprise" of writing or reading (p. 40). During writing or reading tasks, children's goals direct their use of stored knowledge (meta-cognitive knowledge), initiate thoughts and feelings (metacognitive experiences), and activate the actions they implement (cognitive actions) to complete the tasks. The cognitive goals children have as they engage in writing or reading tasks influence how they monitor their communications (Pawtowski & Haugh,1996):

> Metacognitive knowledge refers to children's awareness and use of accumulated world knowledge of: 1) one's self as a written communicator (person variables); 2) the purpose of the written communication tasks and related information (task variables); and 3) strategies needed to communicate effectively during writing or reading (strategy variables). (p. 78)

Metacognitive experiences are conscious experiences (ideas, thoughts, feelings, or sensations) that may occur during writing or reading (Flavell, 1981). Thoughts, ideas, feelings, or sensations occurring during writing or reading endeavors may influence how individuals monitor their communications.

Cognitive actions are the actual actions children implement as they read or write. Reading and writing can be positively or negatively influenced by the individual's actions (Berieter, 1980; Brown, 1980).

Children's stored knowledge about reading and writing in these categories influences how they monitor these communicative endeavors (Flavell, 1981; Henk & Melnick, 1995; Smith, 1978). In fact, Flavell (1981) indicated that schools should set about

fostering metacognitive experiences during communicative events that produce specific thoughts, ideas, feelings, and sensations. This mirrored Dewey (1938), who wrote,

> A primary responsibility of educators is that they not only be aware the general principle of the shaping of actual experience by environing conditions, but that they also recognize in the concrete what surroundings are conducive to having experiences that lead to growth. Above all, they should know how to utilize the surroundings, physical and social, that exist so as to extract from them all that they have to contribute to building experiences that are worthwhile. (p. 40)

This means encouraging children to notice any conscious thoughts, ideas, feelings, or sensations that provide feedback about the task. For example, metacognitive experiences can be activated by simply encouraging children to ask themselves, "Does this make sense?" as they write or read. This self-imposed metacognitive experience focuses children's awareness on whether or not what they just wrote or read makes sense (Pawtowski & Haugh, 1996). Encouraging children to ask themselves if what they read makes sense creates a metacognitive experience that may prompt them to reread (cognitive actions) and clarify their goals for reading (cognitive goals), perhaps leading to an increase in their accumulated knowledge of strategies for reading (metacognitive knowledge, Pawtowski & Haugh, 1996).

Self-questioning is an aid to metacognition. Questions are important to promote thinking, productive learning, and content retention (Williamson, 1996). Effective questions seek the course for problem solving, stir the thought process, and stimulate the imagination (Vacca & Vacca, 1993). Effective questioning actively engages students in the meaning-making process (Williamson, 1996): "Self-questioning then is a meta-cognitive process of reading which enables students to become independent in their understanding of text, because they are actively engaged through goal-directed, organized

thinking" (p. 41). Knowing how to use metacognitive strategies, such as self-questioning, leads to strategic skilled reading (Paris, 1987).

Teachers can greatly influence the development of greater metacognitive knowledge because it is formed by internalizing attitudes, values, and norms of one's peer, parents, teachers, and all others in society (Henk & Melnick, 1995). Teachers who provide positive feedback, using specific words and phrases that describe how children are using their minds during this communicative activity, encourage children to reflect on their own processes (Flavell, 1981). Creating permanent metacognitive knowledge through such concrete metacognitive experiences will influence future exp eriences and actions (Flavell, 1981). Metacognitive reflection should be a part of a student's reading program (Flavell, 1981).

All readers, no matter how young, have metacognitive knowledge about reading. Metacognitive knowledge includes any understanding of, or beliefs about, reading and readers (Whitehead, Anderson, & Mitchell, 1987). Metacognition about reading includes accurate beliefs or naïve representations of the reading world. Children use their metacognitive representations, both accurate and naïve, to understand and regulate their reading behavior and interpret the larger reading world around them. Metacognition about reading influences our thinking about ourselves as readers and about other readers (O'Sullivan & Joy, 1994).

Little is known, however, about children's understanding of reading problems, in particular their beliefs about what causes reading problems and how those problems can be overcome (O'Sullivan & Joy, 1994). This is an important aspect of metacognitive

development for a number of reasons. Children's beliefs about the causes and remediation of reading problems influence their interpretation of their reading problems and their motivation to overcome those problems (Whitehead et al., 1987).

Their metacognition about reading problems is important also because it influences their interpretation of other children's reading. Children construct their beliefs about reading problems from their own reading experiences and from the public reading experiences of others, especially school-based experiences. Understanding how those experiences influence children's developing beliefs is essential for building comprehensive models of metacognition and reading (O'Sullivan & Joy, 1994).

Young readers have a naïve belief that all reading problems can be overcome with extra effort (O'Sullivan, 1993). In their 1994 study, O'Sullivan and Joy found that children described all problems as stemming from lack of effort, even for children who were described as hard workers. Increasing effort was the strategy recommended most often by young children to improve reading ability. Overall, subjects' understanding of what causes reading problems seemed more sophisticated than their knowledge about how to overcome them (O'Sullivan & Joy, 1994).

Current theories suggest that self-perceived competence and task value are major determinants of motivation and task engagement (Gambrell, Palmer, Codling, & Mazzoni, 1996). Metacognition contributes to a child's self-perceived competence. As the child becomes aware of his or her reading process, the task value increases, thus enhancing motivation and task engagement.

McClain (1991) described metacognition as awareness that refers to knowledge of specific cognitive strategies, as well as knowledge of how and when to use them. Control refers, in part, to the capability of monitoring and directing the success of the task at hand, such as recognizing that comprehension has failed, using fix-up strategies, and checking an obtained answer against an estimation. Additionally, a large part of controlling strategy use relates to learners' perseverance in self-motivation, decison-making as to the importance of the task, time-management, and attribution of success or failure.

The greater an individual's awareness of the thinking processes and the sense of control of these processes, the better he or she is able to understand the text. When readers are aware of their thinking as they read and use that awareness to regulate what they are doing, they are using metacognition. Metacognition in reading is more than just understanding the content; it encompasses understanding that one has understood the content (McLain, 1991).

McLain (1991) went on the state that metacognitive strategies include predicting, self-monitoring, self-questioning, and study skills. Such strategies are essential to reading comprehension. Monitoring one's state of reading comprehension and using fix-up strategies when necessary are essential to efficient reading (McLain, 1991).

CHAPTER 3

METHODOLOGY

This chapter describes the qualitative descriptive study research design conducted with a group of 8 second, third, and fourth grade students in a mid-sized city in the south-eastern United States. The descriptive study focused on the effectiveness of CRMA as an instructional strategy; interactions within the group, itself, as the 8 students worked together during the CRMA sessions; and on the shifts in strategies and perceptions resulting from the CRMA sessions.

Several steps had to be taken prior to conducting this study. Because the study dealt with young children, it was necessary, first, to obtain permission to carry out the study from the University of Alabama at Birmingham's Institutional Review Board for Human Use (See Appendix A). Next, the researcher requested and received permission from the principal of the school to conduct the study on the school's premises (see Appendix B). Finally, parental signatures were obtained on informed consent forms to give the researcher permission to include their children in the study (see Appendix C).

The following four research questions were addressed in this study:

1. To what extent is CRMA effective as an instructional strategy, as evidenced by the RMIs done throughout the study?

2. How does the quality of miscues change, as measured by the analysis of the RMIs administered to the students over time, as students participate in CRMA?

3. What types of interactions occur among the students and between the students and teacher-researcher during CRMA sessions?

4. How do students' perceptions of themselves as readers, as measured by the Burke Reading Interview, change as a result of participation in CRMA?

The descriptive study was planned with specific elements incorporated to build trustworthiness in the study. Lincoln and Guba (1985) identified the following four criteria that every qualitative study must meet to build trustworthiness: The researcher must plan the study to arrange for credibility, transferability, dependability, and confirmability. Each of the four criteria was incorporated in the design of this descriptive study.

External validity is usually associated with a quantitative study. Qualitative researchers deal, instead, with transferability. The nature of the qualitative study lends itself to using thick description and purposive sampling to provide the reader with enough detail to determine whether the findings are transferable to another own situation or to similar situations in general (Lincoln & Guba, 1985). To establish transferability, the following sections of this chapter describe the setting, subjects in the study, and the study design: the school, the description of the population, and the design.

Setting

This study was conducted in an elementary school in a mid-sized southern city. The research site was a 12-year-old elementary school with a student body of 485 students; one of 12 elementary schools in the city school system. The diverse population of the school was made up as follows: 5% were children of Japanese parents with work

visas in the United States who did not speak English; the remaining 95% came from socioeconomic backgrounds that ranged from poor to economically advantaged and represented a wide range of ability levels. The majority of the student population (80%) came from the surrounding neighborhood. The remaining 20% of the student population was bused in from other areas as a result of court-ordered busing.

The school received strong parental support and involvement in the children's education. Many parents volunteered to tutor in a tutoring program or found other ways to interact within the school. The PTA was an active organization within the school, and the parents stayed informed of their children's academic progress, working closely with teachers to ensure that their children received a quality education.

The school consisted of 25 self-contained classrooms and employed a full-time librarian in the media center, which was available to students throughout the day in addition to one scheduled class per week. The students had physical education each school day and music twice a week. In addition, learning disability, emotionally conflicted, and speech services were available at the school. A full-time staff counselor was available to students or parents.

The teaching styles at the school ranged from traditional to more holistic. Many teachers had a narrowly traditional approach to teaching children to read, believing that a reader must reproduce the text exactly to be a good reader. Others approached the reading process with a broader view, valuing what the children could do and encouraging them to build upon and strengthen their use of other reading strategies besides simply sounding out text.

Description of the Population

The participants in the study were chosen through purposive sampling. Purposive sampling allowed the researcher to include subjects on the belief that they could assist in the expansion of developing theory (Bogdan & Biklen, 1992). After gaining permission to conduct the study, the researcher asked second-grade, third-grade, and fourth-grade teachers to identify children who were struggling with grade-level material (see Appendix B). Permission forms to participate in the study were sent home to the parents of those identified (see Appendix C). When permission was obtained, an RMI Procedure 1 form was administered to each child (see Appendix D).

Twelve children–4 each from the second, third, and fourth grades–were chosen from those who were given an RMI Procedure 1 and whose miscues indicated that they were struggling with reading comprehension and used a limited number of strategies or cuing systems as they read. Most of the students chosen exhibited an over-dependence on graphophonics, with a resulting meaning loss, regardless of the nature of the miscue. These RMIs served as the students' baseline miscue analysis.

Through attrition over the first 2 weeks, 4 of the 12 dropped out of the study. The results of the study are based on the interaction of the 8 students who participated in the study for the full 8 weeks. Three second graders (all male), two third graders (one male, one female), and three fourth graders (two females and one male) attended all 16 sessions. Pseudonyms have been assigned for the students to insure their confidentiality. Two of the second graders and both of the third graders came from classrooms where the teacher's reading program was based on the basal, and skills lessons had to be mastered.

Exact reproductions of the text were valued as good reading. One second grader and the all three fourth graders came from classrooms where the teachers' reading instruction philosophies focused on meaning rather than exact reproduction of print. For a quick reference, see Table 1. A detailed description of each child follows.

Darrell was a second grader whose teacher focused on word production and fluency as the sign of a good reader. Darrell was listed as a reader functioning at least one grade level behind the other students. His RMI Procedure 1 revealed a high tendency to use graphophonic cues and graphophonically similar word substitutions, even when they resulted in meaning loss in the sentence. Darrell was vocal during the first sessions. He had very definite opinions about reading and what the reading process was all about. He was very definite in his opinion that reading was getting all the words right.

James, a tall, reserved second grader, had attended kindergarten and first grade out of state. His family had moved into the area recently. James attended speech classes during the study. His teacher recommended him for the program because he took an unusual amount of time when reading aloud and he missed a lot of words. James was marked as a student reading at least 1 year below grade level, according to his basal reader tests. James relied almost exclusively on the strategy of sounding out the words when he encountered difficult text, rarely relying on picture or context clues or using any other strategy. When the researcher suggested that he go on to the end of the sentence, then regress to use the context of the sentence to help him, he was aghast. James struggled through each and every word, ending many times with nonsense substitutions as he struggled to sound out the words. His retellings were basic and without substance.

Table 1

Description of Study Participants

Student	Grade	Age	Teacher orientation	Strategy mentioned on Burke interview
Darrell	2nd	7	word calling	sound out words
James	2nd	8	word calling	sound out words
Alex	2nd	7	word calling and meaning	sound out words
Mike	3rd	9	word calling	sound out words
Alison	3rd	8	word calling	sound out words
Christy	4th	10	meaning	sound out words
Karen	4th	10	meaning	skip it
Josh	4th	9	word calling	sound out words

Alex, a bright, lively second grader, was attending speech classes for a lisp and stutter throughout the length of this research project. Alex's teacher focused on both word production and meaning when looking for the attributes of a good reader. The teacher listed Alex as at least one grade level behind, according to her classroom standards. His RMI Procedure 1 revealed an over-dependence on graphophonically similar substitutions, with resulting meaning loss in the retellings. Alex's stutter and lisp contributed significantly to his lack of oral reading fluency.

Kevin, another third grader, was subjected to constant arguing in his home. His parents were consistently having marital problems. Kevin took responsibility for a kindergarten-aged brother a good deal of time. He was considered a trouble-maker by his teacher, who labeled Kevin as one grade level below his peers in reading. His teacher, too, focused on word recognition as the hallmark of a good reader. As with the others, Kevin's retelling during the RMI Procedure 1 revealed meaning loss in the story, and his miscues contributed to additional meaning loss.

Alison was a tall, thin, third grader, who was shy and quiet during the first sessions. Alison had been identified by a teacher who practiced a very traditional instructional method. The children were divided into high, middle, and low reading groups, and much of their instructional time was spent round-robin reading within the groups. Alison was in the low reading group, and her self esteem within the classroom was suffering, according to her teacher. Alison's RMI Procedure 1 revealed a child whose substitutions were syntactically correct in many instances, but, who still relied highly on graphophonic cues. Her retellings were sparse and revealed a lack of understanding of the story.

Christy, a fourth grader who was small for her age, had a history of health problems. Christy had been identified as both learning disabled in reading and other health impaired. Her family was also continually in upheaval. She was moved in November, during the study, from one teacher's room to another because of conflicting views between her parents and teacher. Christy had been labeled by the original teacher as functioning below grade level. Christy's RMI Procedure 1 revealed that, indeed, her reading comprehension suffered. She made no substitutions and omitted any word that she stumbled on. She did not regress or seem concerned that she was not reading for meaning.

Karen, an outgoing fourth grader, was the middle of three children in a middle-class family. Karen was struggling in the classroom because of her reading ability. She had been identified as learning disabled in reading. Her initial RMI Procedure 1 showed she used substitutions with syntactic similarity. Although Karen could relate a few major details in the story she read, her retelling lacked any real depth.

Josh, the only fourth-grade male, was being raised by a single father. He had been diagnosed with attention deficit hyperactive disorder by kindergarten and as learning disabled in both reading and math by the third grade. Josh continually substituted nonsense words, pausing often, with many attempts to produce the text. He seldom regressed, reading the entire passage without stopping. When retelling, he mumbled a few words, then stated he did not remember. Even with an assisted retelling, Josh gave few details in the story.

Design

This descriptive study was conducted during the 1996-1997 school year, from the middle of October through the middle of December. The eight students and the researcher met twice weekly after school for an hour session. All sessions were audiotaped. The students met in the researcher's classroom for a total of 16 sessions.

Prior to the first session, the researcher met with each student individually. During this meeting, the researcher administered an RMI Procedure 1 and conducted an informal interview to ascertain the student's willingness of the student to participate in the research study. During the first session, the children participated in the Burke Reading Interview (see Appendix E) with the researcher (Goodman et al., 1987), who also gave the children an overview describing CRMA to the students. Three children were chosen to audiotape themselves reading a work of fiction to be discussed in a group setting at the next session.

During the initial sessions, the researcher chose the literature to be used. During the later sessions, the children selected their own readings. Each child was administered a complete RMA Procedure I Coding Form and Reader Profile at the beginning of the study, at the halfway point of the study, and again at the end of the 8-week period. The Burke Reading Inventory was readministered at the end of the 8-week period.

To add credibility to the descriptive study, there was prolonged engagement through meetings over a 3-month period, with persistent observation to focus the study and use of multiple methods of data collection (Lincoln & Guba, 1985). Data collection methods included participant observation, informal interviews, field notes, and transcriptions of audiotaped sessions. Triangulation of data was achieved by collecting data from

multiple sources, and data from one source was validated by the other sources (Lincoln & Guba, 1985).

The researcher was an integral part of the sessions in the beginning of the study. During the initial sessions, the teacher-researcher conducted mini-lessons on CRMA and reading strategies as appropriate and modeled appropriate discussion techniques. As the sessions continued, the students took on the major roles, leading discussions, having dialogues, and exploring the reading process.

All individual audiotaped sessions occurred in a private office in the school. Only the participant and the teacher-researcher were present during the tape recordings. These occurred during the school day at times when it was not disruptive for the student to be out of class. The instructor used the audiotapes for the initial and final RMI Procedure 1 and the reading inventories. Beyond that, the audiotapes were used by the students to discuss miscues and explore the reading process.

A typescript of the story the participant read was prepared for each group discussion, and each student had a copy. They learned some of the simpler markings and were free to mark their copy in any way that was helpful to their discussion. Figure 1 illustrates some of the most common markings taught to the students and used in the study, in accordance with procedures outlined in *The Reading Miscue Inventory* (Goodman et al., 1987).

Two tape recorders were used at each session. The first recorder was used to tape the entire session; the second to replay the tape recording that a student had made earlier. The tape recordings of each session were transcribed for data analysis.

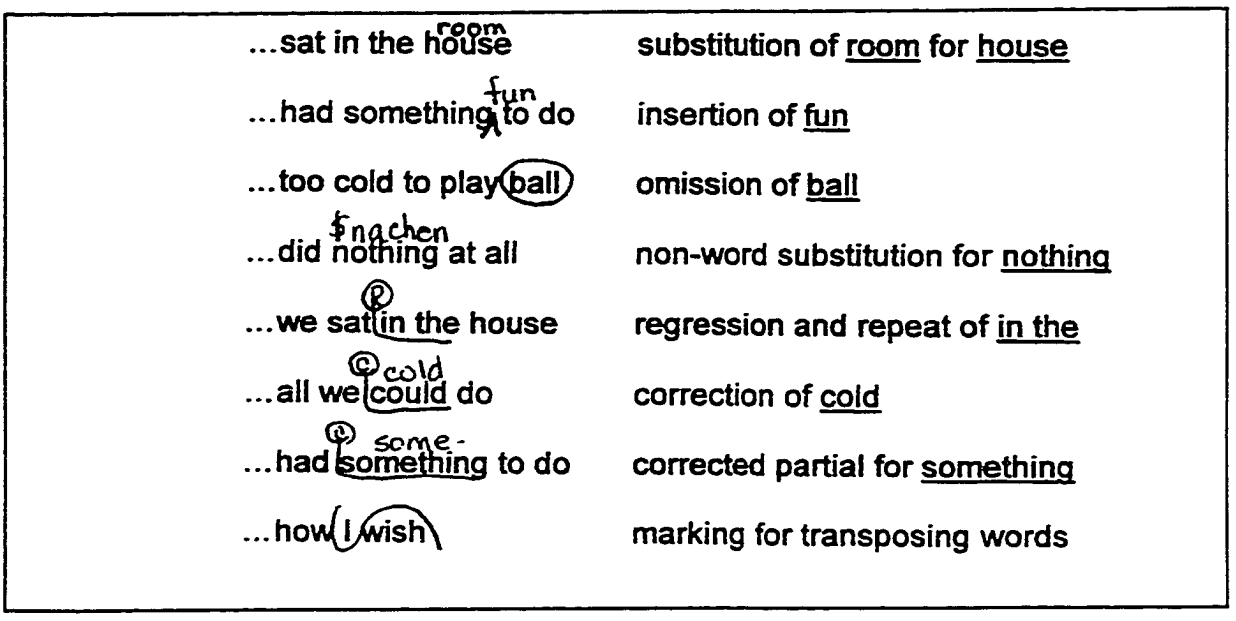

Figure 1. Miscue marking chart. (Text from *The Cat in the Hat,* Seuss, 1957.)

The data collected for the study were comprised of the following:

1. The Burke Reading Interview (Goodman et al., 1987) was administered to each of the 12 students, once at the beginning of the study and again at the end.

2. A baseline RMI Procedure 1 was administered prior to the beginning of the study.

3. The RMI Procedure 1 and the Reading Profile Procedure 1 were administered at the midpoint of the study and again at the end of the study. These consisted of marked typescripts.

4. Transcripts were prepared from the 16 CRMA sessions held between October and December, 1996.

5. Field notes were made by the researcher during or directly after sessions.

6. The researcher carried out informal interviews of the students.

Data Analysis

The last two criteria that Lincoln and Guba (1985) described to establish trustworthiness, dependability, and confirmability were addressed during the data analysis stage of research. The data gathering occurred during each group session and by review of the tapes after the sessions. Field notes and audiotape transcriptions were reviewed throughout the study to narrow the focus of the study (Bogdan & Biklen, 1992). Following the procedure that Bogdan and Biklen (1992) described, a data analysis was performed to look for emerging themes or categories upon completion of the study. After generating the categories, the researcher read and coded the data. Once the data had been coded, the codes were examined carefully and sorted into categories. Upon completion of the data analysis, the researcher identified 15 codes and 6 categories.

Once the codes and categories had been established, the researcher wrote an explicit definition for each. The codes and categories were then given to an individual expert in the field of qualitative research who was familiar with miscue analysis. This interrater sorted the codes into categories. The independent analyst sort was compared to the researcher's to determine interrater reliability. Interrater reliability was established at 87%, by counting the codes and categories and dividing the discrepancies by the total amount. Whenever a discrepancy occurred between the interrater and researcher, the particular discrepancy was reexamined and then placed into a category by mutual consensus of the researcher and independent analyst.

Not only did this expert sort the codes and confirm categories, she also acted as a peer debriefer (Lincoln & Guba, 1985). The expert's role as peer debriefer was to allow

the researcher to clarify and justify methods and findings throughout the study in response to pointed questions from the debriefer, who took on the role of "devil's advocate" (p. 308).

Other strategies were employed to increase the reliability of the study. Multiple sources of data were gathered (Yin, 1989). These included participant observation, field notes, audiotapes, and informal interviews conducted with the students participating in the study. Triangulation between the field notes, audiotapes, and student informal interviews was used to strengthen validity (Mathison, 1988). Peer examination was another method used to increase validity (Merriam, 1988). Throughout the study and during the writing of the dissertation, several colleagues read and commented on the findings as they emerged. An abbreviated audit trail (Lincoln & Guba, 1985) was established by carefully cataloguing and documenting all research data and procedures. The expert doing peer debriefing reviewed this and discussed the documentation with the researcher.

The researcher's own biases were carefully considered during the data analysis as categories began to emerge. The researcher's own psycholinguistic reading beliefs were taken into account as the study advanced. Commitment to the philosophy made the baseline, midpoint, and ending miscue analysis vital and the audit trail an important reliability tool.

Lincoln and Guba (1985) described reliability as the ability for outsiders to concur that, given the data collected, the results make sense–they are consistent and dependable, instead of the traditional quantitative definition, requiring outsiders who replicate the

experiment to get the same results. The use of an interrater for reliability, multiple data sources, triangulation of the data from multiple sources, peer examination, peer debriefing, and an abbreviated audit trail all contributed to the establishment of the reliability of the study (Merriam, 1988).

CHAPTER 4

FINDINGS

> Teaching is essentially a matter of facilitating learning, and where that learning depends on communication between the teacher and the learner, the same principles apply as in any successful conversation. The aim must be the collaborative construction of meaning. (Wells, 1986, p.121)

The focus of the four research questions guiding this study was collaborative construction of meaning through talk. Two major thematic categories emerged as the data were analyzed, and subthematic categories were identified supporting each thematic category. The thematic categories and subcategories are as given in Table 2.

Table 2

Major Thematic Categories and Their Supporting Subthematic Categories Used for Data Analysis

Thematic category	Subthematic categories
Revaluing	Miscue quality
	"Everybody makes mistakes when they read"
	Strengths as readers
	Reading strategies
	Readers' self-efficacy
Community	Ceremony
	Rituals
	Talk

The major thematic categories, revaluing and community, were derived from the students, the heart of this study. Their voices were captured throughout Chapters 4 and 5. The quotes and dialogue were selected because they addressed the thematic categories that emerged and identified changes in the students' behaviors and attitudes over the length of the study. Sections of transcripts, rich in descriptive details, were used more than once because those segments of dialogue and discussion highlighted more than one thematic category or subcategory.

Revaluing

The first of these thematic categories involved the students and the ways in which they revalued themselves as readers. The data revealed that the CRMA sessions were beneficial to the students. By the end of the study, they made higher quality miscues during oral reading. The students realized that miscues were universal; all readers make mistakes. The participants found that they had strengths as readers and incorporated new strategies into their transactions with print. The students developed positive self-images as readers as a result of the CRMA sessions. The students became empowered readers through their work in CRMA sessions.

Miscue Quality

As a classroom teacher-researcher, my overriding hope was that CRMA would be an effective instructional strategy and assist the students as readers. Each student was given a RMI Procedure 1 at three different intervals throughout the study. The first was a

baseline assessment before the sessions began. A second RMI Procedure 1 was administered at the midpoint of the study and the third at the conclusion of the study. Table 3 displays students' growth in higher quality miscues.

As the data in Table 3 indicate, seven of the eight students were making higher quality miscues at the completion of the study. Seven of the students seemed to rely less on the graphic and sound similarity, resulting in a higher percentage of miscues without meaning loss while reading orally. Increased reliance on grammatical and semantical structure was evident in seven of the students.

Figure 2 presents an example of Darrell's reading from the text, *Leo the Late Bloomer* (Kraus, 1971):

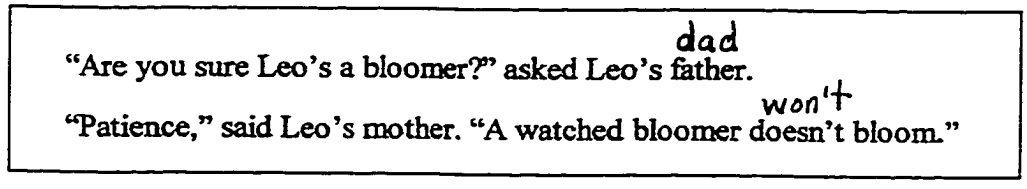

Figure 2. Example of Darrell's reading with miscues marked.

These two miscues, both high quality substitutions, were indicative of Darrell's attention to meaning construction instead of individual word calling by the end of the CRMA sessions. The quality of Darrell's miscues changed over the course of the study. His baseline RMI Reader Profile revealed that 85% of his miscues had a high graphic similarity, and 75% showed a high sound similarity to the word in the text. It appeared that Darrell focused on print rather than constructing meaning as he read orally. His final

Table 3

Display of Student Growth in Higher Quality Miscues

Student	Meaning construction			Grammatical strength			Graphic similarity			Sound similarity		
Darrell	53%	55%	59%	50%	61%	53%	73%	68%	58%	75%	69%	67%
James	61%	63%	63%	51%	50%	49%	75%	65%	64%	70%	69%	65%
Alex	65%	72%	76%	59%	64%	72%	76%	55%	51%	73%	61%	48%
Kevin	67%	70%	78%	63%	71%	81%	75%	63%	49%	76%	66%	51%
Alison	68%	74%	82%	66%	75%	82%	72%	61%	51%	73%	60%	54%
Christy	66%	71%	78%	71%	74%	81%	83%	65%	50%	76%	70%	62%
Karen	55%	59%	64%	52%	54%	61%	77%	61%	53%	72%	67%	53%
Josh	58%	54%	59%	59%	52%	61%	65%	61%	64%	68%	66%	65%

RMI Reader Profile revealed a shift from a reliance on graphic and sound similarity to grammatically correct miscues, resulting in an increase in meaning construction.

Darrel was representative of the seven students in the study who made higher quality miscues by the last CRMA session. Darrell appeared to substitute his everyday language in place of the printed text. His miscues and those of the other six did not seem to interfere with the meaning.

Alison was another of the CRMA students whose miscues became more meaning oriented over the course of the study. In Session 3, Alison read from *Alaska's Three Bears* (Gill, 1990). The tape of her oral reading progressed as shown in Figure 3:

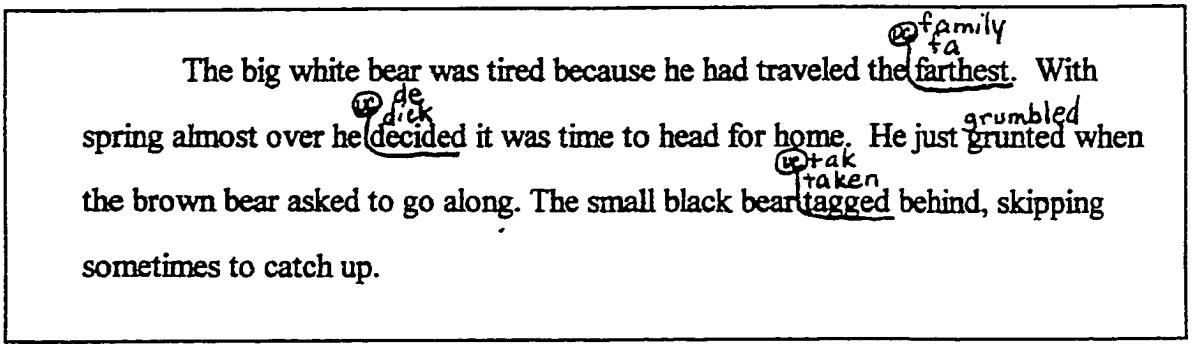

Figure 3. Excerpt from the transcript of Alison's reading in Session 3.

Alison's oral reading during this session seemed to indicate an over-dependence on beginning sound correspondence. When regression was indicated because meaning was interrupted, Alison continued on without paying attention to the story.

In Session 7, Alison used her everyday language in her oral reading from *The Magic School Bus Inside the Earth* (Cole, 1987). The oral reading was as shown in Figure 4:

The water wore (ate) away this cave in the rock. We wanted to stay for awhile but suddenly, the bus sprouted a drill. It started boring (drilling) through the rock. Frizzie shouted, "Follow that bus!" And down we went.

Figure 4. Excerpt from the transcript of Alison's reading in Session 7.

The seven students whose quality of miscues improved by the end of the study appeared to be transacting meaning from print, no longer relying on reading discrete words and letters without attending to meaning. When Karen read from *Bonjour, Mr. Satie* (dePaola, 1991), she did not appear to be bothered by the substitutions and insertions she made that did not interfere with meaning and continued reading without a pause. The recording of her oral reading is shown in the transcript in Figure 5:

"Well, *mes enfants*, do you remember my friend Pablo, who painted that (the) portrait of me in blue? Well, his new paintings are very different (all). They caused quite a stir in Paris this spring." "Oh, tell us, tell us!" cried the children.

. . .

I went from blue to pink. From pink to things African. And now my paintings show things from different sides (every side) all at the same time.

Figure 5. Excerpt from transcript of Karen's reading.

Christy chose to read from *Aunt Harriet's Underground Railroad in the Sky* (Ringgold, 1992) in Session 13. She left uncorrected those miscues that she appeared to have decided did not interfere with meaning (see Figure 6).

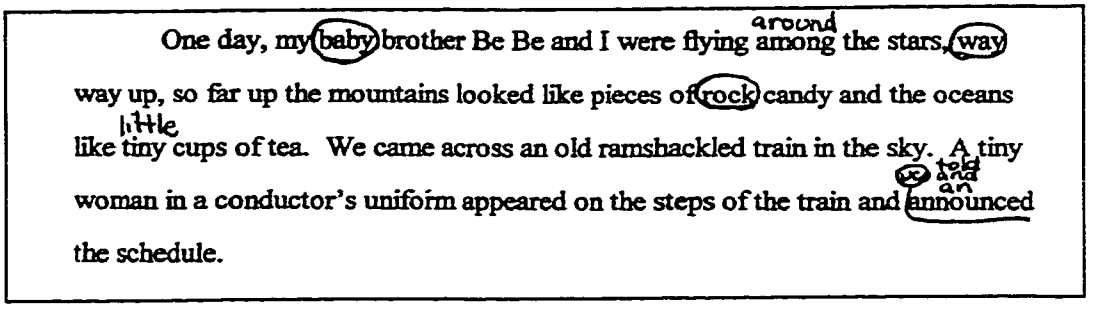

Figure 6. Example of Christy's reading from Session 13.

Consistently, James made miscues that focused on the way the print looked (graphic awareness) and sounded (phonemic awareness). *Bear Shadow* (Asch, 1985) seemed to be James' favorite book. I found it interesting that in Session 11, while he read from *Bear Shadow*, he replaced "hopping" for "hoping." Even though James made meaning-loss miscues, he still understood and enjoyed the text. However, while reading "The Story of Ferdinand" (Leaf, 1984), in Session 15, James substituted *strongly* for *snorting* and *bunny* for *butting*. Although these miscues resulted in a disruption of meaning, James did not regress or seem aware that regression was needed. When James disconfirmed the text, he abandoned the process. After making several meaning-loss miscues in Session 15, James said, "I think I'm tired of listening." In his final RMI, James, reading from *Leo the Late Bloomer* (Kraus, 1971), substituted the following (Figure 7):

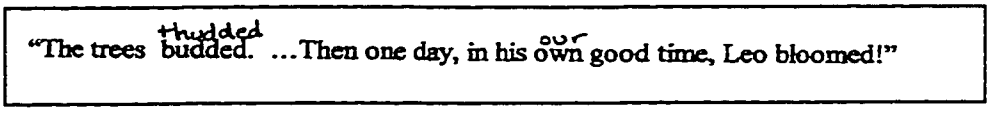

Figure 7. Excerpt from the transcript of James' reading in Session 15.

Flurkey (1995) examined his conception about the reading process, questioning K. Goodman's (1996) theory that everything a reader did, including making mistakes, helped a reader make sense of text. He posed the question, "Wasn't it the making of mistakes that made poor readers in the first place?" (p. 11). Flurkey (1995) reflected further,

> Miscue analysis enabled me to see that Shari wasn't doing something wrong when she produced substitutions, omissions, regressions, and insertions; she was using her own language to do what was sensible for her. . . . Reading is about making meaning for oneself. (p. 11)

CRMA proved to be an effective instructional strategy for use with students because it provided the students with the same insights that Flurkey (1995) had discovered from participating in a workshop with Yetta Goodman. Reading *is* about making meaning for yourself and using everything you know to do so.

In their last session, the CRMA group participants articulated the identical conception that was consonant with Goodmans' and Flurkey's theory:

> Teacher-researcher: What have you learned about reading?
>
> Darrell: That you always could. If you could sound the word out or sometimes you could make up another word that would make sense in the sentence.
>
> Karen: If, like, someone messed up sometimes it won't be a mistake and sometimes it would and, like, it depends on what kind of miscue you got. Like, if it's, like you mess up on two or three pages, like almost every word, it's a miscue for the whole book, but if you just mess up on one or two words on a page, it's not a miscue on the whole book.

Alison: Everybody makes miscues when they read.

Kevin: You can use details in the sentences to figure out what the word is or what it means.

James: If you don't know what the word is you can look, you can use words you know and see if it makes sense in the sentence.

Alex: People who wrote the book, now, they don't write words that sound right, and sometimes when we speak, when we read the book we think it's right but it's really not.

This was an example of the CRMA group's articulated understanding that their own language and knowledge could help them understand troubling text.

"Everybody Makes Mistakes When They Read"

The students began the study believing that good readers did not make mistakes or miscues when they read. Six of the eight students (Alex, Darrell, Alison, Kevin, Christy, and Josh) reported on their prestudy Burke Reading Interview that a good reader knows all the words when reading aloud from a text. Furthermore, the same six students also stated that good readers do not find words they do not know in texts. This was their conception that emerged from the initial implementation of the Burke Reading Interview.

On the poststudy Burke Reading Interview, Alex, Kevin, and Alison all listed one of the fourth grade readers as a good reader. Kevin explained, "Karen understands the words in the story and it means she is a good reader." Additionally, Alex perceived Josh to be a good reader, "Josh learned a bunch, he's trying to understand what's in the story,

what the author wrote. I'd let him read my story 'cause that's what a good reader does; he's a good reader."

Some students' perceptions of what constitutes a good reader also changed over the length of the study. By the end of the study, when the Burke Reading Interview was readministered, six students (Alex, Kevin, Alison, Christy, Karen, and Josh) had come to the conclusion that good readers were readers who understood the story. However, neither James nor Darrell, who were both second graders, changed their answers over the CRMA sessions. In the initial and poststudy interviews, they persisted in their thinking about how good readers read. James reported that "good readers know all the words" and Darrell stated, "good readers read fast."

Through interactions with the text and my participation in CRMA sessions, the students realized that miscues are universal: everybody makes them. Good readers and struggling readers make miscues. In the poststudy Burke Reading Interview, seven of the eight students revealed that good readers struggle over words they do not know. Only James persisted to state good readers did not struggle with print during transactions with text. James stated in the final Burke Reading Interview, "If they're good, they'd know the words, they don't have to stop to figure them out."

Christy and Karen acknowledged each other as good readers, and Josh perceived me, the teacher-researcher, as a good reader. All three of them stated that whomever they cited as a good reader understood the story. In addition, Karen commented, "Christy told me the stories all the time, she don't have to say every word, she reads good!" Christy, who named Karen, declared, "Karen is a good reader. She helps everyone, she knows

what a good miscue is when she makes one and she knows what the story says." Josh just said, "Mrs. Woodruff reads good."

I brought tapes of my own reading in during early CRMA sessions, in order to emphasize the idea that all readers made miscues. The different types of miscues that all readers tend to make was emphasized in several mini-lessons during the early CRMA sessions. During the dialogue in the last session, both Alex, a second grader, and Alison, a third grader, talked about everyone making miscues. The exchange during Session 16 went as follows:

> Karen: If, like, someone messed up sometimes, it won't be a miscue, and sometimes it would and, like, it depends what kind of miscue you got. Like if it's like you mess up on two or three pages, like almost every word it's a miscue for the whole book, but if you just mess up on one or two words on a page, it's not a miscue on the whole book.
>
> Alison: Everybody makes mistakes when they read.
>
> . . .
>
> Teacher-researcher: How do you feel about reading; do you feel differently now that you've studied reading so much?
>
> Alex: I feel like that all miscues aren't bad; everyone can miscue.

Through CRMA sessions, most of the students in the group changed their opinions of what a good reader is and does in the transaction with print.

Readers' Strengths

The students appeared to become more empowered readers through the CRMA process, as had those described in Marten's (1998) study using RMA in one-on-one situations. Their growth as readers was revealed as each session progressed. The students began to see and articulate patterns in their own miscues. Furthermore, they corrected or changed the pattern once they noticed their miscues. Josh, who had a tendency at the beginning of the study to substitute nonsense words with a high graphophonic similarity, made the following miscue during Session 4 (Figure 8):

> **Josh (reading from the tape): The snow crunched as they followed a twisted path through mountains and mountains of ice. The sky was icy fresh and it seemed to dip and disappear (despair) until it landed in the white glare of ocean. (*The Alaska Three Bears*, Gill, 1990)**

Figure 8. Excerpt from the transcript of Josh's reading in Session 4.

Alex: Stop the tape, there's a miscue.

Alison: Josh said *despair* instead of *disappear*.

Kevin: Why do you think you said that?

Josh: It seemed, [pause] it looked like despair because nobody, [pause] they could see nothing, just mountains, nobody was around there, just them and it was kind of lonely.

Alison: Yea, I know, so they felt despair.

Josh's miscue was in response to the feeling, the words, and pictures. It was semantically correct. This represented a shift from graphophonically related miscues to semantically oriented miscues.

In Session 9, Karen discussed finding particular miscue patterns. She said, "You could watch for your pattern, if you figure it out." When Alison miscued, it was Karen who pointed out the pattern (Figure 9).

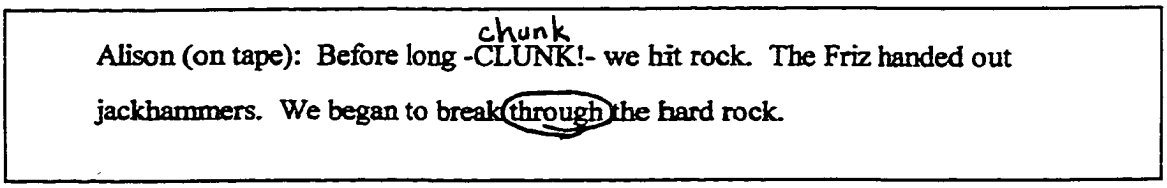

Figure 9. Excerpt from the transcript of Alison's reading in Session 9.

Kevin: I see a miscue, she missed . . .

Karen: She read *chunk* and it's *clunk.*

Alison: It's real close to the right word.

Karen: Alison makes miscues like that, it's her pattern.

Teacher-researcher: Like what, what's her pattern?

Karen: Changing a letter, making miscues that sound like the word a lot.

Kevin: It's not a meaning-loss miscue. The rocks could sound like chunk.

Alison: No, it's meaning loss. Chunk is not a noise, clunk is.

Moreover, it seemed that having the language to discuss miscues assisted them in finding patterns. Clearly, this aided them in identifying their reading strengths and

working through their struggles with print. During Session 10, James read from *Bear's Shadow* (Asch, 1985). Figure 10 presents an example.

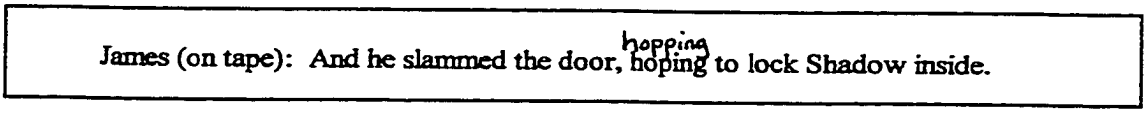

Figure 10. Example of James' reading during Session 10.

James: I made a miscue there. It is a meaning loss; it looked very close to *hoping*, so I said *hopping*. I used to do that all the time, just put in words that were close.

Although pattern identification was paramount, the community helped members of the group recognize their individual miscue patterns. It was Karen and Christy who supported Kevin in his efforts to identify the pattern of omitting words. The dialogue in Figure 11 illustrates this quite decisively:

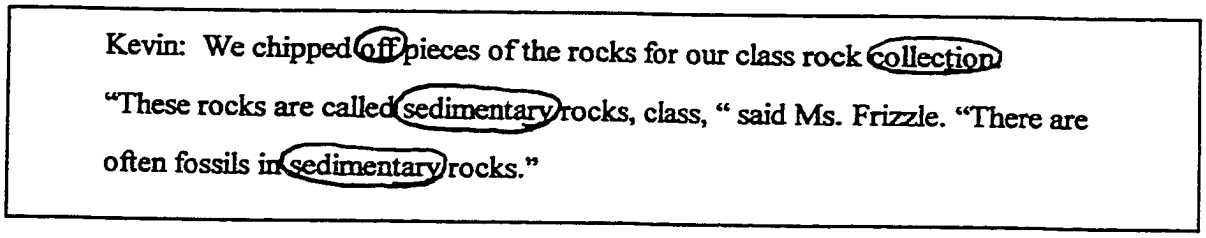

Figure 11. Example of Kevin's reading used to identify his pattern of omitting words.

Karen: Stop the tape. Let's talk about the miscue we just heard. Kevin skipped a word here and here [showing everyone her transcript]. He did that before, too.

Christy: I think that's Kevin's pattern.

Teacher-researcher: What kind of miscue pattern is it?

James: He skips words.

Teacher-researcher: Omission?

In the last session, the group made some observations about their conclusions concerning their strengths in reading:

Teacher-researcher: What have you learned so far about reading?

Darrell: That you always could, if you could sound the word out, or sometimes you could make up another word that would make sense in the sentence.

. . .

Alison: Everybody makes mistakes when they read.

. . .

Alex: I feel like that all miscues aren't bad; everyone can miscue.

Darrell: I feel better; I can read better and I can figure out words more.

Alex: I used to read the whole sentence, now I skip some words and I can find out if it's a miscue or not.

Kevin: Well, I just, I found out that if you just skip a word and look at all the other words and see if you can put two and two together, you can figure out the words. I like reading now.

By the end of the CRMA sessions, the students saw their miscue patterns and realized that all readers made miscues. This realization abetted their perceptions of themselves as able readers.

Reading Strategies

The students internalized several effective strategies, other than sounding words, when they encountered troublesome print. The group developed strategies that enabled them to ask the question, "Does it sound like spoken language?" In Session 5, when Josh's miscue of *despair* for *disappear* occurred, he talked about using other possible strategies. He reflected, "I should have looked back over it, reread it. I knew it wasn't right when I read it." In Session 6, James was reading *If You Give a Mouse a Cookie* (Numeroff, 1985). The following exchange took place (Figure 12):

> James (on tape): "When he looks into the mirror, he might notice his hair needs a cut trim" (Numeroff, 1985).

Figure 12. Excerpt from transcript of James' reading in Session 6.

Christy: There's a miscue.

James: I know, I changed the word. I was thinking about, I was remembering what had happened in the story, then I was sounding out the next sentence in my head. When I read it, I knew I changed it but it still made sense.

If You Give a Mouse a Cookie (Numeroff, 1985) was one of James' favorite texts, and he was willing to expend the necessary effort to think about different strategies to make sense out of the text.

We closed Session 6 by reviewing strategies that readers could use if they ran into unfamiliar print. The following exchange illustrated a discussion about implementation of strategies when encountering troublesome print while reading:

Alison: We can read the words around it and decide what the author wanted to say.

Kevin: We can skip and go on.

Karen: Skip it, think about it, and then look at the letters.

Alex: Reread it, regress.

A discussion in Session 12 centered on identifying strategies that dealt with high quality substitutions. The group was listening to Josh reading *Rain Forest* (Cowcher, 1988) when this exchange took place (Figure 13):

> **Josh: Jaguar roared with fury and sped through the trees. The animals shuddered. Jaguar was the most powerful creature (cat) in the rain forest. (Cowcher, 1988)**

Figure 13. Excerpt from transcript of Josh's reading in Session 12.

Teacher-Researcher: Tell me about this word right here; you made an excellent substitution there.

James: *Cat* fits in there; we would know either one. The author wrote *jaguar*, though. You could have said *animal* for *creature*. That would have been another good substitution, right?

Alex: *Creature* fits the mood of the story.

During this same session, Josh read *The Magic School Bus Inside the Earth* (Cole, 1987), and discussion occurred about one of his miscues that affected comprehension. Members of the group noticed that sometimes readers comprehend the text as the author intended, and other times readers construct their own meaning from the text. The exchange went as follows in Figure 14:

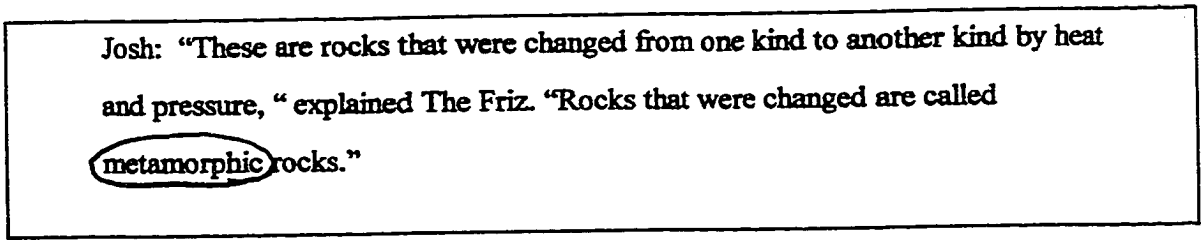

Figure 14. Excerpt from transcript of Josh's reading with miscue that affected comprehension.

Darrell: Josh skipped the word he couldn't say.

Alex: It's a meaning loss because we don't know the name of the rocks when he finishes reading.

Alison: If we were reading just for fun, it wouldn't matter if we knew or not.

Teacher-researcher: So why you're reading the book decides meaning loss or not?

Christy: Yes, sometimes.

Session 14 opened with James reading on tape from *Rainforest* (Cowcher, 1988). The CRMA group negotiated meaning from the text when they were unable to understand the author's intent. Implicitly, the author intended her audience to recognize the voice the jaguar heard as intuition; however, the students, using a collective comprehension strategy, interpreted the voice to be that of God.

James (on tape): Jaguar heard a voice. "Go to high ground," it said. "Go to high ground." The rains came as the animals made their way higher and higher. Fear drove them on. Then the floods came! There were no trees to hold the soil in place, so the river burst its banks. The Machine was washed away!

Kevin: Who do we think said to get to higher ground.

Teacher-researcher: I don't know, who?

Kevin: It could be anybody.

Teacher-researcher: Who do you think it was?

Kevin: Somebody that really cares about animals, that's for sure.

Christy: Let's look again.

Kevin: It said somebody told them. No, wait! It said some*thing* told them.

Alex: It says (rereading), Jaguar heard a voice. "Go to high ground," it said. "Go to high ground."

Josh: I think it's God.

Throughout this conversation over the miscue and segment of print, the group transacted meaning for themselves. They did not read the text verbatim, nor rely on the teacher-researcher to explain the meaning of that section of the book. As a community they used comprehension strategies to construct meaning for themselves.

Reader Self-Efficacy

The students' self-efficacy as readers appeared to develop over the 16 CRMA sessions. The students' answers on the Burke Reading Interview, their interviews, and

discussions all suggested that their perceptions of themselves as readers continually improved over the length of the study.

Prior to the CRMA sessions, when first given the Burke Reading Interview, six of the eight participants said that they wanted to know *all* the words when asked what they would like to do better as a reader. At the end of the study, when asked the same question, six of the students (Alex, Alison, Kevin, Christy, Karen, and Josh) replied that they wanted to understand the story. Only James and Darrell offered a different response. James said he wanted to read all the words, and Darrell said he wanted to read faster.

In the prestudy interview, when asked if they were good readers, three of the eight said no, and four replied, "sort of." When asked the same question on the poststudy interview, most answered "yes." Darrell said, "no," and James said, "sort of."

During the poststudy interviews, Alex explained his perceptions by telling the teacher-researcher, "I understand the story, even when I miscue and don't get all the words right." Karen, reflecting on her reading, said, "I like reading better now because I'm better at it. If I don't know every word, I don't get all upset; I just go on reading. Everybody else don't know words sometimes, too." James, who said he was a good reader, "sort of," stated, "I know other kids don't know all the words and it's OK, but I want to anyway, and sometimes I don't."

CRMA sessions seemed to be an excellent forum for the students' thoughts on their developing self-efficacy in reading. In Session 8, a segment of the group time discussion went as follows:

Alex: I decided that I can read. My teacher doesn't think I'm a good reader, but I know I am. I understand the words, even if I don't say them exactly like the author did.

Teacher-researcher: What is reading?

Alison: You have to know what you read.

Alex: If they know the words they are just reading words. They have to understand it.

Darrell: If you mean *me* but say *I*, its not reading exactly the words, but it's a good miscue.

Josh: If you change the whole meaning, you have to go back and fix it.

Kevin: You have to ask, "Does it make sense?"

The positive influence of the CRMA sessions on the students was further evident during the last session. This exchange took place in Session 16:

Teacher-researcher: How do you feel about reading; do you feel differently now that you've studied the reading process?

Alex: I feel like that all miscues aren't bad; everyone can miscue.

James: I can read better, and I can figure out words more.

Alex: I used to read the whole sentence and go on. Now I skip some words, then regress, and I can find out if it's a miscue or not.

Kevin: I like reading now. I found out that if you just skip a word and look at all the other words and see if you can put two and two together, then reread, you can figure out the words.

Christy: Reading is fun now.

Karen: You use your own imagination to help the author make sense of the story.

Christy: The only time I hate reading now is when I read in the car, it makes me sick.

Alex: I learned I'm a good reader, even if my teacher doesn't think so.

Karen: We learned a whole bunch.

Kevin: *A whole bunch!*

This process solidified Alex's feelings of self-efficacy so much so that he articulated that he wasn't swayed by his teacher's perceptions of his reading. He judged himself to be a good reader. Three of the others openly discussed their improved enjoyment of reading.

Community

The second major recurring thematic category in the data revealed during data analysis was the sense of community the students built during CRMA sessions. Community-building strategies included rites, ceremonies, and talk that the students initiated in the sessions. The learning community established during the sixteen sessions built a common reality among the group. The mere gathering and discussing created the environment where students' insights inherently occurred. Peterson (1992) stated that ceremony and rituals help a teacher establish a caring community of learners. Ceremonies, rituals, and talk established a community of readers for the eight students in the

group, where they valued both themselves and the others in the struggle to understand the reading process.

Ceremony

Peterson (1992) stated that

> ceremony becomes very important when students are expected to construct meaning on their own and with others. Assuming responsibility for their own learning and not merely acting out someone else's plan called upon students to focus their attention. Where study is concerned, ceremony brings about an internal readiness, pushing aside that which might interfere and helping students to participate whole-heartedly by concentrating thought and feeling on the work at hand. (p. 16)

By the third session, the eight students had established their own opening ceremony by taking a few minutes at the beginning of each session to review what had been done in the previous session. Karen began Session 4 by talking about reading:

> Karen: When I was reading this yesterday, I thought about what reading is. You know, I thought about how if you can say all the words, it's not really reading.
>
> Alison: No, it's not really reading.
>
> Teacher-researcher: That's word calling, right?
>
> Alex: If they know the words, they are just reading words; they got to understand it.

Just as Peterson (1992) posited that "ceremony brings about an internal readiness," these eight participants, too, readied themselves by reviewing for the first few minutes of their session in order to focus on the session.

Session 5 opened with Alison talking about a miscue she recalled making while reading the past week in her classroom:

Alison: I read *The Magic School Bus* . . .

Kevin: Which one, *Under the Earth* is good?

Alison: *In the Solar System*. I know I made some mistakes, miscued, but some were good like we've talked about.

Darrell: If you mean *me* but say *I* . . .

Teacher-researcher: Right, if it fits and makes sense it's a good miscue . . .

Josh: If you change the whole meaning, it's not a good miscue.

Kevin: "Does it make sense?" is the important thing to ask.

The students continued to initiate the first few minutes in discussion or clarification. Sometimes it was a question they asked. The beginning of Session 8 illustrated this:

James said: I sounded words out in my head when I was reading *If you Give a Mouse a Cookie* (Numeroff, 1985), but I had to remember the story. I think I said a word that wasn't in the story. Was that good?

Kevin: Sure it's good. Did you put words in that changed the story; could you tell what it meant?

James: Yes.

Teacher-researcher: Good readers do make substitutions that make sense in the story and they go right on. They don't try to change it if it makes sense in the story.

The few minutes of thought or review that the students initiated at the beginning of each session served to focus their attention. Our ceremony of those first few minutes emphasized that reflection and readiness for the session's activities were important for our community.

Rituals

Rituals can be as simple as singing a song or moving a chair into a designated area to signal story time (Peterson, 1992). As the students began to revalue themselves as readers, they initiated rituals to mark the beginning of each session. By Session 3, Kevin had taken over the responsibility for the tape recorder, starting and stopping it when students asked. Without direction, he came in each session, set it up, and had everything ready to go. Alison made sure the books and transcripts of the readings we would use that day on tape were at hand and that there were enough copies and pencils for everyone. While Alison and Kevin completed these tasks, the other students positioned themselves on the carpet, each in their same self-selected spot each week, ready to begin the session.

By an unspoken agreement, sessions were led by different students. Although others asked to stop the tape, usually each session had one student taking the lead role; however, no one leader emerged. The session leader took the responsibility to keep the group on task and seemed to determine which miscues would be discussed at length. This is evidenced in the following examples. During an exchange in Session 6, Kevin kept the group on task. The exchange reported below is characteristic of the intersection of ritual

and discussion that Peterson (1992) described in *Life in a Crowded Place* (see Figure 15).

> **Josh (on tape reading *My Rotten Redheaded Brother*): "That night at dinner I could hardly eat. "Have you been eating angry apples again, child?" Bubbie asked as she sliced me a huge wedge of rhubarb pie. "I baked your favorite!" "Richard gave me one of his extra-rotten, weasel-eyed, greeny-toothed grins." (Polacco, 1994)**

Figure 15. Excerpt from the transcript of Josh's reading in Session 6.

Josh: I made a miscue, I said *ch, ch, child.* I kind of stuttered on child.

Kevin: He said *tooth ed.*

Karen: He said *angry apples, angry child* instead of *again.*

Teacher: What might you have been thinking about?

Karen: I think they look a lot alike, that's what he was thinking about.

Kevin: He could have been looking at the picture, she does look angry.

Josh: Meaning loss.

Kevin: Maybe not, she does look angry.

Teacher-Researcher: Josh, meaning loss or not?

Josh (looking at Kevin): A little bit.

Kevin: I want to talk about *toothed.*

Darrell: Meaning loss or not?

Alex: By making it two words, it's hard to understand but I still think we get the idea.

Josh: Not a meaning loss.

Kevin: Now let's talk about *again*.

This segment demonstrated Kevin's keeping the group focused and on task. In the next session, Alison kept the group on track. An excerpt from Alex's reading is shown in Figure 16:

> **Alex (reading *Bonjour, Mr. Satie*): The Salon was already filled with people. How they talked. How they laughed. How they agreed argued.(dePaola, 1991)**

Figure 16. Excerpt from transcript of Alex's reading during Session 7.

Alison: Stop there for a minute. *Agreed* for *argued*, very similar, but it did not agree with the picture.

Kevin: Was that a meaning change? Did the word agree make sense?

Alison: Yes, but it was a meaning loss because they were not agreeing. What happened there, you skipped a word?

Alex: I just didn't see it.

In Session 9, Alison again took the lead, following Darrell's reading (see Figures 17, 18, and 19):

Darrell (reading *That's Good, That's Bad*): "The balloon drifted for miles and until it came to a hot, steamy jungle. It broke on the branch of a tall, prickly tree, POP! (Cuyler, 1991)

Figure 17. Excerpt from the transcript of Darrell's reading during Session 9, part 1.

Alison: OK, stop right there. Now what do you think that word right there, the balloon what, . . . what do you think it will be?

Kevin: Is it a good miscue or not?

Alison: James, what do you think that word is?

James: Drifted.

Darrell (still reading from *That's Good, That's Bad*): He climbed up onto a roly-poly hippopotamus and rode to shore, GIDDYAP! (Cuyler, 1991)

Figure 18. Excerpt from the transcript of Darrell's reading during Session 9, part 2.

Alison: Stop right there *and rode to the shore-getty up*. Now let's listen again.

Darrell (on the next page): "Ten noisy baboons were squabbling in the grass by the river. They chased the little boy up a tree until he was out of breath, PANT, PANT!" (Cuyler, 1991)

Figure 19. Excerpt from the transcript of Darrell's reading during Session 9, part 3.

Alison: OK, let's look at that word. What do you think it is? Ten noisy baboons were squabbling? Now let's read it again.

Although Alison took the lead in these two examples, the others also took their turns in different sessions. There didn't seem to be a pattern in who took and maintained a lead in each session, but they seemed to rotate leadership without direction. There seemed to be an unspoken agreement between the students as to who would lead in each session. In Session 11, it was Alex who led the way, telling Kevin when to stop the tape (see Figures 20 and 21):

James (on tape): While he slept, time passed and the sun once again cast shadows everywhere. (Asch, 1985)

Figure 20. Excerpt from transcript of James' reading in Session 11, part 1.

Alex: Let's stop the tape there, James transposed the words, I think.

James: You're right, no meaning loss though.

James (on tape): And he slammed the door, hopping to lock Shadow inside. But Shadow was too quick. (Asch, 1985)

Figure 21. Excerpt from transcript of James' reading in Session 11, part 2.

Alex: Stop again, he read *hopping* for *hoping*.

James: It is a meaning loss that time.

Kevin: It looked very close to the same thing.

As indicated in earlier examples, Kevin was an active participant and took the lead in several conversations. All children took at least one turn leading a discussion; but Kevin led four times, Alison led three times, and Alex led twice. Again, this arrangement occurred naturally, a ritual of sharing leadership in our community.

Dialogue

In a community of learners, as in everyday life, dialogue is a primary medium for learning (Peterson, 1992). The students' interactions during the CRMA sessions were marked by two distinct types of dialogue, caring dialogue and discussion about the reading process.

Caring Dialogue

Caring dialogue was friendly in tone and signaled acceptance and a willingness to belong to the community. Caring dialogue was valuable because it helped maintain a shared reality and nurtured a feeling of belonging within the group. In the CRMA group, caring dialogue validated the process of the participants' revaluing themselves as readers. The teacher-researcher initiated caring dialogue in the initial sessions. After Kevin had miscued during the taping of Session 2, he became anxious in the discussion, saying "I tried to" when discussing whether he had asked himself if the miscue made sense. The

teacher-researcher modeled caring dialogue, saying, "That's good; you tried. The miscue was a good one since it didn't disrupt meaning in the sentence." In Session 3, the students were listening to Josh read from Gill's (1990), *The Alaska Three Bears*. He read *despair* for *disappear*. Again, the teacher-researcher responded with supportive comments:

> Teacher-researcher: "All right, and that's a good reason, isn't it? "but disappeared until it landed" does make sense, doesn't it? That's a very nice job, we like the way you were thinking about it.

By Session 5, the students engaged in caring dialogue with one another. They were supportive as they revalued one another's reading strengths in the reading process. In an exchange in Session 5, Alison said, "James, you did good. You thought about the story in your head." In Session 6, when Josh miscued in *The Magic School Bus Inside the Earth* (Cole, 1987), Kevin supported Josh by saying, "Josh, you're reading words that are real close. We could understand what it meant. That's very good." In Session 8, Christy bolstered Alex's attempt to create meaning as they listened to the tape that he made of *Bear's Shadow* (Asch, 1985). She said, "Alex, you transposed the words, that means you're reading ahead. That's good. Good readers do that, right?"

Throughout the CRMA sessions, the group gave each member mutual support and encouragement. All students highlighted what they saw as others' strengths in reading. During the remaining sessions, they took care to point out strengths whenever possible. They participated as a community of learners, listening to and supporting one another in

mutual revaluing of themselves as readers. An example of caring dialogue from Session 2 went as follows (see Figure 22):

> Kevin (reading *The Alaska Three Bears* (Gill, 1990 on tape): heard a plop and a splash from a nearby hole in the ice. "A ringed seal," whispered the big white bear. (Gill, 1990, p. 8)

Figure 22. Excerpt from transcript of Kevin's reading during Session 2.

Darrell: Stop the tape, Kevin miscued right there.

Kevin: I did not. I read it like it is.

Karen: It's OK, Kevin, it's an acceptable miscue. We know what it says.

In Session 6, while Josh was reading *My Rotten Redheaded Brother* and realized the miscue of *angry* instead of *again*, Karen expressed caring dialogue about his mistake:

Karen: I think they look a lot alike, that's what he was thinking about.

Kevin: He could have been looking at the picture, she does look angry.

Josh: Meaning loss.

Kevin: Maybe not, she does look angry.

Teacher: Josh, meaning loss or not?

Josh (looking at Kevin): A little bit.

The support that the group members articulated for each other enabled the dialogue and discussion to flow within their learning community. Each member's verbal contribution was taken seriously.

Dialogue About Reading

The CRMA group engaged in dialogue about reading throughout the sessions. Dialogue has a focus and is a means of constructing meaning among the participants (Peterson, 1992): "Dialogue occurs when people share a common interest and join together to understand. It is a time when participants collaborate and co-produce meaning" (p. 104).

Dialogue was the medium by which the group made discoveries about individual miscue patterns and the effectiveness of comprehension strategies, such as regression as a tool to understand the author's intent, and developed language to discuss miscues consistent with the vocabulary of miscue analysis. The students' common interest in understanding the reading process assisted the dialogue and helped the students to achieve insights about the reading process. In Session 15, the group articulated an insight that individuals transact with print, thus making meaning from the books they read. As a group, through dialogue with each other, they voiced their perceptions that comprehension could take place without every word or sentence of print being understood. They relied on comprehension strategies for larger segments, rather than comprehending specific sentences in the text. The group listened to Darrell read *Ferdinand* (Leaf, 1984) on tape (Figure 23):

Darrell (on tape): All the other little bulls he lived with would run and jump and butt their heads together, but not Ferdinand. He liked to sit just quietly and smell the flowers.

Figure 23. Excerpt from transcript of Darrell's reading in Session 15.

Josh: That's a miscue.

Teacher-researcher: Darrell, could you give me a word that would fit in the sentence?

Darrell: No.

Teacher-researcher: So is this a meaning loss.

Kevin: Yes.

Darrell: Yes.

Alex: But Darrell could tell what the page meant, the story meant.

Karen: So it's not a meaning loss for the story.

Alex: It's more important to know what you're talking about when you talk about the story, not the sentence.

Kevin: The story is more important.

Alex: Sometimes even when the words aren't all right, the story is still good. If the story is good, you don't have to know all the words that the author says.

Darrell: The sentence is important because if you don't know the sentence, how do you know the story?

Kevin: He said the sentence because you would mess up the story if the sentence is wrong.

Karen: The story is the most important. A sentence might not even mess up a paragraph.

As illustrated in this discussion, the participants' dialogue about reading indicated that four of the eight students expressed their opinion that comprehension might be dependent on a word, sentence, or paragraph.

During Session 10, the teacher-researcher left the group for a few minutes. While reviewing the audiotape of the session, she noted the following exchange (Figure 24):

> **Alison (on tape): In minutes, the cloud may grow several miles wide and 40,000 or more feet high. Strong winds shred and flatten the cloud top into the familiar anvil shape of a "thunderhead" or cumulonimbus cloud. (Simon, 1989)**

Figure 24. Excerpt from transcript of Alison's reading in Session 10.

Alison: I didn't understand that word, the one I left out, did you?

[The whole group tries to figure out the word.]

Darrell: That's a miscue.

Kevin: Yes, but we don't need it in the sentence, we're learning about storms anyway.

Christy: We tried everything we usually do.

Josh: It's another word for thunderhead, look at how the author put *or* in there.

Alison: Let's just leave it out.

In this discussion about reading, the community of readers worked together to interpret the author's text without my being present. When they could not decide on the meaning of *cumulonimbus*, collectively they decided to omit the troublesome text and go on.

As the CRMA group worked together dialoguing about reading, they tried to discover why they made miscues and whether they disrupted the meaning of the story. In Session 7, the following exchange took place (Figures 25 and 26):

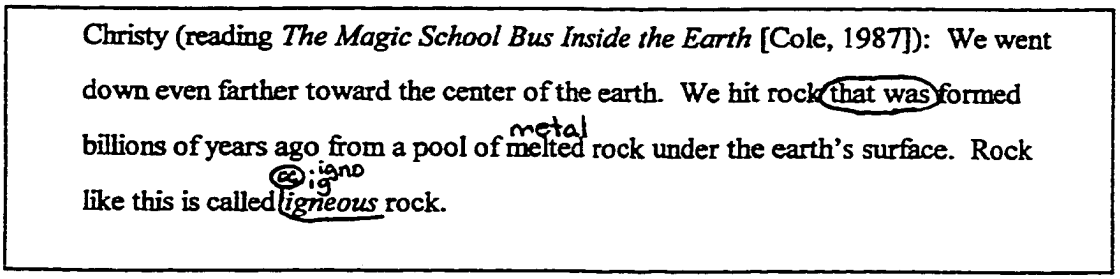
Christy (reading *The Magic School Bus Inside the Earth* [Cole, 1987]): We went down even farther toward the center of the earth. We hit rock that was formed billions of years ago from a pool of melted rock under the earth's surface. Rock like this is called *igneous* rock.

Figure 25. Excerpt from transcript of Christy's reading in Session 7, part 1.

Kevin: I see a miscue, in that sentence, she said *metal* but it's not, it's *melted.*

Teacher-researcher: Was that meaning loss? Why do you think you said that, Christy?

Christy: Yes, meaning loss, they look a lot alike.

Alison: What about that word? (pointing to *igneous*)

Christy: Meaning loss, I never saw a word like that before!

In the same session, the discussion continued:

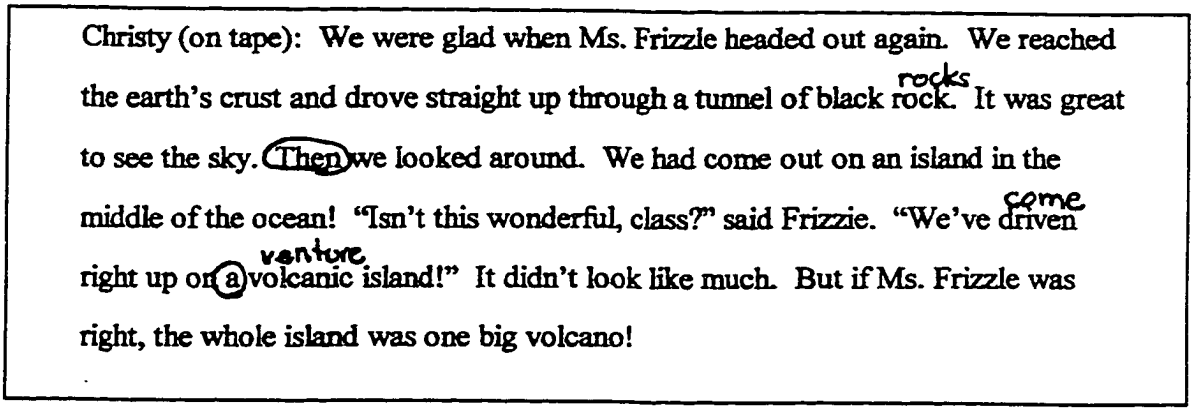
Christy (on tape): We were glad when Ms. Frizzle headed out again. We reached the earth's crust and drove straight up through a tunnel of black rock. It was great to see the sky. Then we looked around. We had come out on an island in the middle of the ocean! "Isn't this wonderful, class?" said Frizzie. "We've driven right up on a volcanic island!" It didn't look like much. But if Ms. Frizzle was right, the whole island was one big volcano!

Figure 26. Excerpt from transcript of Christy's reading in Session 7, part 2.

Darrell: Stop the tape, there were some miscues.

Teacher-researcher: *Rocks* for *rock*, meaning loss or not?

All: NO!

Christy: Its just whether it's one or two.

Karen: Look at venture island, it's a miscue.

Christy: It just came out *venture*.

Teacher-researcher: Is it a meaning loss? Does it make sense in the sentence?

Christy: Sort of.

Teacher-researcher: Look closer at it. Look up here; what's this shaped like?

Christy: It's a volcano. The word is *volcano*; there's no *t-u-r-e* in it for *ture*!

James miscued while reading *Ferdinand* (Leaf, 1984) in Session 15. The following dialogue took place (Figure 27):

James (on tape): All the other bulls ran around boy the strongest snorting bunny and butting, leaping and jumping so the men would think that they were very, very strong and fierce and pick them. (Leaf, 1984)

Figure 27. Excerpt from transcript of James' reading in Session 15.

Karen: James made a miscue there. I think he was trying to read faster and he made a mistake 'cause he accidentally said the strongest *boy* and he skipped and he said *bunny*. I think he was reading a little bit fast and saw that *bull* and said *boy*.

Again, the students used their knowledge of the reading process to discuss the varied forms of texts in Session 16. The transcript read as follows (Figure 28):

Karen (reading *Body Battles* [Gelman, 1992] on tape: If you happen to inhale viruses and bacteria, dust or dirt, they get trapped in the mucus. Then millions of microscopic hairs called cilia wave and push the mucus up and out of the tube.

Figure 28. Excerpt from transcript of Karen's reading in Session 16.

Kevin (listening to Karen read on tape): This is harder to read than fiction, isn't it, Karen?

Karen: Yeah.

Teacher-researcher: Why is that?

Karen: Nonfiction, you know, real books are harder to read.

Kevin: Fiction is funner to read, too. You can use your imagination, and if you use your imagination it's like it's part of the reading.

As a community of readers, their dialogue about reading enabled them to revalue themselves as readers and to retrospectively identify and correct oral reading miscues. The group built a common vocabulary from engaging in discussions about reading. Having a common vocabulary empowered them to have more meaningful discussions as they simultaneously developed reading skill.

Developing Language to Discuss Miscues

The students used increasingly sophisticated language and vocabulary in their dialogue about reading. By Sessions 3 or 4, the teacher-researcher noticed the participants using the words *miscue* and *meaning loss*. By Session 6, the use of these terms was a natural part of the discussion about reading.

Kevin: I see a miscue, she missed *handed.*

Alison (later in the discussion): Meaning loss.

In Session 7, Alex used meaning loss to describe a miscue, as did Christy in the same session. Kevin continued to use both terms consistently throughout the study. The exchange in Session 7 is reported below:

Alex: It is meaning loss because we don't know the name of the rocks when he finishes reading.

Christy: I see a miscue, *wore.*

Kevin (later in the session): I see a miscue . . . .

Christy (later in the session): Meaning loss, I never saw a word like that before.

Karen: Look at *venture island*, it's a miscue.

James talked about a miscue in Session 8, but supplemented the vocabulary. He said, "Miscue, *transposed* the words, no meaning loss. Alex articulated the term *rereading* in Session 9. Alex stated, "Reread, if you don't understand."

As the sessions continued, Karen, Alison, Alex, Kevin, and James consistently developed more sophisticated vocabulary usage. In Session 10, Karen talked about Darrell *omitting* a word. In Session 11, Alex talked about *regressing* in order to

understand. In that session, Kevin noticed Josh *substituting* a word that did not make sense. These five students continued to use miscue vocabulary in their discussions and dialogue. Darrell, Christy, and Josh consistently used the terms *miscue* and *meaning loss*, but seldom discussed the strategies or errors in the terms or vocabulary consistent with miscue analysis.

Collaborative Moves During Discussion

As the students discussed miscues and the reading process, several collaborative moves were observed in the group. Barnes and Todd (1995) and Brown (1996) supported the conception that, when discussion takes place, collaborative moves facilitate the flow of the discussion. Barnes and Todd (1995) identified the moves as initiating, eliciting, extending, and qualifying actions in the discursive event.

The first collaborative move Barnes and Todd (1995) described is initiating. The term is self-explanatory, as it describes initiating the dialogue. Any time that a student in the group began a dialogue or changed the subject, an initiating move took place. At the beginning of CRMA sessions or during pauses in the discussion, one student usually took the initiative and set up a frame of reference that enabled the discussion to begin or continue. The nature of the study and activity meant that many initiations occurred when one of the students stopped the tape recorder to discuss a miscue. This is illustrated by a discussion in Session 7 (Figure 29):

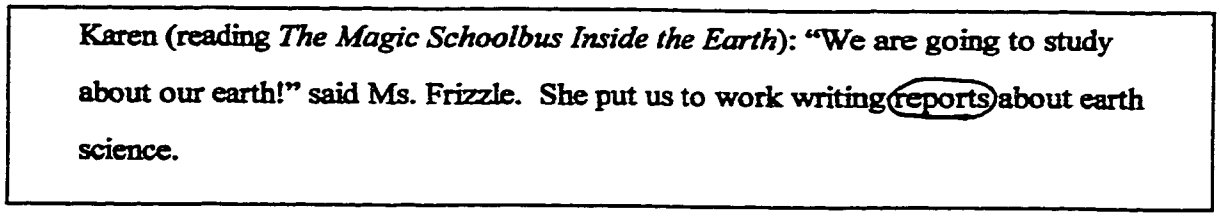

Figure 29. Excerpt from transcript of Karen's reading in Session 7.

Kevin: What happened at the very first of that page? You skipped *reports*. Is that good or bad for meaning?

Karen: Where's *reports*?

Teacher-researcher: Tell us about it Karen. What do you think?

Alison initiated the discussion in Session 8 after reading a passage from *Storms* (Simon, 1989).

Alison: I didn't understand a word. (Whole group tries to figure it out.)

In Session 9, about halfway into the session, Kevin initiated the following exchange, trying to make meaning of what he was hearing and reading.

Kevin: Who do we think said to get to higher ground?

The last three collaborative moves identified by Barnes and Todd (1995) within group discussions are eliciting, extending, and qualifying. Eliciting usually came in the form of requests, either for information or to expand a previous remark within our discussions. The teacher-researcher found when analyzing the data that she was usually the participant who elicited requests for information, as illustrated in Session 6 (Figure 30):

Josh (reading *The Magic School Bus inside the Earth*): Before long--Duck CLUNK!- we hit rock. Ms. The Friz handed out jackhammers. We began to break through the hard rock. (Cole, 1987)

Figure 30. Excerpt from transcript of Kevin's reading in Session 6.

Kevin: I see a miscue; he missed *handed.*

Karen: It's *The* Friz. He read *duck,* and it's *clunk.*

Teacher-researcher: Josh, what do you think? What's happening there?

Josh: Meaning loss.

. . .

Teacher-researcher: Kevin says not. Kevin, why not?

Kevin: *Duck* and *clunk* are like the same thing.

This exchange in Session 9 was rich in several strategies. It provided an example of a student's eliciting a request to expand on a previous thought and the extension of another individual's thought. Extending was the third collaborative move discussed by Barnes and Todd (1995). In Session 9, Kevin extended effectively by asking the group to expand on his thought. He questioned, "Who do we think said to get to higher ground? In this particular exchange, Kevin elicited an opinion from the group to expand on what the author had written.

Barnes and Todd (1995) reported that when a group finds a strategy that appears to be valuable in pursuing the task, members often collaborate to carry it out, so that one takes up an idea from where another left off and extends it. Brown (1996) explained

examples of this phenomenon in her study. In Session 6, the CRMA group discussed strategies for making meaning from print. In this example, the participants were extending one another's thoughts as they discussed various strategies:

Kevin: We learned to go back and look at our mistakes, miscues, to see if they were meaning loss or not.

Josh: We looked at if we left out a word, we could see if it matters.

Alison: We could look at clues in the sentences or in the pictures.

Later in the same session:

Teacher-researcher: Look at how they wrote *clunk* in all capitals. Why did they do that?

Christy: To make it like it really happened.

Alex: She means to make it exciting.

The last collaborative function that Barnes and Todd (1995) described was *qualifying*. Extending blended into qualifying: "To add to and extend what someone else has said is inevitably to change it, perhaps to qualify its range of application, or to point out complexities not mentioned in the original statement" (p. 35). Barnes and Todd (1995) wrote that extending and qualifying make up the bulk of collaborative talk in the quest for meaning, a fact borne out by further research (Brown, 1996). In Session 7, the group listened as Josh read from *The Magic Schoolbus Inside the Earth* (Cole, 1987), and, in one segment, the following exchange occurred:

Alex: It is a meaning loss because we don't know the name of the rocks when he finishes reading.

Alison: If we were reading just for fun, it wouldn't matter if we knew or not.

In Session 8, another example of qualifying took place:

Teacher-researcher: How's it going?

Alison: I didn't understand a word.

Teacher-researcher: OK, is that a miscue?

Kevin: Yes, but we don't need it in the sentence, we're learning about storms anyway.

Consonant with the literature (Barnes & Todd, 1995; Brown, 1996) the CRMA community of readers used all four collaborative moves to facilitate their conversation. Through discussion and dialogue, the group, like other research students, shifted their focus from exact reproduction of the text to making meaning from print (Martens, 1995).

Summary

Chapter 4 presented the findings of the descriptive case study on collaborative, retrospective miscue analysis. Two thematic categories emerged from the data, revaluing and community. These categories had several subcategories to support each of them. The students (a) made higher quality miscues by the end of the study; (b) discovered that good readers as well as struggling readers made miscues; (c) learned their strengths as readers; (d) incorporated new strategies in their reading process; (e) improved their perceptions of themselves as readers; (f) built a sense of community; and (g) shared reality through ceremonies, rituals, and dialogue.

CHAPTER 5

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to examine CRMA as an instructional strategy for use with elementary students. Additionally, the ways in which participation in a CRMA group might produce higher quality miscues was examined. The nature of student interaction during CRMA sessions and how participation in CRMA might influence the self-efficacy of participants as readers was yet another dimension of the purpose of the study.

Summary

Several areas for transferability (Lincoln & Guba, 1985) were drawn from the analysis of the research data. The teacher-researcher found CRMA to be an effective instructional strategy with the eight elementary students who composed this CRMA group. Students developed personal insights about their transaction with print that probably would not have occurred without the collaborative processes of this CRMA community. Students revalued their strengths as readers and their ideas about the reading process. Their interactions within the sessions established a community of readers that allowed the insights and revaluing that occurred to develop in a caring atmosphere. Student discussions and dialogue focused on print and making meaning from print. The

students increasingly used sophisticated vocabulary in their discussions over the 16-week study.

In recent years, the work of several researchers has pointed out that RMA and CRMA were effective instructional tools. Although most of the studies were conducted with middle and high school students and older adults (Costello, 1992; Marek, 1987; Worsnop, 1980), a few studies (Brown, 1996; Germain, 1998; Martens, 1997) were accomplished with upper elementary student participants. These studies reported that RMA or CRMA were effective strategies to improve reading with upper elementary students and adults.

This study demonstrated that CRMA is an effective instructional strategy with these particular eight elementary students from ages 7 to 8. As shown in Table 2, six of the eight students produced higher quality miscues by the end of the 8-week study. Most of the students began the study with Reader Profiles that revealed a tendency to make graphophonically similar miscues that produced meaning losses both in the sentence and during the retellings. Most had difficulty in the story retellings because of their refusal to recognize the need for regression when their oral production of the print did not make sense. At the end of the study, six of the eight students made more semantically acceptable miscues, regressed more when needed, and left uncorrected semantically acceptable miscues that did not disrupt meaning. Two of the students continued to rely on graphophonic and syntactic cues and often used nonsense substitutions in their reading.

The students who participated in CRMA appeared to become more empowered readers as they revalued the strengths they brought into the reading process. All eight

students were able to verbalize effective reading strategies other than sounding out the word. According to the Burke Reading Interviews and their poststudy RMI, all eight used other strategies in addition to sounding out the word by the end of the study. They relied less on other people when interacting with texts than they reported at the beginning of the study. As the dialogue evidenced, the students were able to bring other strategies into use as they transacted with print.

Alison: We can read the words around it and decide what the author wanted to say.

Kevin: We can skip and go on.

Karen: Skip it, think about it, and then look at the letters.

Alex: Reread it, regress.

By the end of the 16 sessions, seven of the eight believed they were better readers, as the transcripts of the Burke Reading Interview indicated. In contrast, only two thought they read well at the beginning of the study.

Several participants came away from the sessions with personal insights into their interactions with print that might not have occurred without the nature of the community that was built and the discussion that ensued within that community. During Session 16, in a discussion about reading and what the students learned during the study, James and Alex had this to say:

James: If you don't know what the word is, you can look; you can use words you know and see if it makes sense in the sentence.

Alex: People who wrote the book, now they don't write words that sound right, and sometimes when we speak, when we read the book we think it's right, but it's really not [what the author wrote].

The CRMA students sensed they belonged to a community of readers. And within that community, they engaged in reading discussions through caring talk, discussing specifics concerning reading processes and miscue and dialogue. Their discussions were generative in extending thought about reading. The group members supported each other in their efforts to make sense of the reading process, behaviors they did not exhibit prior to engaging in the sessions.

James, during Session 10, read from *Ferdinand* (Leaf, 1936):

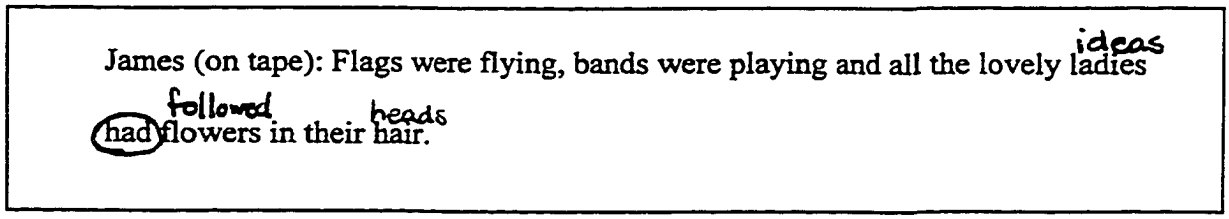

Figure 31. Excerpt from transcript of James' reading in Session 10.

Kevin: I see a miscue, you said *ideas*, that's *ladies*, that was a meaning loss.

Alex: James, you said *ideas* followed in their heads, why did you say that?

James: They were walking down the street talking, they had ideas. We all knew they were going to the bullfight, they might wonder about it.

Alex: So it made sense to you?

James: My mom would have ideas about a bullfight; she would wonder about it.

Although James's miscues had caused a deviation from the author's intent, the reader was confident enough within the group to discuss the transaction he made with the print. Having Alex's support, James made a case for his interpretation of what the author wrote. The rest of the group supported his struggle with the section of print. They tried to ascertain whether James could make sense of the story. This particular exchange continued:

Karen: This is a meaning loss for the sentence for the author, but not for the story. We know what's happening in the story without that sentence.

Christy: Right, we know the story. We can look at the pictures to look at their hats. It's not a meaning-loss miscue.

The sense of community that the group established seemed to allow the students the freedom to verbalize personal interpretations of the reading process and miscues without fear of reprisal from the group. The miscues in the selection above not only describe what was happening with group interaction but also serve to illustrate the personal interpretation of miscues and reading that evolved during the 8 weeks of CRMA. Christy, like Karen, decided that miscues that disrupted the meaning of the story were more important than those that disrupted the sentence. She told the group to read on before regressing to see if they could understand the story.

The collaborative nature of the sessions revealed many of the same findings that Slavin (1990) reported when using cooperative groupings. Consonant with Slavin's study, the CRMA students in the present study helped each other instead of making fun of those who made miscues. They did not perceive the teacher's role as a didactic

teaching role; they accepted the teacher-researcher as a participant. They seemed to judge the sessions from a social learning perspective, rather than as an effort to remediate their individual reading skill. As the examples depicted, the group's discussion and dialogue focused on print, and they made better meaning from print as a result of engagement in each session. The dialogue about Alex's miscue in Session 10 reinforced the previous examples:

> Alex: All the other bulls ran around snorting and butting, leaping and jumping so the men would think that they were very very strong and fierce and pick them.

Figure 32. Excerpt from transcript of Alex's reading in Session 10.

Kevin: I see a miscue. What do you think that word is?

Darrell: Fierce.

Teacher-researcher: What do you think it means?

Alex: All the people are scared of him.

James: Not a meaning loss.

Kevin: It does make sense.

In a later session, Session 9, part of the ritual of their time spent in review, this discussion occurred:

Kevin: We learned to go back and look at our mistakes, miscues, to see if they were meaning loss or not.

Josh: We looked at if we left out a word, we could see if it matters.

Alison: We could look at clues in the sentences or in the pictures if it matters.

Karen: You could watch for your pattern, if you figure it out.

This type of dialogue was typical of all the sessions.

Just as "miscue analysis has resulted in fundamental insights about the reading process" (Y. Goodman, 1995, p. 2), collaborative, retrospective, miscue analysis has allowed students

> to develop understandings of the reading process and to articulate these understandings and the strategies they use. These eight students supported each other by sharing their insights, knowledge, and experiences with reading. They assumed responsibility for their own reading and as leaders in discussion during the sessions. The students understood that they, not their teacher, parents, or friends, must construct meaning and make sense of a text for themselves. (Martens, 1995, p. 40)

Implications and Recommendations

Several implications and recommendations can be drawn from this research study. The CRMA process with this small group of eight students as young as 7 and as old as 11 was effective as an instructional reading strategy. Implications include that the CRMA process could be a viable reading strategy in a regular classroom. Students as young as seven could benefit from the CRMA process when used as an instructional strategy within a classroom setting.

Teachers, using forms of miscue analysis, including CRMA, determined that they entertained new insights into the process of reading process (Hood, 1995; Flurkey, 1995; Brummett & Maras, 1995; Martens, 1995; Brown, 1996). The teachers in these studies reported that they revalued the students in their classrooms and focused more on the strengths the students brought to the reading process instead of the deficits. Their students

developed an understanding of themselves as readers and a new understanding of the reading process. This was compatible with the characteristics of the eight participants in this study.

This study was conducted with eight struggling readers, three of whom were labeled LD (learning disabled) in reading. All three LD students developed in the quality of miscues they made and in their conceptions about themselves as readers. Clearly, CRMA could work well in the LD classroom as well as the regular classroom. The scheduling of a LD classroom, with small groups of students attending at one time, might prove to be ideal for CRMA sessions.

In the teacher-researcher's estimation, the impact of a heterogeneous grouping of students on the CRMA process should be considered for future study. It would seem that a heterogeneous grouping would be more in keeping with Vygotsky's (1978) conception about the zone of proximal development and its impact on student learning. The effectiveness of CRMA on fluent readers is another area in which little research has been done.

The timing of the sessions is yet another area where there is little research. Minimal research has been conducted on whether CRMA sessions are most beneficial immediately after reading a piece, or whether a period of time between the reading and discussion of miscues on the tape is detrimental.

There are many opportunities for research concerning the implementation of CRMA as an instructional strategy in the classroom to determine whether CRMA is to be used effectively in the classroom setting. On the whole, teachers have little knowledge

about miscue analysis and CRMA. Professional development opportunities in this area are needed. Further areas for study include (a) how best to implement CRMA in the classroom, (b) how to structure groups, (c) how long it would take to document improvement, and (d) how to prepare teachers to implement the strategy effectively.

Recommendations for further study in the elementary school include the following:

1. A study should be carried out to determine how CRMA should be implemented in classrooms.

2. A study is needed to discover how CRMA would work best with various groups, such as a heterogenous group and homogenous groups with multiage students, same grade students, with few students, and with larger groups.

3. A study is needed to learn how miscues can be documented if they occur in a developmental pattern.

4. As children add to their repertoire of strategies when dealing with difficult text, a study would be in order to learn whether their miscues document a shift in a specific order that teachers could use to benchmark progress. For example, if a child is making a high percentage of graphophonically dependent miscues, does this constitute a phase of natural development or a focus by instructional leaders? As the child moves from graphophonically dependent miscues, is the shift predictable in any way?

5. Another area of research that might prove beneficial is CRMA as an instructional tool using content area material. The students in this study group touched on the content area of reading. Kevin and Karen both agreed that content area text is harder

to read than fiction, and that is an area of research that few have investigated. CRMA sessions give students valuable insight into transacting with and making meaning from text. CRMA should assist students in reading difficult text as they become aware of meaning loss when they read segments of nonfiction text. Little research has been done in that area.

The findings and discussion in Chapters 4 and 5 found that seven of the eight children became more efficient in the use of the reading strategies. Five of the eight consistently used sophisticated vocabulary to discuss their miscues and thoughts on the reading process. Of those who cognitively accommodated the vocabulary of miscue analysis and used more efficient strategies, only three came from classrooms where teachers valued meaning instead of word reproduction. One participant, even though he recognized that his teacher would not value him as a good reader, persisted in his efficacious belief about himself as a reader. Research into exactly why CRMA sessions affected some of the students in this study more than others would add to the body of knowledge about how children's metacognition of the reading process affects their ability to transact with text. This narrative, about eight young participants involved in a systematic process to improve their reading skill through CRMA, characterized that learning did indeed occur within this nurturing, caring, discursive community of capable readers:

> We are the meaning makers–every one of us: children, parents, and teachers. To try to make sense, to construct stories, and to share them with others in speech and in writing is an essential part of being human. For those of us who are more knowledgeable and more mature–parents and teachers–the responsibility is clear: to interact with those in our care in such a way as to foster and enrich *their* meaning making. (Wells, 1986, p. 222)

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APPENDIX A

INSTITUTIONAL REVIEW BOARD FOR HUMAN USE APPROVAL

UAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

Office of the Institutional Review Board for Human Use

FORM 4: IDENTIFICATION AND CERTIFICATION OF RESEARCH PROJECTS INVOLVING HUMAN SUBJECTS

THE INSTITUTIONAL REVIEW BOARD (IRB) MUST COMPLETE THIS FORM FOR ALL APPLICATIONS FOR RESEARCH AND TRAINING GRANTS, PROGRAM PROJECT AND CENTER GRANTS, DEMONSTRATION GRANTS, FELLOWSHIPS, TRAINEESHIPS, AWARDS, AND OTHER PROPOSALS WHICH MIGHT INVOLVE THE USE OF HUMAN RESEARCH SUBJECTS INDEPENDENT OF SOURCE OF FUNDING.

THIS FORM DOES NOT APPLY TO APPLICATIONS FOR GRANTS LIMITED TO THE SUPPORT OF CONSTRUCTION, ALTERATIONS AND RENOVATIONS, OR RESEARCH RESOURCES.

PRINCIPAL INVESTIGATOR: WOODRUFF, CATHY L.

PROJECT TITLE: COLLABORATIVE RETROSPECTIVE MISCUE ANALYSIS WITH SECOND, THIRD, AND FOURTH GRADERS

_____1. THIS IS A TRAINING GRANT. EACH RESEARCH PROJECT INVOLVING HUMAN SUBJECTS PROPOSED BY TRAINEES MUST RE REVIEWED SEPARATELY BY THE INSTITUTIONAL REVIEW BOARD (IRB).

__X__2. THIS APPLICATION INCLUDES RESEARCH INVOLVING HUMAN SUBJECTS. THE IRB HAS REVIEWED AND APPROVED THIS APPLICATION ON AUGUST 9, 1995 IN ACCORDANCE WITH UAB'S ASSURANCE APPROVED BY THE UNITED STATES PUBLIC HEALTH SERVICE. THE PROJECT WILL BE SUBJECT TO ANNUAL CONTINUING REVIEW AS PROVIDED IN THAT ASSURANCE.

_____ THIS PROJECT RECEIVED EXPEDITED REVIEW.

__X__ THIS PROJECT RECEIVED FULL BOARD REVIEW.

_____3. THIS APPLICATION MAY INCLUDE RESEARCH INVOLVING HUMAN SUBJECTS. REVIEW IS PENDING BY THE IRB AS PROVIDED BY UAB'S ASSURANCE. COMPLETION OF REVIEW WILL BE CERTIFIED BY ISSUANCE OF ANOTHER FORM 4 AS SOON AS POSSIBLE.

_____4. EXEMPTION IS APPROVED BASED ON EXEMPTION CATEGORY NUMBER(S)_____.

DATE: AUGUST 9, 1995

Russell Cunningham, MD

RUSSELL CUNNINGHAM, M.D.
INTERIM CHAIRMAN OF THE
INSTITUTIONAL REVIEW BOARD

The University of Alabama at Birmingham
1170R Administration Building • 701 South 20th Street
Birmingham, Alabama 35294-0111 • (205) 934-3789 • FAX (205) 975-5977

APPENDIX B

PERMISSION TO CONDUCT STUDY

P.O. Box 2824
Decatur, Al. 35602
August 17, 1995

Mrs. Reba Wadsworth
Principal
Julian Harris Elementary
1922 McAuliffe Drive South West
Decatur, AL 35602

Dear Mrs. Wadsworth,

For partial fulfillment of the requirements for the doctoral degree in early childhood education and development at the University of Alabama at Birmingham, I am conducting a study of collaborative retrospective miscue analysis of second, third and fourth graders. I am requesting your permission to conduct this study at Julian Harris Elementary during the first semester of the 1995-1996 school year.

This study will involve introducing collaborative retrospective miscue analysis to a total of twelve second, third and fourth graders and then allowing them to use collaborative retrospective miscue analysis to gain insight and control over their own reading process. Data analysis will be based on the sessions that the students participate in. The children will be selected from those that return informed consent and participate in my classroom during the time that my classroom is in P.E. or library or music.

The study will be conducted without divulging the identities of the students or their families. The study will be conducted with every intention of maintaining or enhancing the self-esteem of the students. Results of the study will be provided upon request to the Decatur City School System.

I appreciate your time and consideration. Please call me at 350-9365 or 552-3096 if you have any questions.

Sincerely,
Cathy Woodruff
Cathy L. Woodruff

Reba Wadsworth

APPENDIX C

INFORMED CONSENT FORM

INFORMED CONSENT FORM

PARTICIPATION:

Your child is being asked to participate in a research project designed to describe how students interact in a collaborative retrospective miscue analysis session. Miscue analysis is the process of looking at the errors a child makes while he is reading orally. The errors are analyzed for clues to the strategies that the child is using to make sense of print. Miscue analysis a valuable tool in reading instruction. This study will be conducted over a period of seven weeks in Mrs. Woodruff's classroom on Tuesdays and Fridays from 3:00 until 3:45. During this time, your child will be introduced to miscue analysis. Your child will be instructed in reading miscues, tape his/herself reading and then collaboratively review the tapes, listening to and discussing the miscues that are made. The researcher will be conducting mini-lessons, as appropriate, and observing your child's interactions with other students during the sessions. The sessions will be audiotaped. There should be no risks associated with the sessions. Your child will not miss any regularly scheduled classes.

RISKS: There will be no risks to your child as a participant in this research. The information collected will be for research use only. It will not be used in any way to evaluate your child nor will it be placed in your child's permanent record.

WITHDRAWAL WITHOUT PREJUDICE: You may withdraw your child from this study at any time without any negative consequences. Early withdrawal will not affect your relationship with Julian Harris Elementary School, the researcher or The University of Alabama at Birmingham.

CONFIDENTIALITY: The results describing the interactions of the students during the collaborative retrospective miscue analysis sessions will be compiled in a final report and published as a dissertation. The final report will be shared with anyone interested. The identity of the school and all participants will not be disclosed. The participants will be assigned a pseudonym or number so that they cannot be identified.

COSTS/PAYMENT; There will be no costs associated with participation in this study. There will be no payment made for participation in this study.

QUESTIONS; If you have any questions concerning this project, Cathy Woodruff will be glad to answer them. Mrs. Woodruff's telephone number is 350-9365 or 552-3096 at work. You are not waiving any of your legal rights by signing this consent form. Your signature indicates that you have read and understood the above information and give your child permission to participate in this study.

_____ _____

Signature of parent/guardian date

_____ _____

Signature of witness date

_____ _____

Signature of investigator date

ASSENT

_____ (I agree to take part in this study)

Signature of student Date of Form: Sept 20, 1995

UAB-IRB

Consent Form Approved 3-22-96

Expiration Date 12-9-96

APPENDIX D

READING INTERVIEW

READING INTERVIEW

Name _____ Age _____ Date _____

Occupation _____ Educational Level _____

Sex _____ Interview Setting _____

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 or he doesn't know?

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

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

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

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

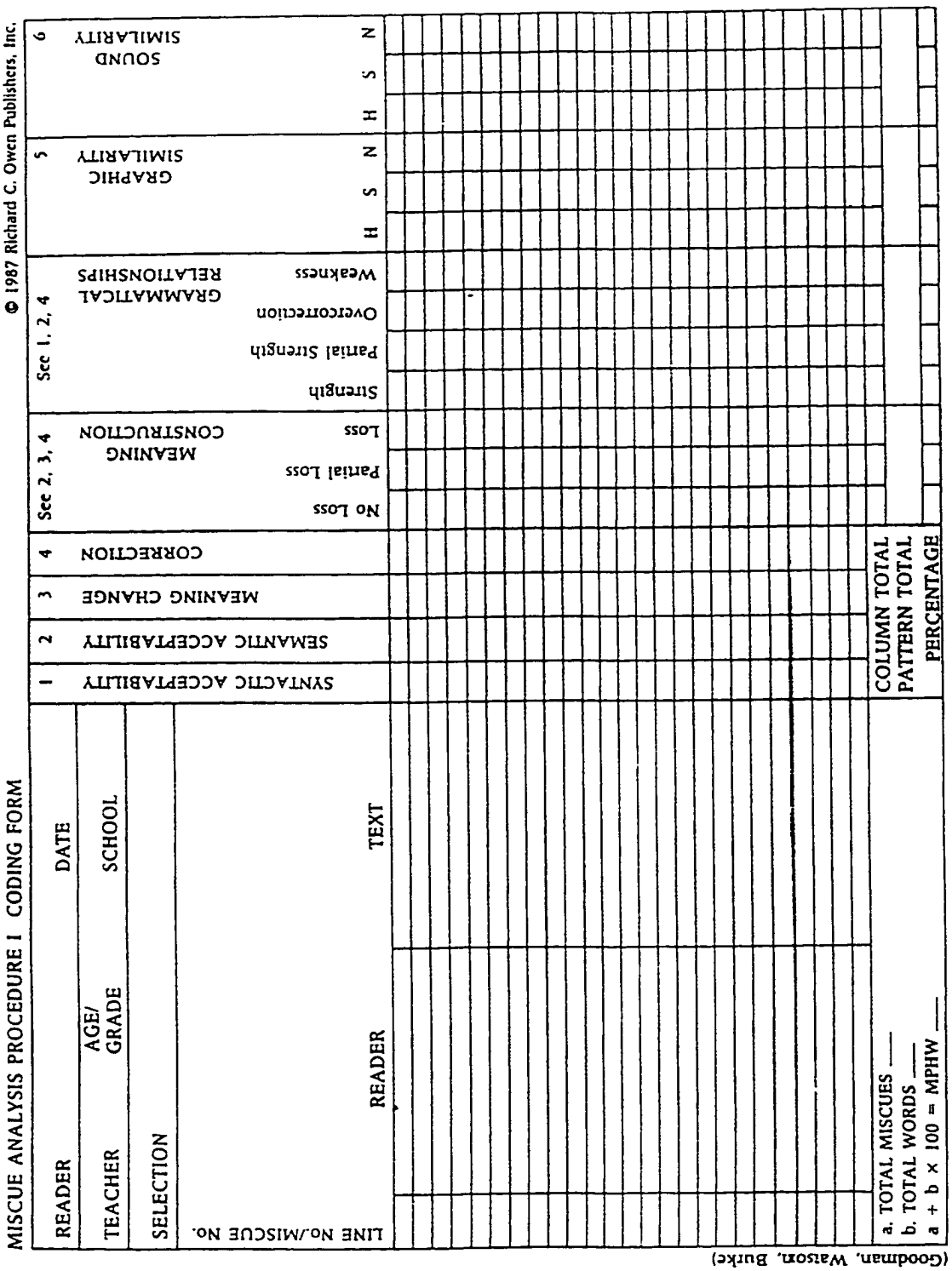
8. How did you learn to read?

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

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

APPENDIX E

READING MISCUE INVENTORY, PROCEDURE I



MISCUE ANALYSIS PROCEDURE I READER PROFILE

	%	%
MEANING CONSTRUCTION		
No Loss		
Partial Loss		
Loss		
GRAMMATICAL RELATIONS		
Strength		
Partial Strength		
Overcorrection		
Weakness		
GRAPHIC/SOUND RELATIONS		
Graphic		
High		
Some		
None		
Sound		
High		
Some		
None		
RETELLING		
Characters		
Events		
Total		
Holistic Score		

MPHW ____ TIME ____

READER DATE

TEACHER AGE/GRADE SCHOOL

SELECTION

REPEATED MISCUES ACROSS TEXT

LINE	READER	TEXT	COMMENTS (place in text, correction, etc.)

COMMENTS

(Goodman, Watson, Burke)

GRADUATE SCHOOL
UNIVERSITY OF ALABAMA AT BIRMINGHAM
DISSERTATION APPROVAL FORM
DOCTOR OF PHILOSOPHY

Name of Candidate Cathy Woodruff

Major Subject Early Childhood Education

Title of Dissertation Collaborative, Retrospective Miscue Analysis with Second, Third, and Fourth Graders

I certify that I have read this document and examined the student regarding its content. In my opinion, this dissertation conforms to acceptable standards of scholarly presentation and is adequate in scope and quality, and the attainments of this student are such that she may be recommended for the degree of Doctor of Philosophy.

Dissertation Committee:

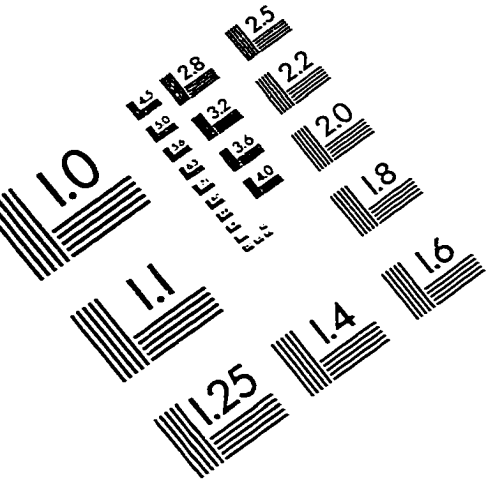
Name	Signature
Jerry Aldridge, **Chair**	Jerry Aldridge
Cecilia Pierce	Cecilia Pierce
Maryann Manning	Maryann Manning
Lois M. Christensen	Lois M. Christensen
Bobbye M. Booker	Bobbye M. Booker

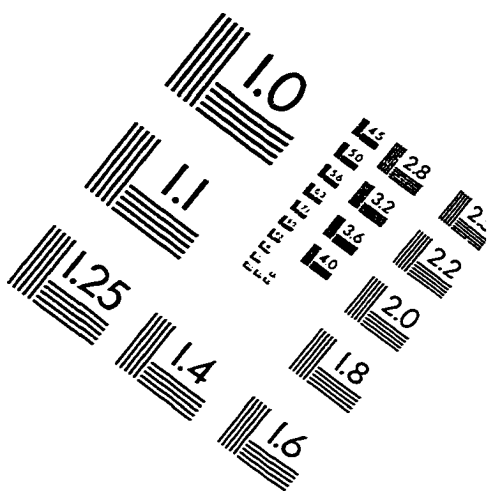
Director of Graduate Program 5/12/95

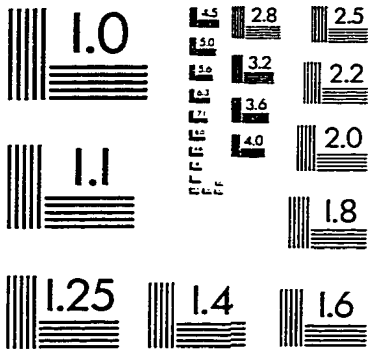
Dean, UAB Graduate School

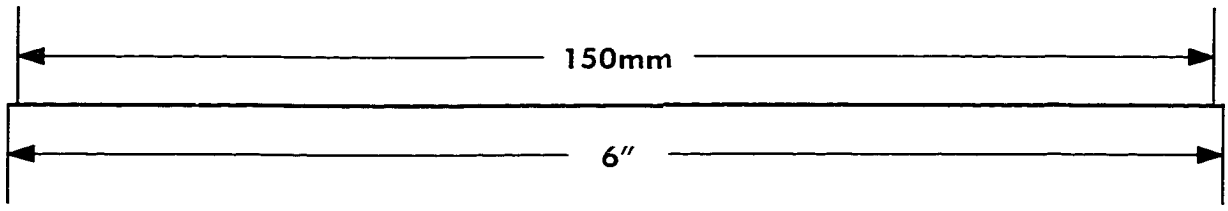
Date 7/9/95

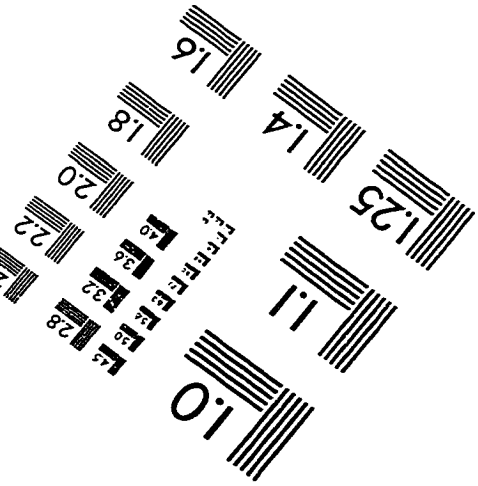
IMAGE EVALUATION
TEST TARGET (QA-3)

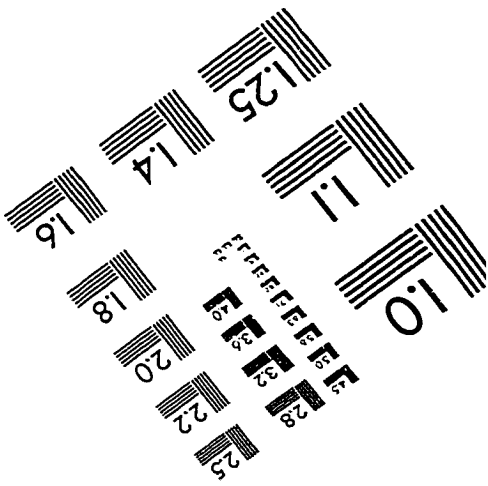












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