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Exploring reading with a small group of fourth grade readers and their teachers through collaborative retrospective miscue analysis

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EXPLORING READING WITH A SMALL GROUP OF FOURTH GRADE READERS AND THEIR TEACHERS THROUGH COLLABORATIVE RETROSPECTIVE MISCUE ANALYSIS

by

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CERTIFICATE OF APPROVAL

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PH.D. THESIS

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This is to certify that the Ph.D. thesis of

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To my “Big, Middle, and Little”—always and forever

"The miscues became, for me, windows on the reading process."

Ken Goodman
Reading, Writing, and Written texts:
A Transactional Sociopsycholinguistic View

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ABSTRACT

Literacy educators hold different beliefs about the best approaches to teach students how to read and about the reading process including a skills view of reading and learning to read versus a transactional, sociopsycholinguistic view of reading and learning to read (Weaver, 2002). Reading for understanding is an important skill to develop in students to promote overall success (Keene, 2008). When orally reading, readers occasionally say something differently than what is printed—which is called a miscue. Goodman, Martens, and Flurkey (2014) defined a miscue as "any response during oral reading that differs from what a listener would expect to hear" (p. 5).

The purpose of this study was to teach a small group of fourth grade readers a process called Collaborative Retrospective Miscue Analysis, or CRMA (Costello, 1996), to help readers learn how to notice and analyze miscues during oral reading through small group collaborative discussions about their miscues and understanding during reading. In this CRMA study, the students' teachers viewed video recorded student small group reading sessions to understand how students changed over the course of 14 weeks.

A reading survey called the BIMOR, or Burke Interview Modified for Older Readers (Goodman, Watson, & Burke, 2005) was used before and after the study and student and teacher CRMA sessions were video-recorded to study what students thought about themselves as readers and keep track of changing views about reading. In addition, students orally read two different texts to determine if there were any changes in readers' miscues over time through the use of the Miscue Analysis In-Depth Procedure Coding Form (Goodman et al., 2005). This analysis allowed a deeper understanding of the readers' usage of the three cueing systems during reading including the syntactic

(grammar) system; the semantic (meaning) system; and the graphophonic (letters and sounds) system (Goodman & Marek, 1996).

As a result of the CRMA process, three themes emerged from the analysis of the data collected. Readers moved to a more meaning-based orientation to reading although the CRMA study students still employed the use of other less emphasized reading strategies such as sounding it out, using a dictionary, and asking for help. Students developed more self-efficacy as readers as they became more confident and aware of their reading process as they participated in the CRMA student sessions. Finally, teachers revalued readers through observing their students as readers with strengths, effectively using problem-solving strategies during reading, and by noticing, "what the reader's smart brain does during the reading process" (Goodman, Martens, & Flurkey, 2014, p. 29).

Implications for both classroom instruction and teacher professional learning are explored as useful applications of Collaborative Retrospective Miscue Analysis in schools and classrooms to help readers move to a more meaning-based orientation to reading and to help readers become more self-efficacious and aware of their own reading process, as well as revaluing readers.

PUBLIC ABSTRACT

Literacy educators hold different beliefs about best approaches to teach students how to read and about the reading process. Reading is an important skill to develop in students to promote overall success. When orally reading, readers occasionally say something differently than what is printed—which is called a miscue. Goodman, Martens, and Flurkey (2014) defined a miscue as "any response during oral reading that differs from what a listener would expect to hear" (p. 5).

The purpose of this study was to teach a small group of fourth grade readers a process called Collaborative Retrospective Miscue Analysis, or CRMA, to help readers learn how to notice and analyze miscues during oral reading through discussion. In the CRMA study, the students' teachers viewed video recorded student small group reading sessions to understand how teachers' views of students changed over the course of the 14-week case study.

A reading survey before and after the study was used to interview readers and the video recorded student and teacher CRMA sessions were viewed to learn about what students thought about themselves as readers as well as any changing views they had about reading. In addition, pre-study and post-study samples of students' oral reading based on two different texts were analyzed to determine if there were any changes in readers' miscues over time.

As a result of the CRMA study, readers moved to a more meaning-based orientation to reading, students developed self-efficacy as readers, and teachers revalued readers.

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Logan's Revelation: A Vignette

Logan: "I make too many mistakes on the words. I just say something else."

Me: "Why do you think that, Logan?"

Logan: "I'm so stupid…because the words are right there."

As he listened to his own oral reading based on the text lying on the table in front of him, Logan realized his oral reading didn't quite match the printed text he's looking at now. Logan was what teachers label a "struggling reader." From his perspective, he really had to focus on the words to be able to read them accurately. In his attempt to read words accurately, Logan often forgot that the main point of his reading was to comprehend the text. Instead, he based his own self-concept as a reader on what he viewed as his "stupid mistakes."

Begrudgingly, Logan drew back from texts because the words were too difficult and he didn't understand why he couldn't just read the words on the paper like his friends could. To him, they read the words fluently and accurately. Why couldn't he? In a well-intentioned attempt to provide support and guidance to help Logan close his own educational gap in his learning, Logan was referred to an interventionist for specialized reading instruction. Eventually, Logan's teachers recommended specially designed instruction through the pipeline of special education to help him conquer his reading woes.

In many schools today, the aforementioned vignette is all too familiar. Caught in the grip of school and teacher accountability as a result of the No Child Left Behind legislation (White & Rosenbaum, 2008), teachers rely on state supported and

recommended literacy assessments in order to determine students' proficiencies in the area of literacy. As they sought answers, too often they unwittingly supported a "deficit" mentality in relation to students and their progress. Weaver (2002) explained:

> When teachers consider or label students as "struggling," "lower ability," or—worse yet—"poor" readers because they cannot read age-appropriate texts fluently, such labeling and possible tracking commonly damages the reader's self-esteem and has further negative effects on the reader, often causing the reader to try even harder to get the words right, at the expense of meaning. (p. 216)

This provides context to understand how some readers, like Logan, develop a sense of helplessness when it comes to reading. Wilde (2000) accurately asserted that when readers try to read words perfectly, there is a tradeoff for a loss of efficiency as well as a loss of comprehension because the reader focuses more on word identification than on gaining meaning from the text. Logan, like many readers, believed it was all about the words.

Theoretical Foundations for CRMA

Collaborative Retrospective Miscue Analysis (CRMA) is when a small group of two to six students "facilitate discussion about their miscues and retellings" (Moore & Gilles, 2005, p. 5). Essentially, one of the students in the small group agrees to be video recorded during an oral reading and later, the students mark the miscues, listen to the student's retelling, and discuss the reader's miscues in order to better understand the reading process (Goodman, Martens & Flurkey, 2014). CRMA is founded upon the work of Goodman, Rosenblatt, and Smith—all whose work, held in concert with one another, inform the theoretical foundations for CRMA and provide the necessary background to

support the use of CRMA with students in classrooms today. In brief, the theoretical foundations include the following three key concepts:

1. Goodman's (1994) transactional psycholinguistic model of reading
2. Rosenblatt's (1978) transactional theory, and
3. Smith's (1973) socio-psycholinguistic theory

Three theories of reading underpin miscue analysis and converge to create the philosophical basis for understanding the reading process undertaken by readers to create meaning from text. Goodman's transactional psycholinguistic model of reading, Rosenblatt's transactional theory, and Smith's socio-psycholinguistic theory work in tandem to explain how reading works. They are the theoretical foundation of miscue analysis and its various forms, which is used to assess students' reading abilities, better inform teachers' instructional decisions, and ultimately, better understand the reading process from the reader's perspective. All three reading theories are based on the Deweyian concept of active learning in which the reader is an active participant in the learning process within a community of learners (Dewey, 2009).

Goodman's Transactional Psycholinguistic Model was first introduced in 1984 in a piece he titled "Unity in Reading." Goodman (1985) emphasized that meaning is constructed between a reader, the text, and the author of the text—"But meaning does not pass between writer and reader. It is represented by a writer in a text and constructed from a text by a reader" (p. 815). This was perhaps Goodman's most important component of his model for reading. He then introduced the concept of dual texts in which the reader, during the act of reading, constructs a text that is parallel to and in addition to the printed text, demonstrating the active construction of meaning (Goodman,

1985).

Goodman and Marek (1996) explained the concept of cueing systems central to Goodman's model for reading. As readers read text, they use three information systems to construct meaning: the syntactic system, the graphophonic system, and the semantic system. All three are used simultaneously in the reading process and help the reader to make sense of text. The syntactic system highlights the structures of sentences and grammar. The graphophonic system concerns the relationships between letters and sounds. The semantic system is actively engaged as readers bring meaning to text and confirm whether or not text makes sense during reading.

Miscue analysis is predicated on the desire to better understand which cueing systems are involved in specific miscues, thereby demonstrating how the reader uses language in the reading process to create meaning (Goodman, Watson, and Burke, 2005). This affords teachers opportunities to learn more effectively about how to proceed with future instruction based on the reader's particular use of one or more of the cueing systems and how efficiently that cueing system was used to make meaning.

Integral to Goodman's model of reading are psycholinguistic strategies and cycles that readers use during the reading process to derive meaning from text. Goodman (1996) called them *psycholinguistic* because "there's continuous interaction between thought and language" (p. 111). These cognitive strategies include initiation or task recognition, sampling and selection, inference, prediction, confirming and disconfirming, correction, and termination. Readers continuously employ these strategies while drawing from their background experience to make sense of what they are reading (Rhodes & Shanklin, 1993). Goodman (1996) identified a cyclical process of reading that involves a

visual cycle, a perceptual cycle, a syntactic cycle, and a semantic cycle. Readers draw on these four processes to create meaning from the text.

Rosenblatt (1978) explained her transactional theory of reading by portraying the reader as an active, meaning-making entity approaching the reading process with background experiences that impact the reader's understanding of and comprehension of text. She defined text as "a set or series of signs interpretable as linguistic symbols" (p. 12). The text carries no inherent meaning until the reader transacts with the text. This transaction creates the "poem" that is created from the reading event. Rosenblatt (1964) eloquently explained the concept of the poem as "an occurrence, a coming-together, a compenetration, of a reader and a text. The reader brings to the text his past experience; the encounter gives rise to a new experience, a poem" (p. 126). This concept of the poem is highly correlated with Goodman's concept of dual texts and necessarily supports the notion that readers construct meaning from text using background experience as well as the printed word and that this new "text" runs parallel with the words in print.

Central to Rosenblatt's transactional theory is the belief that different readers bring different experiences to reading and thus create different meanings of texts. This belief is also supported by the concept that readers create different meanings of text based on their purpose for reading the text. Rosenblatt (1978) identified two main purposes for reading: efferent reading and aesthetic reading. Both impact the meaning a reader creates from the act of reading text. In efferent reading, the central purpose for reading is concerned with what the reader takes away from the reading after the reading event. Aesthetic reading, on the other hand, is concerned with the feelings, attitudes, and ideas that one experiences during the act of reading. Readers identify with these two purposes

for reading on a continuum and thus approach different texts differently, resulting in the creation of different meanings from the same text (Rosenblatt, 1988).

Frank Smith (1979), a psycholinguist by nature, shocked readers with two assertions that challenged prevailing assumptions existing in the teaching of reading during that time period. First, Smith proclaimed, "children cannot be taught to read" (p. 6). It was the teacher's responsibility to make it possible for children to learn how to read. Secondly, Smith explained that during reading, the more non-visual information the reader has, the less reliance on the visual information presented in text. In other words, "the more you know already, the less you need to find out" (p. 15). These ideas are confirmed by miscue analysis research and practice.

Smith's socio-psycholinguistic theory of reading also privileges the concept of error during reading. In fact, this was a major characteristic of learning, according to Smith (1973) who explained, "A child must take the risk of using a word incorrectly in order to find out whether the rules he has for identifying or using that word are correct; he must use his rules in order to get feedback" (p. 189). Central to miscue analysis is the idea that readers make miscues that are necessary to create meaning from text. In Smith's view, the construction of meaning from text is central to the reading process and "attempting to decode isolated words to sound is unlikely to succeed because of the number, complexity, and unreliability of phonic generalizations" (p. 155).

Perhaps the most important contribution from Smith's socio-psycholinguistic theory of reading involves the social aspect of learning. Smith (2004) intimated "other people help us to learn by helping us to understand" (p. 209). This emphasis on the social aspect of learning to read is best captured in Smith's creation of what he named the

"literacy club" (Smith, 1988). Students who join the literacy club learn to read and use language in a risk-free environment that helps them interact with other readers in authentic literacy experiences. Consistent with his views on teaching versus learning how to read, how would Smith answer his own question, "How do children learn?" Smith (1988) answered this question when he simply explained, "by participating in literate activities with people who know how and why to do these things" (p. 9). The idea of a "literacy club" is vital to understanding why students learn through social events and forms the basis of one of the variations of miscue analysis—the Collaborative Retrospective Miscue Analysis process, or CRMA.

All three of these theoretical constructs work in tandem to explain the reading process. Miscue analysis and its various forms are assessment procedures that describe students' reading abilities, better inform teachers' instructional decisions, and potentially help readers understand the reading process. Miscue analysis, used as a process to better understand readers and the reading process, is an integral part to teaching literacy in classrooms with teachers who wish to engage students in their own learning.

It is important to situate miscue analysis and its variations within the context of assessment to help teachers inform instruction. According to Serafini (2001), three paradigms of assessment include assessment as measurement, procedure, and inquiry. Assessment as measurement is operationalized as standardized tests and larger-scale assessments. Assessment as procedure leads to assessment procedures—focusing more on the collection of data than what the data informs teachers. Assessment as inquiry is "a process of inquiry, and a process of interpretation, used to promote reflection concerning students' understandings, attitudes, and literate abilities" (p. 387). Within this assessment

as inquiry paradigm, knowledge is socially constructed and learners transact with texts and the world to create new meanings and understandings (Rosenblatt, 1978).

In schools today, formative assessment has become the standard for assessing student knowledge and understanding. Popham (2008) defined formative assessment as "a planned process in which teachers or students use assessment-based evidence to adjust what they're currently doing" (p. 6). To oversimplify, formative assessment is an intentional process in which teachers or students use evidence of learning to adjust current learning to impact future learning.

Guskey (2007) specified that teachers "need to see their assessments as an integral part of the instructional process and as an essential element in their efforts to help students learn" (p. 16). This belief promotes the idea of the intertwining of instruction and assessment as both needed to help students learn. More profoundly, Stiggins (2007) emphasized the importance of the assessment process to use student results in ways that would "keep students believing in themselves as capable learners who make sound decisions that will lead them to greater levels of achievement" (p. 60). Using assessment information to help students believe in themselves as capable learners helps students see themselves as able learners with a purpose.

The reality of schools today is that standardized tests prominently shape the assessment landscape of classrooms and students' educational experiences. Valencia, Hiebert, and Afflerbach (2014) summarized three critiques of standardized tests. First, standardized tests do not reflect our understanding of the reading process and they are poorly aligned with instruction in classrooms where the promotion of higher-level thinking and more complex literacies exist. Secondly, standardized tests have an

inappropriate influence on curriculum, instruction, and assessment such that there has been a narrowing of the curriculum and often a fragmentation of teaching and learning experiences in classrooms. Lastly, overreliance on standardized tests positions teachers and students as "passive recipients and targets of assessment rather than active participants and partners in the process" (p. 18). Standardized assessment results are rarely received in a timely manner in order to provide feedback for teachers' instructional practices or students' progress in learning.

Valencia et al. (2014) argued that two forms of assessment are important for promoting student learning in ways that allowed teachers to remain important decision makers in their classrooms: authentic assessments and performance assessments. They described authentic assessment as those that "represent literacy behavior of the community and workplace, and that reflect the actual learning and instructional activities of the classroom and out-of-school worlds" (p. 22). Equally important is performance assessment in which "students are required to demonstrate their level of competence or knowledge by creating a product or a response" (p. 22). Situated within these two forms of assessment, CRMA offers teachers a form of authentic assessment linked closely to the real reading that happens with students and that incorporates students' responses to their reading in concert with discussions and thinking with a small group of learners facilitated by a teacher who is knowledgeable about miscues and the search for meaning during the act of reading.

Contextualizing CRMA within the assessment as inquiry paradigm and as a formative assessment is important for providing teachers and students with information to improve student learning and to help students believe in themselves as capable learners. I

argue later that CRMA holds value in schools to help teachers and readers revalue readers and the act of reading itself. Viewing CRMA as authentic assessment positions this literacy assessment as an important alternative to other forms of assessment predominant in schools today.

Statement of the Problem

"Some students, especially those who have experienced difficulties with reading for several years, are often resistant to and disinterested in reading" (Martens, 1995, p. 40). Students have attached a negative connotation to the word "miscue" and often find it synonymous with "mistake" or "error." Goodman (1996) depicted "*readers in trouble* to refer to all those who are not doing as well as they think (or someone else thinks) they should do in the development of reading proficiency" (p. 15). These students view other readers in two ways—those who can read and those who cannot. Their assumptions about themselves lead them to view themselves as lacking and unable to read effectively. More than once I have overheard readers mutter to themselves that they were "stupid" or "dumb" because of their mistakes.

We live in a world that champions fluency in ways that narrow students' definitions of what it means to be a "fluent" reader. State assessments use one-minute timed oral reading fluency measures to determine students' levels of proficiencies in literacy (http://www.fastbridge.org/assessments/reading/). One-minute timed fluency assessments influence students to form the belief that if they don't read every word perfectly, these errors diminish their levels of fluency. Students start to believe that they are more successful if they can read texts perfectly. Rasinski (2004) shared:

In some schools, where improvement of the reading rate has become the chief

> goal of fluency instruction, teachers admonish students to "pick up the pace," regularly time them on their reading to encourage them to beat their previous scores, and engage students in daily reading exercises that emphasize speed over meaning. (p. 50)

Rasinski (2004) also cautioned that an overemphasis on reading speed at the expense of meaningful reading and prosody leads to readers who read fast but understand little. Benchmarks for fluency rate also tend to encourage students to read as fast as they can in order to meet exceedingly high rates for words correct per minute.

Miscues in oral reading, as defined by Goodman (1996), are "unexpected responses that occur for a variety of linguistic and cognitive reasons" (p. 605). Goodman, Watson, and Burke (2005) further refined the definition of miscue to mean that it "is a place in which a reader's observed response (OR) does not match the expected response (ER)" (p. 3). Perhaps the best definition comes from Goodman, Martens, and Flurkey (2014) in which they defined a miscue as "any response during oral reading that differs from what a listener would expect to hear" (p. 5). Goodman et al. further added that "all readers make miscues and that miscues are inherent for readers of all proficiencies" (p. 6). This statement speaks to the critical importance of miscues to all levels of readers—miscues are part of the reading process.

In addition to miscue analysis, well-intentioned teachers often use running records as the standard for assessing students' reading abilities and skills to make decisions about next steps in instructional strategies and goals for individuals or small groups of students. In traditional running records, teachers listen to a student read grade level text for one minute and record the number of miscues to determine a student's accuracy level for

reading such text. This is represented as a quantitative percentage out of 100 that allows a teacher to make decisions regarding a student's reading level for choosing new texts for instruction with that particular reader. Weaver (2002) explained crucial differences between running records and miscue analysis. Running records focus on students' accuracy as well as the number of miscues a student makes. Miscue analysis focuses on the meaning the reader makes through their miscues and how those miscues relate to the students' sense of meaning from the text. The problem is often that teachers do not understand how to analyze the miscues to determine the types of miscues made and whether or not the miscues affect a student's reading comprehension. Students are often not included in such conversations about and assessments of their reading.

Collaborative Retrospective Miscue Analysis, or CRMA, holds great potential for affecting the ways in which teachers collect meaningful information regarding students' strengths in the area of reading and offers teachers an authentic method for assessing students' literacy behaviors and skills. Miscue analysis has been shown to be an answer to teachers' continual questions about how teachers can better instruct students over time with varying levels of literacy needs.

CRMA holds even greater potential in shaping students' views of themselves as readers over time. CRMA engages students in the collaborative assessment of their own reading and privileges the social aspect of learning so that students view themselves as co-constructors of meaning during the reading process. Elevated understanding of one's abilities during CRMA has been shown to be an answer to re-valuing one's self-concept during reading, as well as the reading process itself.

Research Questions

Collaborative Retrospective Miscue Analysis is an extension of miscue analysis that focuses on using the concept of collaboration within a structured, social environment to better understand the miscues a reader makes while in the process of reading. The central question for this study is: What happens when a group of fourth graders at Lincoln Elementary School participates in Collaborative Retrospective Miscue Analysis (CRMA)?

Because I am also interested in how CRMA affects students' reading behaviors and their ideas about the reading process as well as that of their teachers, other guiding research questions include:

1. How are fourth grade students' reading behaviors shaped through the CRMA process?
2. How are fourth grade students' ideas about reading and themselves shaped through the CRMA process?
3. How do fourth grade teachers' views of students as readers change through the CRMA process?
4. How do fourth grade teachers' ideas about reading change through the CRMA process?

Purpose of the Study

The purpose of this study was twofold. First, this study aimed to teach a small group of fourth grade students a process called Collaborative Retrospective Miscue Analysis, or CRMA, in order to investigate how their learning through CRMA changed their thinking about the reading process and themselves as readers. In CRMA, students

collaboratively analyzed their own oral reading miscues in order to better understand their reading process. During these sessions, I video recorded students' oral reading to use as the main source of discussion as students were taught how to collaboratively analyze their own and others' reading miscues to observe the reading process. I also interviewed students using the Burke Inventory Modified for Older Readers (BIMOR) to collect information about how students viewed themselves as readers as well as to better understand the students' understanding about the reading process itself. To better understand students' growth over time in the area of reading, I conducted several miscue analyses for each student to track the changes in their reading process throughout the study including before, during, and after the study.

Secondly, my study aimed to track similar changes in the students' teachers and their views of the readers and the reading process. Through monthly interviews with teachers in which they observed selected portions of the video recordings, teachers were asked to respond to video recordings and discuss their views of the readers and their own understanding of the reading process. As part of these interviews, teachers discussed their students, what they noticed about their students, and any changes in their students in respect to reading behaviors and the reading process.

Significance of the Study

This study was significant for several essential reasons for students, teachers, and school leaders. First, CRMA was seen as a critical and meaningful assessment for teachers in classrooms attempting to meet the diverse needs of all types of readers. In CRMA, the student is the lead learner about their reading and comprehension of text as a process approach to reading itself. Furthermore, the collaborative nature of CRMA

allows students to engage socially in the act of reading, thus becoming a motivational component to learning and assessing reading.

Second, students engaging in CRMA had the ability to critically examine their own views of the reading process itself—what it meant to be a "good" reader who tackles text to better comprehend complex texts. In this age of common core state standards, there is an increasingly rigorous demand placed on students to become critical consumers of text and to comprehend more complex text (Marzano, 2012/2013). CRMA allowed students to collaboratively use the reading process to aid in their comprehension of text.

Finally, this study was significant because previous studies focused on Collaborative Retrospective Miscue Analysis often showcased the changes in students engaged in the process of CRMA (Almazroui, 2007; Martens, 1998; Martens & Doyle, 2011; Moore & Aspegren, 2001; Moore & Brantingham, 2003). This study also described the changing views of the reading process from the vantage point of the students' teachers. This is significant because it allowed me to track the changing viewpoints about reading from the teachers as well as the students in my study. The study also sought to better understand the growth of students through the eyes of their teachers, as they viewed their students engaged in the CRMA process through video recorded excerpts. Shedding light on the students' changes as readers from the teachers' perspectives offered insight to the overall changes in students' views of themselves as readers.

In Chapter 2, I provide a review of the literature to determine a definition of reading pertinent to my CRMA study. I also synthesize research concerning miscue analysis and revaluing as a process to re-vision one's sense of self. I end with additional

explanations about teacher professional learning, educational reform that affected the context of my study, and finally, the politicalization of reading in the state that provided a backdrop for alternative forms of literacy assessment like CRMA.

Chapter 3 describes the methodology for my case study research. It explains participant selection, forms of data collection I used, and the analysis that led to my findings and conclusions.

I introduce the CRMA students through in-depth descriptions of them and present a reading survey and miscue analyses for three student participants in Chapter 4. I also introduce two teachers who discovered new ways of learning about students as they participated.

Chapter 5 presents findings. Evidence from a reading survey, observations of students participating in the CRMA process, observations from teachers' viewings of video recorded student CRMA sessions, and formal miscue analyses throughout the data collection phase of my study are further explained to shape the findings about CRMA as a result of that analysis.

Finally, in Chapter 6, I offer a discussion of the findings and conclusions of my study and identify study limitations. Implications for classroom practice and literacy assessment, as well as implications for teacher professional learning, are included in this chapter. I also include a section on strengths of CRMA for teachers. I end with recommendations for future research related to CRMA and share researcher reflections about this CRMA case study.

Chapter 2: Review of Literature

What is Reading?

I begin my review of literature with a discussion about how to answer the question, "What is reading?" because the answers to this simple question help situate my study within a context of reading that supports the purpose of my study. Simply stated, the answer to the basic question "What is reading?" is "reading is a process of making sense of print" (Goodman, Fries & Strauss, 2016, p. 65). Stated another way, "the sense you make of a text does not depend first of all on the marks on the paper. It depends first on the sense you bring to it" (Goodman, 1996, p. 1). Reading is about making meaning from the words, sentences, and texts we read.

It is helpful to understand what reading is not. Ken and Yetta Goodman (2011) shared some commonsense beliefs about how people make sense of print as being wrong and needing to be debunked. These included 1) learning to read centers on reading as word recognition, 2) word recognition depends on phonics, 3) phonemic awareness is central to learning to read, and 4) reading is the accurate identification of words. In this sense, reading is not about word recognition dependent upon readers' knowledge and skills in phonics. Nor is reading all about having a certain level of phonemic awareness. And reading is not just accurately identifying words. Reading is much more than phonemic awareness, phonics, and the identification of words.

Two contrasting models of reading and learning to read dominate American literacy instructional practices in classrooms during the 21st century. Evidence of both models can be found to some degree in schools and in classrooms intending to best teach students how to read. In the next section, I explain the two contrasting models that

include a “skills view” model and a “transactional, sociopsycholinguistic view” of reading and learning to read.

Weaver (2002) explained the skills approach to reading and learning to read as the model that “assumes that reading proceeds from the bottom up, starting with letters and letter-sound relationships, then words” (p. 33). In this approach, students are taught to read by starting with letter identification and letter sounds. Once students know those skills, then teachers focus on helping students learn the sounds of letters. Once students know the sounds of the letters, then students learn words. Weaver described this model as “part to whole” in which reading first includes phonemic awareness (sounds), then a shift to phonics (letter sounds), followed by word recognition in an automatic, rapid fashion, and then finally to a focus on meaning. This can also be described as a “bottom up” approach.

Conversely, a transactional, sociopsycholinguistic view of reading posited by Weaver (2002) emphasized that readers transact with texts they read and construct meaning by drawing upon their schemas, or “their entire lifetime of knowledge, experiences, feelings, and beliefs” (p. 36) to make sense of text. This model is a whole-to-part view or a “top-down” view of reading. Weaver added “reading is a process, a transaction between reader and text in a given situational context, an event during which meaning evolves” (p. 24). Goodman (1996) shared thoughts about the reading process as “reading isn’t recognizing words, it’s making sense of print” (p. 7). Goodman further depicted reading as a transaction between the reader’s mind and the written text the reader reads to make meaning out of the text. Simply stated, Goodman, Martens, and Flurkey (2014) summarized, “reading is making sense or constructing meaning” (p. 4).

Miscue Analysis

Over the past 40 years, miscue analysis research and its application in classrooms across the country has ebbed and flowed just as the winds of change continually affect teaching and learning. Miscue analysis holds great potential for teachers to learn how readers construct text and make meaning from print—to see the reading process unfold before one's very eyes. I provide a background for Retrospective Miscue Analysis (RMA) and Collaborative Retrospective Miscue Analysis (CRMA) through the history and research regarding the early beginnings of miscue analysis and its application to teaching and learning about students' processes for reading. Also pertinent to the study is the concept of revaluing in developing self-efficacious readers.

The history of miscue analysis began quietly in 1965 with a short article written by Kenneth Goodman entitled "*A Linguistic Study of Cues and Miscues in Reading*" in which two succinct statements created the fuel for the next 40 years of miscue analysis research. Goodman (1965) stated "reading has been defined as the active reconstruction of a message from written language" (p. 639) and "reading is a psycholinguistic process" (p. 639). These two statements defined the theory of the reading process that Goodman formulated and that ultimately changed reading instruction and learning in the United States for years to come. Most importantly though, through this study, Goodman found that readers were better able to read more words in context than from word lists, which challenged the notion that readers had to study long lists of words in order to learn how to read. Students understood more words when they were placed in the context of a story than compared to a list of unconnected words. Goodman (1970) called reading a psycholinguistic process because when readers read text, it is a process that involves

language and thinking. In addition to using the three cueing systems (graphophonic, syntactic, and semantic systems), a reader brings experiences to a text in order to make meaning of the text.

From Goodman's early miscue research, he created a taxonomy of cues and miscues in reading that provided teachers and researchers with an analysis tool for analyzing miscues (Goodman, 1969). As teachers analyzed miscues from a student's oral reading, the taxonomy offered questions to ask about each miscue in order to better understand the reader's process of making meaning from text. The analyst compared the reader's observed response (O.R.) to the expected response (E.R.) in order to compare the two responses for determination of understanding. Goodman was one of the first reading researchers to present the theoretical argument that reading was a psycholinguistic process. Goodman (1969) added, "Understanding of the process must depend on understanding how language works and understanding how language is used, that is how language and thought are interrelated. Psycholinguistics is the study of these relationships" (p. 11). Goodman also presented three basic kinds of linguistic information, also defined as cueing systems, that readers use to make sense of words during the act of reading which was integral to his theory of reading to be described later: graphophonic information, syntactic information, and semantic information.

Smith and Goodman (1971) provided further clarity for the usage of the word "psycholinguistics" to the reading process as they challenged longstanding notions of teaching reading through the word study method. They added, "Rather the evidence is that the deep level process of identifying meaning either precedes or makes unnecessary the process of identifying individual words" (p. 179). In "*Reading: A Psycholinguistic*

Guessing Game," Goodman (1976) presented a psycholinguistic model for reading that involved the three cueing systems and an eleven-step process that readers use to navigate both cues and miscues during the act of reading to create meaning based on text. Allen (1972) continued the psycholinguistic conversation by adding that young readers learn language before entering school, can apply that language learning to the reading process without being able to verbalize it, and bring a great wealth of experience to the act of reading. Readers do this through the flexible use of the three cueing systems during reading, thereby strengthening the need for miscue research over time. Allen (1972) added, "Decisions are based on the information gained from using the available cue systems. Only when a child demonstrates to us through his oral reading behavior that he is making such decisions can we be sure that he is reading with meaning" (p. 263).

Various researchers and followers of Goodman's research continued to refine miscue analysis over the course of the 1970s and 1980s to impact the teaching of reading as well as the use of miscue analysis in the classroom as a valid assessment of students' abilities to read and comprehend text. Goodman and Burke (1972) wrote the *Reading Miscue Inventory: A Manual Procedure for Diagnosis and Evaluation* in order to bring Goodman's Taxonomy of Reading Miscues to classrooms across the country. In their original *Reading Miscue Inventory (RMI),* Goodman and Burke (1972) stated that the RMI "gives teachers the opportunity to examine and evaluate the interaction between the language of the reader and the language of the author" (p. 5).

In an attempt to provide less obtrusive or less time-demanding procedures for implementing miscue analysis in classrooms, Goodman, Watson, and Burke (1987) created additional miscue analysis procedures in their work *Reading Miscue Inventory:*

Alternative Procedures. Most notable in their 1987 work was the notion that "the most significant outcome of understanding miscue analysis is the ability to build a personal model of the reading process" (p. 9). This reiterated the concept that readers bring to the reading process a wealth of knowledge and understanding and that the act of reading itself depends very much on the interaction between the reader and the text. Goodman, Watson, and Burke updated their RMI work in 2005 to highlight an important shift from evaluation to instruction. The authors also included the Burke Reading Interview (BRI) as a method to gain valuable information in order to design quality instruction for students based on teachers' knowledge regarding the student as a reader. Goodman et al. (2005) stated, "What students believe about reading and reading instruction affect the decisions they make about their reading strategies" (p. 179).

A brief history of miscue analysis would not be complete without mentioning variations that have continued the application of miscue research to various contexts. Rhodes and Shanklin (1990) co-developed an instrument for gathering miscue data called the CRMA, the Classroom Reading Miscue Assessment. Useful for teachers collecting data, the CRMA was used without audiotaping readers in the act of reading. Goodman and Marek (1996) described Retrospective Miscue Analysis (RMA) as involving "readers listening to, thinking about, and talking about the miscues they made during a previous oral reading" (p. 39), which was often audiotaped for students to refer to during the RMA session.

Sarah Costello (1996) included small groups of readers participating in the RMA session, but facilitated and owned more by the readers themselves in what she termed "Collaborative Retrospective Miscue Analysis" or CRMA. Drawing on students' social

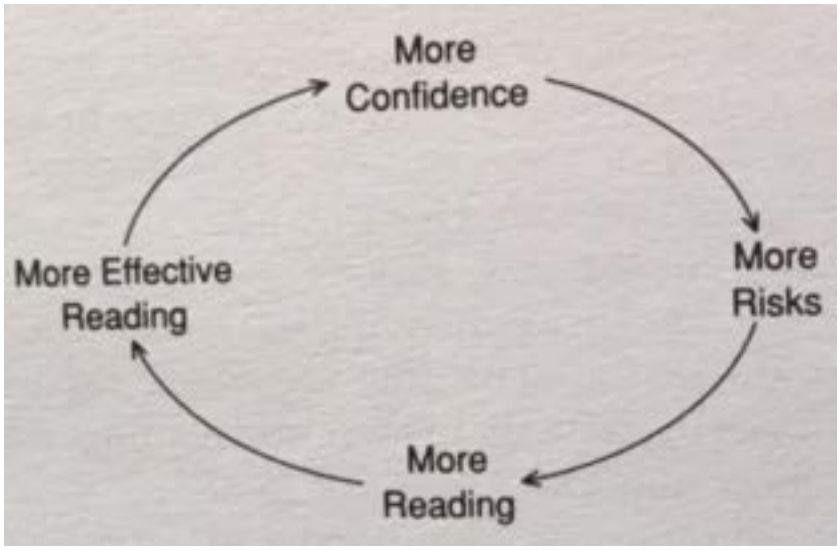
nature of learning is at the heart of CRMA and promotes greater student direction of learning. Davenport (2002) adapted miscue analysis and created Over the Shoulder Miscue Analysis (OTS) which is "an untaped procedure that is conducted as a teacher sits beside a student and literally looks over her shoulder at the text" (p. 110). Kabuto (2009) explored the inclusion of a student's family within the miscue analysis procedures to create the FRMA, or Family Retrospective Miscue Analysis, in which families participate in oral readings and discussions of miscues together to enrich literacy understanding and involvement. Each of these versions of miscue analysis built on the original research of Kenneth Goodman and advanced miscue analysis understanding and application throughout schools across the country.

Moore and Gilles (2005) defined Collaborative Retrospective Miscue Analysis as a "collaborative effort among students assigned to small groups to discuss miscues and retellings without the continuous or direct guidance of a teacher" (p. 64). Martens and Doyle (2011) added that "[r]eaders look through the miscue 'window' with another reader, or for collaborative RMA, a group of readers, to examine their own reading process and evaluate, understand, and learn from it" (p. 49). In essence, a group of readers audio-records their own oral readings in order to spend time analyzing their miscues and discussing their understandings, misunderstandings, and insights within the small group with ever decreasing support from the teacher. As this responsibility to discuss and analyze is given more to the students within the small group, there is a gradual release of responsibility over time and the ownership of the students increases (Moore & Gilles, 2005).

Revaluing: A Process to Re-vision One's Self

Goodman and Marek (1996, p. 206) created a cyclical graphic to represent the revaluing process that occurred as a result of readers' participation in Retrospective Miscue Analysis. The Cycle of Revaluing graphic (see Figure 1) included the following components of revaluing: more confidence; more risks; more reading; and more effective reading. As Figure 1 illustrates, a reader improves reading by reading more. As confidence is built and more risks are taken as a reader, the reader reads more, which leads eventually to more effective reading.

Figure 1 - Cycle of Revaluing



Adding the social component of the collaborative group to the Retrospective Miscue Analysis (RMA) procedure expedites the positive effects of participating in a social setting that aims to revalue the act of reading and readers themselves. Learning to read is a social event and builds on readers' needs to communicate with others during the learning process (Goodman, 2014).

In a study that included direct observation and experiences working with several

students over a two year period, Watson (2011) worked specifically with Syed, a high school senior from Sudan, who greatly benefitted from the Retrospective Miscue Analysis process to re-engage as a reader. When he came to words that he did not know while reading, he simply placed a checkmark next to them, identifying them as words he needed to think about more in the process of reading. Through her work with Syed, Watson and student became more reflective as learners. Watson described how "engaging in RMA, Syed was in charge of his progress as he thought out loud about making meaning" (p. 75). Over the course of their work together Syed realized that if he spent more time trying to pronounce words correctly versus searching for word meaning, that he often had very little understanding of the text. In Watson's words, "We reclaimed teaching as a space in which relationships are built, grown, and are used to support the use of strategies for more effective and efficient reading" (p. 76).

Goodman, Martens, and Flurkey (2016) described the process they used to help Zachary, a fourth grade student, revalue himself as a reader over the course of 14 RMA (Retrospective Miscue Analysis) sessions during a span of five months. Through listening to himself reading and discussing his miscues, along with the strategies he used while reading, at the end of the study, Zachary "spoke confidently and named multiple strategies for dealing with problems encountered in his reading" (p. 213). One important outcome of the study was that Zachary realized that his focus on meaning making while reading allowed him to understand that he made miscues because he was focused on making sense. Goodman et al. demonstrated that through this level of raising awareness about reading, "Readers become aware that they are learners who control their own reading, construct meaning, and, as a result, continue to grow as readers" (p. 224).

Readers often grapple with their own identities as readers when they encounter difficulties with reading. These difficulties in reading often negatively affect the reader's sense of self as a reader and students often define themselves by the failure they experience (Moore & Gilles, 2005). Yetta Goodman (1996) eloquently stated, "As part of miscue analysis, I realized that readers' beliefs about themselves as readers often influence their literacy development" (p. 600). Bloome and Dail (1997) added:

> Miscues may provide a 'window' on the identities that readers are taking up in a particular reading event, especially when the identities they assume are different from the identity we expect them to assume or that we have made available for them to assume. (p. 615)

It is critical, therefore, that teachers use opportunities like CRMA to help readers confront their own reading identities and allow them to revalue themselves as literate individuals. CRMA holds potential to accomplish that process of revaluing both reading and readers.

Martens and Doyle (2011) shared four key insights, or "big reclaiming ideas" based on their work with a collaborative RMA group called "The Mighty Readers" that summarized the potential for CRMA to help readers revalue reading and themselves as literate beings: all group members experienced revaluing to reclaim themselves as learners; relationships were key to reclaiming learning; readers assumed agency; and a safe, risk-free environment built on respect and strengths was key to the revaluing process. Vitally important to the success of CRMA, then, is establishing a community of learners who feel comfortable taking risks as readers and playing with language to gain meaning from miscues through the process. After a series of Retrospective Miscue

Analysis sessions, Martens and Doyle (2011) shared that "Ron and his peers shifted from being passive observers to actively reclaiming their learning of reading as young researchers and colleagues" (p. 56). Teachers who use CRMA must first pay attention to the creation of a safe environment for students to try on new identities as readers and challenge existing reader identities in this safe space for learning.

Teacher Professional Development

An important delineation exists between two terms that are often used interchangeably, but provide implications for schools today in the area of improvements to teacher practice. Those two terms are "professional development" and "professional learning." Professional development helps educators develop skills and knowledge useful for meeting the needs of diverse learners (Mizell, 2010). Often, professional development is considered to be what schools do to teachers—they develop them (Easton, 2008). However, Easton implored that more was needed for teachers to meet the varied needs of students. Teachers need to be wise and knowledgeable, or more than just developed—they need to be learners and self-developers. Lieberman and Miller (2014) described a view of professional development under the assumption that "teachers need direction instruction about how to improve their skills and master new strategies" (p. 7). There is an assumption here that professional development is top-down with little teacher voice in the design of teacher learning to improve the quality of teachers.

Raphael, Vasquez, Fortune, Gavelek, and Au (2014) offered a definition of professional learning as one that "favors ownership over compliance, conversation over transmission, deep understanding over enacting rules and routines, and goal-directed activity over content coverage" (p. 147). In other words, professional learning for

teachers promotes teacher buy in, conversations about students and their learning, broad understanding of curriculum, instruction, and assessment, and work towards goals to improve student learning.

Defining teacher professional learning is not an easy task considering the wide variety of definitions and its connections with schools today. Learning Forward (2010), an international organization devoted to the improvement of teacher professional learning and also formerly known as the National Staff Development Council, defined professional learning to mean "a comprehensive, sustained, and intensive approach to improving teachers' and principals' effectiveness in raising student achievement" (p. 16). Furthermore, Reeves (2010) defined what effective professional development looked like when he stated, "It is intensive and sustained, it is directly relevant to the needs of teachers and students, and it provides opportunities for application, practice, reflection, and reinforcement" (p. 23).

No matter the specific definition one uses to explain the intricacies of professional learning for teachers, many characteristics of professional learning affect teacher practices in classrooms. Often the research behind such characteristics varies widely in meaning or is even contradictory in nature (Guskey, 2003). Because of the many definitions and variety of what professional learning looks like in schools, it can be difficult to determine what effective teacher professional learning looks like in order to truly impact student learning. Guskey (2009) stated, "The point is that truly effective professional development may stem not from a single list of 'best practices,' but instead from a collection of core elements that must be adapted to the unique contextual characteristics of a particular school" (p. 231).

Because there are so many needs of teachers to meet the demands of schooling today, professional learning may be as individualized as each teacher in the teaching system. However, in an attempt to bring coherence to this subject and its connections to this study, I will discuss key characteristics, or core elements of teacher professional learning that are pertinent, and indeed, supportive of the teachers to be included in this study on CRMA.

Darling-Hammond, Wei, Andree, Richardson, and Orphanos (2009) reported four general guidelines for the design of effective professional development programs to include:

1. Professional development should be intensive, ongoing, and connected to practice,
2. Professional development should focus on student learning and address the teaching of specific curriculum content,
3. Professional development should align with school improvement priorities and goals, and,
4. Professional development should build strong working relationships among teachers. (pp. 9-11)

Because professional development should be intensive, ongoing, and connected to practice, it is imperative that teachers participate in learning experiences that will impact changed practices in the classroom. DuFour and Fullan (2013) advocated, "leaders focus on creating the processes and culture that enables educators to learn continually as part of their routine professional practice" (p. 54). Learning Forward's (2010) definition of professional learning included "workday learning, learning that takes place when teachers

are at school and requires that districts make time for learning and improving practice" (p. 16). Guskey (2009) added, "educators need time to deepen their understanding, analyze students' work, and develop new approaches to instruction" (p. 230). Darling-Hammond (2010) called this "learning to practice *in* practice" (p. 316). The most effective professional development champions the work that teachers do in the classroom and in the school context to support educator learning.

Professional development focuses on student learning and addresses the teaching of specific curriculum content. Reeves (2010) explained three characteristics of high-impact professional learning as "1) a focus on student learning, 2) rigorous measurement of adult decisions, and 3) a focus on people and practices, not programs" (p. 21). Professional learning is directly related to the learning that students do in classrooms and is evaluated based on student results. For professional learning to be effective, we must also interrogate adult practices in schools. Additionally, professional learning isn't necessarily all about adopting a specific program, but instead focusing on the needs of people within the system and implementation of changed practices for continuous improvement. Learning Forward (2010) promoted the concept of a continuous cycle of improvement that examined student and teacher learning needs by reviewing data as well as developing a set of clear educator learning goals aligned to those learning needs.

Professional learning aligned with school improvement priorities and goals is key to creating a coherent system of supports for teachers to meet the needs of students. DuFour and Fullan (2013) found that the deepest professional learning occurred when it "is aligned with the system's goals rather than the pursuit of random interests" (p. 54). This type of professional learning is not random, but rather tied closely to the school's

goals, which in turn helps teachers feel that the learning is connected to their real work.

Professional learning should build strong working relationships among teachers because teachers need collaboration in order to be effective in meeting the diversity of needs and instructional decisions made in teaching. Bean and Swan Dagen (2012) explained professional development "must be based on teacher inquiry and take place in a culture that embraces collaboration among a community of learners" (p. 359). Teachers must work collaboratively in order to ensure that all students learn in an environment in which teachers learn from and with one another as well as support each other (DuFour & Fullan, 2013).

In terms of professional learning and its role in improving literacy, Routman (2014) situated literacy in the context of professional learning when she shared the following characteristics of professional learning for improving literacy in schools: "dialogue professionally with the principal and teachers on literacy matters of substance; observe, discuss and apply exemplary reading and writing practices with the support of the principal, teachers, and experts; and concentrate on whole-school literacy improvement through shared learning" (p. 231). These characteristics comprised what Routman termed a "professional *literacy* community" focused on the improvement efforts in schools to bolster literacy and literacy achievement.

Raphael, Vasquez, Fortune, Gavelek, and Au (2014) appraised professional learning from within a sociocultural perspective about teacher professional learning built on a foundation of interactions with others. Raphael et al. summarized professional learning using five principles rooted within this sociocultural perspective: professional learning promotes teacher agency and ownership of learning; professional learning is

situated as meaningful problems of practice; professional learning is based on dialogical practice; professional learning maintains a systemic view; and professional learning is sustained across time. Positioning CRMA within these sociocultural principles mentioned above provides the foundation for teacher professional learning related to this study and summarizes the most important concepts that make teacher professional learning meaningful for teachers.

Educational Reform in the State

In 2012, a blog post from a major newspaper in the state capital announced the headline "Education reform passes House and Senate" (Noble, 2012). With this announcement, a package of educational reforms in the state was set in motion as the first step in a multi-year approach to improving education. Within this reform package, there would be implications for students, teachers, and administrators in the K-12 educational system throughout the state. The author announced,

> At the heart of the reform package is a bundle of provisions aimed at ensuring literacy among students in Kindergarten through third grade. Under the bill, schools must more closely monitor student's reading skills in the early grades and provide intensive instruction for the ones who aren't making adequate progress. (Noble, 2012, para. 8)

The passing of this particular educational reform package created a domino effect in order to move from legislation to implementation in the state's public school classrooms. The initial state legislation was signed by the governor and enacted through the Early Literacy Implementation Law, Iowa Code §279.68 (2012). This in turn created the need for the Iowa Department of Education to interpret the legislation and various

expectations for schools and school leaders in the state. The Department interpreted the law through the creation of the Iowa Administrative Code 281-62, or IAC 281-62 (2014). This administrative code provided more specifics for the state's school districts to the requirements of the law and was called State Standards for Progression in Reading. Finally, in an effort to provide additional implementation guidance, the Iowa Department of Education produced a document entitled *Early Literacy Guidance* (2014) that provided support to maneuver and implement the many specific requirements of the new law, called the "Early Literacy Implementation" law, or abbreviated as ELI. I provide further information about each of the aforementioned components to bring particularity and specificity to the major components of the educational reform law that impacted the state's schools, students, teachers, and administrative staff.

Iowa Code §279.68 was passed by Iowa legislators in 2012 and was required to be implemented in the 2013-2014 school year. Briefly, this Early Literacy Implementation law included the following major components aimed at improving the status of literacy in the state, specifically to create academic conditions in which all students were proficient in reading by the end of third grade (Iowa Code §279.68):

A. Universal literacy screening three times per school year for all students K-3 using a locally determined screener or the statewide literacy screener
B. Intensive reading intervention for students deemed "substantially deficient" according to the literacy screener
C. Weekly progress monitoring for students "at risk" or "substantially deficient"
D. Intensive evidence-based summer reading program for students who are "substantially deficient"

E. Retention for students not proficient by the end of grade 3 (although there are provisions for alternative forms of demonstrating student proficiency in reading that can exempt child from retention.)

When the ELI legislation was passed, it carried with it school funding intended to bolster efforts to improve literacy instruction and assessment in grades K-3. School districts in the state received Early Literacy Implementation funds to assist schools in ensuring that schools had adequate resources for improving literacy and included evidence-based literacy curriculum, interventions, and other resources necessary for quality instruction. ELI funds could also be used to create intensive summer reading programs. This was one instance in which the state's legislators followed through on the funding of a major mandate, and it was aimed at grades K-3 only.

In its interpretation of Iowa Code §279.68, the Iowa Department of Education added Chapter 62: State Standards for Progression in Reading to the Iowa Administrative Code, aimed at helping school districts with the implementation of this new state law. The Code, IAC 281-62, outlined standards for all assessments, universal-screening instruments, and progress-monitoring instruments (IAC 281-62). Furthermore, it determined basic levels of reading proficiency on approved assessments by stating,

> The department shall determine benchmarks for basic levels of reading proficiency to be used with approved assessments based on the ability to predict meaningful future outcomes of a student's reading performance that is sufficient to master appropriate grade four reading skills prior to the student's promotion to grade four. (IAC 281-62.2(6))

IAC 281-62 also contained provisions for the identification of and treatment for

students having a "substantial deficiency" in reading. If a student's score on the universal screener fell below the grade level benchmark for a period of two consecutive universal screening assessment periods, that student was then determined to have a "substantial deficiency" in the area of reading. In turn, teachers were required to provide intensive reading intervention(s) to that student as well as to monitor that student's reading progress weekly using a state approved progress monitoring instrument. "A school district shall continue to provide the student with intensive reading instruction until the reading deficiency is remediated" (IAC 281-62.4(3)).

IAC 281-62 included a requirement for parental notice at least on an annual basis in writing that identified the following:

1. That the child has been identified as having a substantial deficiency in reading;
2. A description of the services currently provided to the child;
3. A description of the proposed supplemental services and supports that the school district will provide to the child that are designed to remediate the identified area of reading proficiency; and
4. Strategies for parents and guardians to use in helping the child succeed in reading proficiency, including, but not limited to the promotion of parent-guided home reading. (IAC 281-62.4(4).

If a child remains "substantially deficient" by the end of the third grade and the parent or guardian of that child doesn't enroll the child in an intensive summer reading program, and the child does not qualify for a "good-cause" exemption, then it is mandatory that the school retain the child in the third grade (IAC 281.62.5(2)). This

mandatory retention law has been sidelined for several years, after the state delayed the implementation of the retention portion of the law indefinitely.

The Iowa Department of Education released a document called *Early Literacy Guidance* that provided official guidance to the implementation of §279.68 and there were a number of revisions to this document released in 2013, 2014, and again in 2015 as the implementation of the educational reforms were realized. Overall, the *Early Literacy Guidance* document provided requirements, permitted actions, additional guidance, frequently asked questions, and definitions (Early Literacy Guidance, 2015). It included several lengthy tables that explained each citation from the Iowa Code 279.68 and its alignment to IAC 281-62, plus the action or actions required for each citation by Iowa's school districts and a deadline for implementation.

In an effort to support the various educational reforms and initiatives in early literacy, there were several other resources created to enact Iowa Code 279.68 in Iowa's school districts. These included Iowa TIER and the Iowa Reading Research Council. Each one of these added an additional layer of support to assist the state's schools through this reform package to improve literacy proficiency for grades K-3 in Iowa's schools.

Iowa TIER stands for "Tools for Innovation and Educational Results" and is a statewide data system to maintain student data for teachers and schools (Iowa Department of Education, n.d.). It is for the administration of universal screening assessments and progress monitoring. Many reports can be created to view and analyze student data. The Iowa TIER brochure further touted, "Iowa TIER has been established so that all students will experience a dynamic instructional environment, one that adapts to meet their

continually changing needs, in order to optimize learning and student outcomes" (Iowa Department of Education, n.d., para. 1).

Assessment coordinators and teachers alike used Iowa TIER to administer universal screeners and progress monitoring assessments as outlined by §279.68. The Iowa TIER brochure stated that teachers can "schedule students into interventions and monitor their progress" (Iowa Department of Education, n.d., para. 4). The TIER website maintained all student data throughout the state in order to support students who moved to new school districts within the state.

Two major assessments and their resultant student data are stored electronically in the Iowa TIER system. These two assessments are generally referred to as the F.A.S.T. Assessments standing for Formative Assessment System for Teachers. One of the assessments is a computer-adapted reading assessment called the aReading Assessment and the other one is called CRM-R, which is a universal screener administered three times per year and involves three timed, one-minute oral readings. Teachers or assessment administrators record the students' errors as they read during the administration of the assessments. The score that counts is the median score and the assessment generates a fluency rate as well as an accuracy percentage. School districts determine which of the two assessments will be reported to the state as part of the state's accountability system for schools.

The Iowa Reading Research Center, or IRRC, "works under the auspices of the Iowa Department of Education to carry out the goals outlined in Iowa legislation and policy" (https://iowareadingresearch.org). This center serves as a warehouse of resources to support literacy practices in the state to support the educational reforms efforts. An

Advisory Council to the IRRC was created from multiple sets of stakeholders across the state including teachers, higher education representatives, education associates, parents, and community members. The IRRC is responsible for supporting educators with guidance and support in the area of the new state system for literacy assessments as well as providing resources for teachers and schools to use to communicate assessment results with students' parents. The IRRC is also a resource for schools across the state to access resources for teachers in their communication of the ongoing implementation of the requirements of the §279.68 and thus are included within the background of this law.

Teachers and School Reform

Fullan (2007) stated, "Educational change depends on what teachers do and think—it's as simple and complex as that" (p. 129). While changes and school reforms are relatively commonplace in schools, the role of the teacher is vitally important in school reform because teachers are closest to the instruction and learning of students. Change is often seen as innovation in classrooms and is one way to view reform in schools. Fullan also outlined three components or dimensions to the implementation of any new program or policy at the school level to include materials, teaching approaches, and beliefs. Teachers often use new materials including instructional resources and curriculum materials or technologies to implement as part of any change. New teaching approaches are called upon to include instructional strategies or activities to incorporate into new changes in classrooms. Beliefs are changed as teachers are asked to review and integrate new pedagogical assumptions about students and learning in the classroom.

Fullan (2007) concluded that all three dimensions—materials, teaching approaches, and beliefs—were needed for long lasting reforms. The extent to which

teachers change in each of these three dimensions is often unknown and can be unpredictable. Changing materials used in classrooms represents the least amount of change. Asking teachers to change their instructional strategies and learning activities is somewhat more challenging. The most difficult dimension to affect is being able to change teachers' beliefs.

Using the aforementioned dimensions as a basis for change, I draw correlations between the dimensions and educational reform efforts in the state for the area of literacy. With the new legislation for Early Literacy Implementation (Iowa Code §279.68, 2012), teachers were expected to change the materials they used to assess students. According to the legislation, teachers needed to assess students three times per year and use weekly progress monitoring materials that were different than what had been previously selected by classroom teachers for student assessment. The law required teachers to incorporate daily interventions for students at risk for reading failure, thereby changing the instructional approaches used by teachers. Finally, teachers were compelled to alter their basic beliefs about students' literacy progress by framing that progress through the lens of reading rate and growth based on one-minute timed fluency assessments.

Change is not an easy task, nor is it something that happens quickly if it is intended to last. Allington (2007) noted four underlying principles of change needed for any systemic change:

- Change comes from within, not afar.
- Change will not necessarily cost more money.
- There are no quick fixes.
- There is no one best way (p. 12).

These principles indicate that change is best supported when not forced upon educators. More money thrown at problems doesn't necessarily equate to change. Change takes time and hard work. There are many ways to change to make improvements in education. Allington (2007) also reported through case studies of reform efforts that change efforts were best achieved by matching the change to the local community and its characteristics, suggesting that with any change, the local context matters. Allington further pointed out that a central figure to the success of change initiatives was the teacher and that through the change, teachers' perspectives about children and literacy learning were outcomes of the change.

"To the degree that teachers are out of the policy loop in designing and adopting school reforms, it is not surprising if they drag their feet in implementing them" (Tyack & Cuban, 1995, p. 135). In order for real changes to occur at the local level in school reform, teachers must be a part of the change process. Because teachers are nearest to the instruction that occurs in classrooms, they hold a central role in carrying out the implementation of changes in schools. Tyack and Cuban also promoted the concept that change advocates must "focus on ways to improve instruction from the inside out rather than the top down" (p. 134). In response, some teachers quietly shut their doors and teach in ways that are inconsistent with the very change efforts intended to change practice in their classrooms. Another response is that some teachers resist the change and wait for the change to go away, like other changes in the past. When reform efforts include teacher opportunity to use their knowledge about their students and their communities, adapted reform efforts are more likely to last in classrooms where teachers work together to change their practices.

Learning from past educational reform efforts, the role of the teacher in making real changes in the classroom has the greatest opportunity for success and long lasting change when teachers are able to work together. Additionally, when teachers are given the opportunity to meld reform efforts using their knowledge of their students and the community contexts within which they educate their students, change is possible. Next, I describe my previous experience with a small action research project that allowed for changes in the way I supported students in the area of literacy.

Previous Action Research

My previous personal experiences with CRMA taught me the importance of remaining patient with students and provide the opportunity for students to take more control and ownership of the process of analyzing miscues. In 2010 when I was serving as an interventionist at a much larger school district, I worked with a small group of three third grade boys during a reading intervention (three 30-minute sessions per week) that lasted for one semester of the school year. Two of the boys were English Language Learners and the other boy, Logan (student's real name), was being considered for special education services. All three boys questioned their own identities as readers. In their own words, they often felt "stupid" because of their inability to read words correctly, which I believe contributed to a narrow view of what "reading" was for these students—word calling. I used the CRMA process to gradually help the boys take more ownership of their learning and most importantly, to realize that miscues were necessary for them to better understand their own reading process and to gain meaning from text.

From that experience, I learned that it takes time for readers to reclaim their learning in order to become confident again in their abilities and competencies in the area

of reading. It takes time and effort for students to think about reading as making sense and using their language to better understand what they read. It takes time for students to understand that their miscues are important to their learning and that all readers miscue. Students' fragile identities as readers require much more encouragement and support in order to begin the process of revaluing themselves as learners and as readers. Engaging in a collaborative literacy activity like CRMA helped readers connect with one another through literacy in ways that helped them develop deeper understandings about themselves as readers. The following quote was taken from a reflection I wrote in March 2010 during my informal action research with these students for a graduate course on qualitative research methods:

> "Sometimes Logan substitutes a word that makes sense for the word on the page, like "pen" for "paddock," (which is a holding pen for horses and was in one of our books). When Logan does this, he shows me that he is making meaning when he reads—these are "good" miscues because they mean that he understands the reading and knows what is happening. I have really seen Logan grow in this area. He understands now that when he makes a miscue, that it can be a good thing—and that ALL readers miscue sometimes. This has given Logan a lot of new confidence during reading."

Through the use of CRMA, these three boys learned a lot about themselves—especially Logan. He learned that miscues were a natural part of reading and that all readers made miscues. He learned that making a "good" miscue meant that he actively created meaning from text during reading, which is a main goal of comprehending text. Most dramatically, though, Logan realized that his identity didn't need to suffer because

of his reading ability or lack of ability. After many CRMA sessions and greater understanding about the reading process, Logan began to see himself as a worthy reader. Logan realized that he wasn't "stupid" as he had originally called himself when he noticed that sometimes his miscues were indeed matching the meaning of the text and that he still "got it" as he read aloud. Towards the end of my time with Logan, I noted that he was happier and smiled more often than before and I believe it was due to his increased confidence to read and comprehend text in social situations such as CRMA sessions. This instilled greater confidence in his overall demeanor and even his attitude was more positive.

Moore and Brantingham (2003) also noticed a change in a student who was engaged in Retrospective Miscue Analysis: "When Nathan was encouraged to use reading strategies that worked for him, he became empowered as a reader, a learner, and a person" (p. 473). Nathan, a third-grade student, even coined his own term which he called an "okay miscue," which was a miscue that somewhat changed the meaning of a sentence but also provided the reader with enough meaning to keep reading. During reading, Nathan moved from a strategy of sounding out a word to more powerful reading strategies such as stopping to think about the text, repeating his reading, and using placeholders to conserve meaning. Most powerful, Nathan's confidence was increased to allow him to connect with his peers socially as well as his increased understanding of his own reading process, which greatly helped him during reading. This empowerment is central to the work of CRMA in creating active readers who know a lot about their own reading process.

Summary

Miscue analysis and its variations have been around for over 40 years and have impacted countless teachers and students in the process to learn more about reading and literate behaviors. Since NCLB, however, research concerning miscue analysis has waned with the proliferation of standardized testing and other accountability assessments like the state assessments described earlier in this chapter. Our state's educational reform efforts have affected the educational climate across the state as well as the types of literacy assessments utilized in schools to make determinations about student progress over time.

Because CRMA has great potential in revaluing readers and the act of reading, resurgence in miscue analysis research and its application to classrooms may provide valuable and helpful assessment information from a literacy assessment that happens within classrooms everyday. Teachers who participate in learning about CRMA may view this learning as a new form of professional learning in which teachers purposefully use everyday literacy assessment experiences to positively impact reading instruction and support learners in the classroom. Martens and Doyle (2011) discovered that the students with whom they involved in meaningful discussions about miscues learned to revalue reading as a meaning construction process and viewed themselves as capable readers.

In this literature review, I have presented a brief historical overview of the development of miscue analysis and articulated the nuances involved with Retrospective Miscue Analysis and Collaborative Retrospective Miscue Analysis. I have also provided additional reviews of the literature surrounding the concept of revaluing readers to positively impact students' self-concepts as readers. In Chapter Three, I describe the

methodology, setting of the study, data collection and analysis methods used in the study, as well as the role of the researcher, study implications, and considerations for reliability and validity.

Chapter 3: Methodology

In this study I introduced three fourth grade students to the process of Collaborative Retrospective Miscue Analysis, or CRMA, in order to analyze their oral reading miscues within a small group setting over 14 weeks. I wanted to better understand how students' reading behaviors were shaped as a result of their participation in weekly CRMA sessions. I was also interested in how these students' ideas about reading changed throughout the study. I included the students' teachers in my study to learn if their views of their students as readers changed over the course of the study and if their views about reading changed as a result of viewing their students participating in the CRMA sessions. Central to this case study was my inclusion as a participant observer in relation to students and teachers from Lincoln Elementary School, in which I served as the principal.

Study Methodology

Qualitative researchers seek understanding about phenomena related to the particular theme or issue of study. "Qualitative researchers are interested in understanding how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences" (Merriam, 2009, p. 5). Engaging students in their school context to investigate their real experiences with reading and learning in social situations with peers was a hallmark of this study.

Creswell (2013) offered an extensive working definition of qualitative research that illustrates my intention for using qualitative research methods for this study.

> Qualitative research begins with assumptions and the use of interpretive/theoretical frameworks that inform the study of research problems

addressing the meaning individuals or groups ascribe to a social or human problem. To study the problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under the study, and data analysis that is both inductive and deductive and establishes patterns or themes. The final written report or presentation includes the voices of participants, the reflexivity of the researcher, a complex description and interpretation of the problem, and its contribution to the literature or a call for change. (p. 44)

Creswell (2013) included characteristics of qualitative research necessary for this study:

- Natural setting: Qualitative researchers often situate research studies in the natural environment of the study's participants. In this case, my study included the closer examination of three fourth grade students in their natural school setting along with their teachers. This environment yielded real experiences, phenomenon, and results because it was located in the space of the school and the desired outcomes for real students in real school spaces—not a laboratory.
- Researcher is the key instrument: I am the central instrument in the design of the study, the methods, the collection of data, the interactions with study subjects and the interpretation of the various forms of data collected. I am well-positioned for serving as the key instrument in decision-making related to this study because I have served as a classroom teacher who taught literacy for 13 years in both fourth grade and sixth grade and I worked as a reading interventionist for five years supporting students in the intermediate grades.

- Multiple methods: I employed a variety of methods and data collection instruments to collect data, including a reading inventory; teacher theoretical profile about reading; formal miscue analyses; videotaped CRMA sessions; videotaped sessions with teachers; and transcriptions of interactions among students and teachers. By using a variety of methods and data collection tools, I aimed to triangulate data to be able to provide a focused and coherent interpretation of what happened in my study.

- Complex reasoning through inductive and deductive logic: A key component of my analysis of data collected was through the identification of emerging patterns and themes. I used the inductive model of logic to identify these emerging themes and used deduction to compare results and interpretations with the actual data collected.

- Participants' meanings: My study subjects' voices helped locate and solidify the central purposes for this study. In the findings, I used their voices to tell "stories" about their reading, reading behaviors, reading self-perceptions and identities, and reading instruction. These meanings helped me to construct better interpretations for the data collected.

- Emergent design: Key to qualitative research is the emergent nature of the design and the need to remain flexible and open to new ways of thinking about the research design. I remained focused closely on my study participants to be open to finding new ways of discovering additional meaning about their experiences related to CRMA.

- Reflexivity: In this study, I was positioned as the minor subjects' school principal, the adult subjects' immediate supervisor and evaluator, and a literacy leader and scholar. As the study progressed, I was careful to reveal my own assumptions, biases, and tendencies in thinking so as not to deflect the interpretations, but rather inform them (Merriam, 2009).
- Holistic account: The complexity of qualitative research implies a big-picture perspective and accounting for the themes, patterns, and meanings that emerge from the study.

The key characteristics of qualitative research informed my study because they comprised the underlying factors and components that implicated my work. These characteristics remained central to my research so that I adhered closely to the true intentions of qualitative research philosophy and methodology.

Merriam (2005) argued that qualitative case study research has the following concepts as central tenets: "the search for meaning and understanding, the researcher as the primary instrument of data collection and analysis, an inductive investigative strategy, and the end product being richly descriptive" (p. 39). Case study research, as a legitimate qualitative research method design, was very applicable to this study since I wanted to investigate the answers to my research questions in the students' school environment and teachers' classroom spaces to better understand how using CRMA affected perceptions about strengths and weaknesses as readers and the act of reading itself.

Yin's (2009) definition of case study explained that case studies investigate phenomena in depth and are centered around their real life contexts where the boundaries between a phenomenon and the context are not clearly evident. These boundaries are

what my study aimed to discover—how does a student's involvement in the CRMA process change his or her thinking about the act of reading and of the perceptions around self-identity as a reader?

Setting of the Study

A small, rural elementary school in an agricultural-based community in the Midwest was the setting for this study. During the 2014-2015 school year, Lincoln Elementary School (pseudonym) housed 25 preschool students and 287 kindergarten through fifth grade students. Lincoln Elementary School's demographic information included mainly families of blue-collar workers in an economically depressed community. In fact, some teachers had a certain percentage of their undergraduate and graduate student loans forgiven for each year that they taught at Lincoln Elementary School because of the town's designation as an economically depressed area in the state. The amount of students receiving free and reduced lunch was 41%, which indicated a percentage greater than the state average. Lincoln Elementary School had two sections of each grade level with approximately 19-25 students in each class.

At the time of this study, twelve of the 25 teachers and staff in the building were enrolled in various master's degree programs which included: literacy, curriculum & instruction, special education, school counseling, nursing, and early childhood education. This fact demonstrated teachers' commitments to lifelong learning and improving their instruction and teaching practice through the attainment of an advanced degree. Teachers promoted learning for students every day.

Lincoln Elementary School was identified as a SINA (School In Need of Assistance) school by the federal government in the area of reading starting in 2014 as

per No Child Left Behind legislation. This designation happened because the combined percent proficient reading score for third through fifth grade students was at 87%, which was below the 2013-2014 state goal trajectory of 100%. Because of this substandard proficiency level, as the school principal, I was required to form a team of teachers to analyze student performance data in the area of reading in order to develop a plan of action to address the school's reading assessment data. Literacy was an area of focus for the school year when the study was completed. In the 2013-2014 school year, teachers studied the Iowa Core Literacy Standards (https://iowacore.gov) to become more familiar with them. During the same year, Professional Learning Communities (PLC) teams were created and met throughout the year by grade levels to select priority standards that teachers called "essential learnings." PLC teams also developed a pacing guide and learning targets written in student-friendly terms in the area of literacy. PLC teams had autonomy to determine what was important in the standards for their students at each grade level and worked collaboratively to ensure that core standards were included in lesson and unit designs.

In the year prior to the study, district elementary staff participated in a review of the existing reading curriculum and eventually decided to adopt a new literacy curriculum featuring a reading and writing workshop model called Benchmark Literacy (http://www.benchmarkeducation.com/literacy/). Teachers had ample resources including many texts at multiple reading levels for small group reading instruction and a traditional "basal" approach was not the basis for this curriculum. Teachers were involved with professional learning focused on the implementation of the new literacy curriculum. The new curriculum included the following components: interactive read-

alouds, whole group mini-lessons, differentiated small-group/guided reading, independent reading, phonics and word study, writing, and assessments to drive teachers' instructional decisions. An emphasis on comprehension strategies helped teachers apply a variety of techniques in different literacy contexts. Instead of using a basal or anthology of reading for instruction, teachers selected leveled readers to help students access reading in ways that differentiated reading instruction and learning beyond whole group mini-lessons. This mattered to teachers because it provided more autonomy in determining instructional activities for individual readers as opposed to a basal approach that typically provided ideas for whole group teaching and learning about reading.

Students in first through fifth grades participated in the Accelerated Reader (http://www.renaissance.com/products/practice/accelerated-reader-360-c/?utm_expid=108573409-18.YBCgiPOeTJCC9Jae5dUzSg.1&utm_referrer=http%3A%2F%2Fwww.renaissance.com%2F) program for reading books and demonstrating comprehension through electronic book quizzes. Used in supplement to the new literacy curriculum, the Accelerated Reader program allowed teachers to help students select texts at their reading level to encourage wide reading. Teachers often used this reading program to help students set quarterly goals for improvement and read a certain number of books to attain a certain level of reading comprehension at 85% or above for a determination of success. The Lincoln Elementary School Library-Media Center had not labeled any books in the library as Accelerated Reader books and most teachers in the school encouraged students to read a wide variety of books besides just books with Accelerated Reader quizzes. At the time of the study, teachers in third through fifth grades maintained a public "Points

Wall" showing students' attainment of reading points from their Accelerated Reader quizzes, but that practice has been eliminated at this time. Several teachers in the building required their students to maintain a Student Reading Log to record the books they read and their performance on reading quizzes including reading comprehension percentages and numbers of points attained.

The school community and parents of students were highly supportive of Lincoln Elementary School and the district's mission to "prepare today's students for tomorrow's world in a caring learning environment." The Lincoln Elementary School Parent Teacher Organization was also highly involved in fundraising efforts to provide classroom teachers with innovative use of funds to support student learning and achievement, which often impacted teachers' access to literacy materials. Many teachers used their yearly allotment of money from the Parent Teacher Organization to buy picture books, graphic novels, and other novels to increase the number of books in their classroom libraries to support wide reading for their students. Students often recommended books that teachers purchased for them to read and often included book series or favorite authors.

To prepare students for learning in the 21st Century, there was great access to technology. In grades 4 and 5, there was one Chrome Book per every two students (ratio of 1:2). In addition, there were 2 mobile labs of laptop computers; 2 mobile labs of iPads; and 1 mobile lab of iPad Mini devices. A learning design coach was employed by the district to help teachers improve their instruction through the incorporation of technology and other resources to positively impact student learning and achievement. For instance, the learning design coach worked with first grade teachers to help them use a student-driven digital portfolio called Seesaw (http://web.seesaw.me/). Students

uploaded writing projects in order to share with their families to receive feedback. The learning design coach also worked with fourth and fifth grade students and teachers to teach them how to use Google Documents to share their writing drafts with peers in order to collaboratively provide feedback for revisions and editing during the writing process. Both of these activities helped students make choices about their learning and provided opportunities for new ways of engaging in literacies in the electronic world.

Description of the Study

In this qualitative case study, I engaged three fourth grade students at Lincoln Elementary School in the process of Collaborative Retrospective Miscue Analysis (CRMA) sessions to better understand the students' own ideas about the reading process as well as to best determine how their reading behaviors changed over time. I tracked the same changes in the students' teachers' views of the children and the reading process.

I met with a small group of three fourth grade readers and looked at their school data through the use of the students' Iowa Assessments reading scores and FAST Assessment universal screening data (CBM-R test – oral reading fluency), the students' performance on *aReading*, a computer-adapted assessment associated with the FAST Assessments, and through teacher observations and recommendations. These small group CRMA sessions occurred once weekly for 20-30 minutes each session for a duration of 14 weeks over the course of four months. Students in the study did not miss any core instructional subjects (Literacy, Mathematics, Social Studies, or Science) so I had to be creative with the weekly schedules for the CRMA sessions. Given my roles and responsibilities as a building principal, the frequency and duration of CRMA sessions could be seen as a limitation of the study. Serving as both the principal researcher and

the principal administrator of an elementary school building had its own challenges that impacted the flexibility of the study.

I administered the Burke Inventory Modified for Older Readers (BIMOR) to the children (See Appendix A for the Burke Inventory Modified for Older Readers). I used this reading inventory to better understand their views of themselves as readers and specific reading behaviors at the beginning of the study and then compared student responses with the same reading inventory results at the end of the study. I also used the BIMOR to uncover students' beliefs about the act of reading and how this belief affected them as readers, or their perceptions of selves as readers. The reading inventory contained questions such as: "Describe yourself as a reader—what kind of reader are you?" and "When you're reading and you come to something you don't know, what do you do? Do you ever do anything else?" These questions helped me gauge students' perceptions about their reading behaviors and how they approached reading difficulties when they read. Developing a better understanding about how students accessed particular reading strategies when experiencing reading difficulties was important to my overall understanding of them.

I conducted a formal reading miscue analysis with each student at the beginning, the middle, and the conclusion of the study to track if students shifted from low quality miscues to more high quality miscues made during oral reading. I excluded the results from the formal reading miscue analyses conducted in the middle of the study because there were not important changes evident in the analyses. It was important for me to track students' changes in miscues related to syntax, semantics, and graphophonic similarities through the course of the study. I used the Miscue Analysis In-Depth

Procedure Coding Form (Goodman, Watson & Burke, 2005) during these formal miscue analyses. After completing the miscue analysis at the beginning of the study, I utilized the results to shape questions for students during CRMA sessions and included more questioning related to making meaning during reading. For example, one of the questions I asked of students frequently after the first miscue analysis was, "Does that miscue make sense?" Sometimes when students miscued, I also asked them, "Does that miscue need to be corrected? Why or why not?" See Table 1 - Summary of Data Collection.

Table 1 - Summary of Data Collection Procedures

Procedures in Study	Notes
Students' Previous Assessment Data	• Iowa Assessment reading scores • FAST CBM-R (oral reading fluency) scores • FAST aReading (computer-adapted assessment) scores
Teacher Recommendations	• Teacher appraisals of students whom they think would benefit from CRMA involvement in study based on knowledge of students including student progress in the area of reading
BIMOR (Burke Inventory Modified for Older Readers)	• Administered before and after study • Reading Interview: o Beliefs about reading o Reading behaviors o Perceptions of self as reader
Formal Miscue Analyses	• Beginning, middle, and end of study • Formally analyzed and reported only the beginning and the ending analyses for this study • Analyzed for strengths in miscues using syntactic, semantic, and graphophonic cueing systems • Analyzed corrections • Holistic scoring of students' retelling

I video recorded the bi-weekly CRMA sessions. These conversations were the crux of the entire study because I was better able to understand students' views of themselves as readers as well as any changes in their understanding of the reading process. I screened the recordings to show to the students' teachers "vignettes" of student learning and reflective conversations about miscues and changes in students.

A significant portion of the study sought to understand how the students' teachers' perspectives about the students as readers changed over time as well as the understanding about the reading process itself. I asked the teachers in the study to become effective "kidwatchers" in order to learn most about their students and their progress in the area of literacy (Owocki and Goodman, 2002). Kidwatchers observe their students using language with a focus on how kids think and learn.

At the beginning and the end of the study, I administered the DeFord Theoretical Orientation to Reading Profile (TORP) to the students' teachers to best determine any changes in the teachers' orientations towards the teaching of reading (See Appendix B for the DeFord Theoretical Orientation to Reading Profile). The TORP allowed me to see which literacy perspective teachers held in relation to the teaching and learning of reading: a phonics orientation, a skills orientation, or a whole language orientation (DeFord, 1985). A teacher's orientation to the teaching of reading affects decisions the teacher makes in regards to instructional decisions in the area of reading. I hoped to be able to track teachers' changing views of reading over the course of the study and make observations related to the connections between their students' perspectives and their own.

At the time of my study, the teachers at my school were implementing a new literacy curriculum called Benchmark Literacy. This curriculum was a departure from the previous curriculum, Houghton-Mifflin Reading, which was a traditional basal-based reading curriculum in which teachers taught from a scripted program with whole group reading texts. Teachers changed from using a basal anthology of literature to a more reading workshop focused curriculum. Instead of using the basal, teachers taught mini-lessons to their whole class using anchor posters and shared readings. They also used many different leveled texts to incorporate into small group guided reading that were connected to the main comprehension skill being taught in the whole group instruction. This allowed students to transfer comprehension learning to other texts. Teachers also incorporated flexible small group guided reading with the previous curriculum including leveled texts for readers. In Benchmark Literacy, the foundation is based on the concept of a reading and writing workshop model for teaching literacy skills to students. There is no basal used in Benchmark Literacy. Teachers had many copies of leveled texts to use with students to meet the wide variety of needs in their students. I anticipated changes in teachers' views and perspectives in regards to the teaching of literacy as they viewed their students participating in CRMA sessions.

Given that teachers were involved in new professional learning related to the implementation of Benchmark Literacy at the time of the study, it was important for me to consider what type of professional learning the teachers needed to support their conversations and thinking related to what they viewed of their students participating in CRMA sessions. First of all, I needed to help teachers better understand what CRMA looked like and its intended outcomes for students. They needed to know about the entire

process to see the big picture. Before they viewed the first video recorded CRMA session, I taught them about the following points related to CRMA:

- Overview of CRMA to explain the reading miscue inventory oral reading session
- Miscue analysis including acceptability in syntax and semantics as well as graphophonic similarity
- Collaborative Retrospective Miscue Analysis (CRMA) sessions with small group of students

I used strategic informational excerpts from Goodman, Martens, and Flurkey (2014) to support the teachers' learning about Collaborative Retrospective Miscue Analysis and the process I used with students. In fact, after several conversations with the teachers in my study, both asked if they could read the same book by Goodman et al. (2014). I purchased copies of the book for each of them to read over the remainder of the study. Throughout the study, we affectionately referred to this book as "the purple book" due to the book's main color.

In addition, I showed the teachers selected excerpts, or vignettes, from the student CRMA video recorded sessions and engaged teachers in the main questions of: "What do you notice?" and "What do you want to talk about?" (specifically in relation to students and the reading process changing over time). I met with the students' teachers for a total of four sessions throughout my study, or approximately once per month.

Through the course of this study, I looked for changes in teachers' views about students, including students' perspectives about themselves as readers, but also a changing view of what it means to be a "reader." The CRMA process was intended to

help students revalue themselves or rethink their own abilities as readers because "it allows them to understand and appreciate their own knowledge of language" (Goodman, Martens, & Flurkey, 2014, p. 5). By structuring the four teacher viewing sessions to observe their own students outside of the regular classroom environment through video recordings, and seeing their students participating in the CRMA process of collaboratively discussing miscues, language, and meaning, I looked for ways in which teachers revalued their readers. The CRMA process itself intends to position students as active learners and readers who know something about their reading as they discuss their miscues.

Case Selection

The selection of cases for this case study was paramount for the information gathered in order to best answer my research questions adequately. The most common form of case selection in a case study is purposeful sampling. Merriam (2009) defined purposeful sampling as "based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (p. 77). Creswell (2013) reiterated that an investigator purposefully selects those cases that will yield the best information to inform one's understanding related to the central research problem or phenomenon. In purposeful sampling, three key decisions are important to the selection: selecting participants for the study, the specific sampling strategy, and the size of the sample (Creswell, 2013).

- Selecting participants for the study: I am the principal and lead learner of an elementary school which was focused on improving literacy and literacy instruction after being officially designated a SINA (school in need of assistance) by the federal

government. I had immediate access to all students but was particularly interested in fourth graders because of our state's retention law. In 2017, the state legislature has decided to begin retaining third graders who do not pass the state assessments. The students in this study would have been in danger of retention. Previously, I served as a fourth grade teacher for seven out of 13 years of teaching in an elementary school in a neighboring state. Having been a reading interventionist, I tend to be drawn to students who need additional supports in the area of reading. Therefore, my study focused on classroom teachers and their fourth grade students who struggled with reading.

- Sampling strategy: In homogeneous sampling, the key is to select similar cases in order to describe the experiences of a particular subgroup (Glesne, 2011). In addition, homogeneous sampling "focuses, reduces, simplifies, and facilitates group interviewing" (Creswell, 2013, p. 158). I selected fourth grade readers for inclusion in this study that were relatively similar in their reading progress and achievement to better understand how this group of students was affected by the CRMA process. Within this small group of students, I believed there to be enough variability in their abilities and personalities to create a group appropriate for the CRMA study. To select the teachers for my study, I used the sampling strategy of convenience sampling, which is a strategy mainly based upon the availability of respondents (Merriam, 2009). In this case, there were two fourth grade teachers in my school, so these two teachers were selected for inclusion in this study since they were the teachers of the students selected for the study.
- Size of the sample: The size of the sample in a qualitative case study is often left up to the researcher because there are so many variables in cases and it necessarily depends on the investigator's main research questions, the data to be

collected, the analysis needed, and any available resources (Merriam, 2009). I included three students and two teachers in my case study.

Data Collection

Four basic types of data are central to qualitative research and include observations, interviews, documents, and audiovisual materials (Creswell, 2013). Each type of data yields different types of information useful for interpretation. "The data collection techniques used, as well as the specific information considered to be 'data' in a study, are determined by the researcher's theoretical orientation, by the problem and purpose of the study, and by the sample selected" (Merriam, 2009, p. 86). Glesne (2011) asserted that qualitative researchers rely on a combination of data collection techniques to record data. There are strengths and weaknesses involved with each source of evidence, but it is paramount to select those sources that will yield the greatest amount of information related to my research questions. I collected evidence from the following sources according to Yin's (2009) description of data collection: documentation, interviews, and participant-observation.

Documentation

A central component of miscue analysis is the actual presentation of text read aloud by students, and the evaluation of the student's oral reading proficiencies as indicated by the miscue analysis. I selected texts appropriate for each reader for an oral reading and subsequent formal miscue analyses. Because this was the first year of the implementation of our new literacy curriculum, and because I wanted to model the use of the new leveled readers for our students, I selected the same books for each reader for each miscue analysis based on their approximate reading levels determined by their

teacher and students' participation in the small group guided reading. I had to be mindful of the range of their reading levels for these miscue analyses. I selected short stories from the new literacy curriculum that were historical fiction since students had completed a study about historical fiction in their classrooms. I used this robust miscue analysis procedure three times for each student selected as part of the study. I performed this miscue analysis before the Collaborative Retrospective Miscue Analysis sessions started, midway during the sessions, and then again following the last session. In this way, I hoped to be able to show differences in each students' miscues over the course of the study by looking at whether or not the types of miscues changed over the course of the study. For the purposes of this study, I include analyses of only the formal miscue analysis in-depth procedure from the time before the study began and after the study was completed. The miscue analysis completed during the middle of the study did not show important changes so it was not included in the analysis.

To formally record and document these miscue analyses, I used a recording form called the "Miscue Analysis In-Depth Procedure Coding Form." See Appendix C for the Miscue Analysis In-Depth Procedure Coding Form (Goodman, Watson, & Burke, 2005) I used to record the actual text, the student's miscue(s), and then include a deeper way to record specific miscues related to syntax, semantics, and graphophonic language cueing systems. "Miscue analysis examines readers' control and use of the language cueing systems and reading strategies while reading orally" (Goodman et al., 2005, p. 131). I analyzed students' miscues to determine relative and emerging patterns for constructing meaning and for better understanding of the student as a reader.

Specifically, I recorded the syntactic and semantic acceptability of the students' miscues as well as whether or not there was a change in meaning due to the miscue and if the student self-corrected which miscues. I also calculated percentages for column totals in which to draw conclusions about each reader's ability to maintain meaning when they miscued, grammatical strength of sentences, and both graphic and sound similarity percentages. For each formal miscue analysis, I also determined the miscues per hundred words (MPHW) by dividing the total number of miscues by the total number of words and then multiplying by 100. This produced a number that represented the average number of miscues per hundred words. Having the formal miscue analysis sessions with each student subject before and after the study provided me with ample information over time to determine changes in the students' reading.

As students participated in video recorded CRMA sessions, I helped students to make sense of the miscue analysis sessions by providing them with a list of questions to prompt them during the CRMA sessions (See Appendix D for the CRMA Guiding Questions). These questions helped students navigate the conversations and discussions about miscues with language to prompt each other as well as serve as a reminder for myself to ask questions that mattered for the students. Questions included (Goodman & Marek, 1996, p. 53):

1. Does the miscue make sense?
2. Was the miscue corrected? Should it have been?
3. Does the miscue look like what was on the page?
4. Does the miscue sound like what was on the page?
5. Why do you think you made this miscue?

6. Did that miscue affect your understanding of the text?

Interviews

In this study, I used the Burke Inventory Modified for Older Readers (BIMOR) to survey student subjects about their perceptions of themselves as readers and their reading identity as well as the particular strategies they use for dealing with problems in the area of reading. "The BRI provides information about the readers' metalinguistic knowledge, that is, the language people use to think and talk about reading as an object of study" (Goodman, Watson, & Burke, 2005, p. 179). This reading survey, or inventory, was administered to each student at the beginning and end of the study to show changes in students' perceptions and feelings about themselves as readers. Analyzing the students' responses to the questions helped to share students' changes in their attitudes about reading (Goodman et al., 2005).

I administered the DeFord Theoretical Orientation to Reading Profile (TORP), to the teachers at the beginning and end of the study. This survey documented how teachers believed children should learn to read and how teachers should teach reading to children. The TORP is based on a Likert-scale with responses ranging from strongly disagree to strongly agree. Teachers read a series of 28 statements about reading and reading instruction and self-scored using the Likert-scale for each statement. Results from the TORP indicated each teacher's basic orientation to the teaching of reading: phonics orientation, skills orientation, or whole language. The initial TORP determined that both teachers fell into the skills orientation of teaching reading. In the skills orientation of teaching reading, an emphasis is placed on the teaching of isolated skills and word recognition. Over the course of the study, I analyzed changes in the teachers' views

about reading instruction as a result of watching the videotaped CRMA sessions of their students.

Of special note was my own caution in conducting interviews that I designed to be open-ended. I remained aware of the potential risks and benefits to the teachers in this study as I asked the two interview questions outlined above. The risks involved feeling embarrassed to answer the questions for fear about what it revealed about themselves as teachers (Merriam, 2009). Most importantly, there was a power differential that bears explanation that required a great deal of trust between the two teachers and me. I served as the principal investigator of this study engaging teachers in taking a risk to answer questions specifically about their beliefs and feelings about reading and their students. I also served as the teachers' supervising evaluator as their principal of Lincoln Elementary School.

The simultaneity of serving both as principal investigator and principal evaluator required a certain amount of vulnerability and required that I made sure that the teachers felt safe in the interview space. One of the teachers, Mrs. Madison (pseudonym) was participating in the formal evaluation cycle during the same time as the study; while Mrs. Ryan (pseudonym) was not. I needed to remember to continually develop a trusting, open relationship with the teachers and keep the conversations non-evaluative. Especially important for my role of evaluator was to separate conversations related to the CRMA study from the formal evaluation cycle and make sure I focused on Mrs. Madison's instruction in the classroom separately from the events in the study.

Participant-Observation

Central to my study was the fact that I introduced and facilitated the CRMA sessions with a small group of intermediate-aged students. Because of this design, I necessarily needed to be involved with the group of student subjects with whom I interacted over the course of the study. Merriam (2009) outlined a checklist of elements likely to be observed in most settings for a study: the physical setting, the participants, activities and interactions, conversations, subtle factors (physical or nonverbal cues), and my own behavior as researcher.

In this case study, I was not a passive observer, but I actually participated in the events being studied (Yin, 2009). Also, since the CRMA sessions started with my greater involvement followed by less involvement, I started as a complete participant in the study as I taught the students the process involved in collaboratively analyzing miscues. However, over time, I gradually released the responsibility to the students to facilitate their own discussions and learning in the process. I wanted to shift to more of a "participant as observer" throughout the CRMA study (Creswell, 2013).

After teaching the students about miscues and noticing they were comfortable marking various types of miscues, in CRMA Session #4 I allowed one of the students to "be the teacher" and direct the start and stop of the video recording to discuss miscues that they felt needed to be discussed in the small group. This allowed for a short amount of time for students to facilitate their own discussion. In CRMA Session #7, I physically moved my chair away from the small group to let the students lead their own conversation. I found myself maintaining my presence as facilitator in the CRMA

sessions even though my intention was to gradually release responsibility to the students to lead their own discussions.

Importantly, I faced challenges in writing field notes as a complete participant because of the nature of my participation. To alleviate this, out of necessity, I videotaped these CRMA student sessions so that I could capture the essence of the Collaborative Retrospective Miscue Analysis without losing key details in trying to document observations. This allowed me time to watch video recorded sessions to capture moments of interest and important details for further study.

Following each video recorded student CRMA session, I viewed the recording and wrote notes on my Documentation Log for CRMA Study. The log included three sections: a description of what happened at the CRMA session with the students with specific details of what occurred; critical moments in the CRMA discussions with students as well as highlighting important miscues; and finally, specific student and researcher quotes or other notable data. In addition, I video recorded each teacher session and recorded notes based upon the two questions I asked of the students' teachers: 1) What did you notice? and 2) What do you want to talk about in relation to students and the reading process changing over time? On this log, I captured specific teacher quotations and kept a running record of the points of their discussions.

In summary, data collection in this study included documentation, interviews, and participant-observation techniques such as observations and the documentation log. This variety of collected data yielded a large quantity of data used to help answer my central research questions. Through the variety of data collected, I achieved triangulation using multiple sources of data (interviews, video recorded sessions, and miscue analyses),

meaning "comparing and cross-checking data collected through observations at different times or in different places, or interview data collected from people with different perspectives or from follow-up interviews with the same people" (Merriam, 2009, p. 216).

Data Analysis Plans & Methods

Merriam (2009) described data analysis as "the process of making sense out the data. And making sense out of the data involves consolidating, reducing, and interpreting what people have said and what the researcher has seen and read—it is the process of making meaning" (p. 175-176). That process of making meaning involved careful analysis of my participant observations, student and teacher interviews including the Burke Reading Inventory and the TORP, and students' miscue analyses. In addition, I particularly agree with Yin's (2009) definition of data analysis as "examining, categorizing, tabulating, testing, or otherwise recombining evidence, to draw empirically based conclusions" (p. 126).

Two important and fruitful methods of data analysis were open coding and axial coding, both terms used by Merriam (2009) to help researchers make meaning from data. Open coding, described by Merriam (2009) as the "process of making notations next to bits of data that strike you as potentially relevant for answering your research questions" (p. 178), was my first step. This open coding process necessarily needed to happen throughout the data collection phase of the research study in order to best analyze the data for emerging patterns and themes, but also to help guide the questions I asked of students and the observations I made over the course of the study. My goal was to

determine students' changing self-perceptions about themselves as readers and changing views about the act of reading through the use of this coding technique.

Both during the study and after the study was completed, I reviewed videos and made notations next to phrases and/or lines of text through line-by-line coding—which simply "helps to immerse you in the data and discover what concepts they have to offer" (Glesne, 2011, p. 195). Through the act of open coding, I found particular words and phrases used by my students and teacher subjects that served as useful pieces of language to use in later explanations of the data (See Table 2 for Coding Examples from Early Analysis). Saldana (2013) referred to these words and/or phrases as "in vivo coding" (p. 91), and these added strength to the data collected and the meanings gleaned from the data.

Table 2 - Coding Examples from Early Analysis

Coding Type	Examples from Documentation Log
Open Coding	• Purpose of reading • Thinking during reading • Thinking during miscues • Making sense • Student strengths • Reading for meaning • Teacher modeling • Students working hard
In Vivo Coding	• All readers miscue • Sounding it out • Because we're smart • Reading better than last time • High quality vs. Low quality

I took my analysis a step further in determining the types of categories found within my open codes I had created for my documentation log. Merriam (2009)

described this method of analysis as axial coding, or analytical coding. Basically, axial coding is looking deeply and critically at one's open coding results and discovering overarching categories that emerge from this data set (the open codes). Finding the overarching categories added an additional layer of analysis and challenged me to find categories that cut across data sources. Some examples of the axial codes that began to emerge were that "sounding it out" was a favorite strategy of the CRMA students even though that was not a strategy we focused on in the CRMA sessions. Another axial code was "reading for meaning" which students noticed during the CRMA sessions and teachers noted from the video recordings of their students. Yet another axial code was "differences in students" as both teachers and students noticed that their confidence increased as their understanding of miscues increased. "High quality vs. low quality" miscues cut across all data sources because this became important to the CRMA students. Students and teachers alike realized that "miscues are okay" through the course of the study, which was a fundamental concept about miscues for all readers.

Another level of coding that helped me to determine major themes happened when I compared the BIMOR coding from before the study to the BIMOR coding after the study. After listing, alphabetizing, and analyzing the coding lists for common themes and important themes, I created a spreadsheet to easily compare the two coding lists. I discovered several major themes that showed shifts that happened through the study. See Figure 2 – Coding Themes from BIMOR Comparison for additional insight into my thinking.

Figure 2 - Coding Themes from BIMOR Comparison

BIMOR Initial Codes (Jan. 2015)	BIMOR Final Codes (May 2015)	Major Shifts
By Order of Importance	By Order of Importance	
Sound it out	Miscues	Reading as a Focus on Words TO Reading as a Focus on Sense Making
Ask Others	Make Sense	
Dictionary	Sound it Out	
Reading Practice	HQ vs. LQ	Mistakes TO Miscues
Word Knowledge	Adventure	
Fluency Rate	Ask others	
Perfect Reading	Reading Practice	Inadequacy TO Competency
Lexile Levels	Dictionary	
Mistakes	Easy vs. Hard	
Listen to Reading	Fix	
	Fluency Rate	

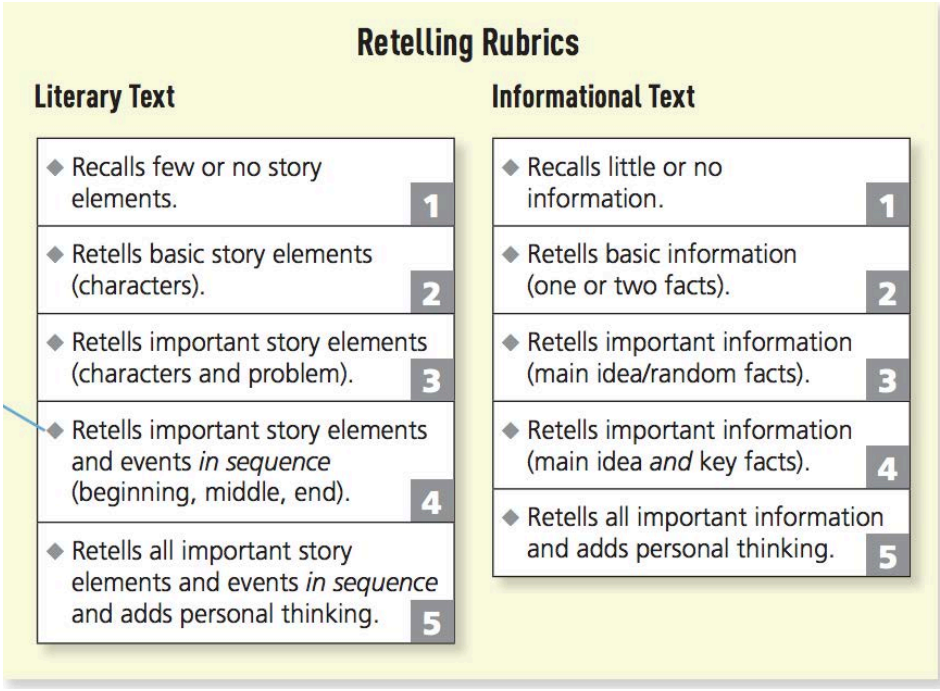
I found emerging themes or categories in multiple sets of data, thus indicating triangulating themes that were strengthened by multiple occurrences in multiple forms of data. These patterns, or themes, resulted from the categorization of the data collected and offered me the chance to formulate the answers to my research questions. I used the themes and the data to interpret, or make sense of the lessons learned. Creswell (2013) stated, "It is a process that begins with the development of the codes, the formation of themes from the codes, and then the organization of themes into larger units of abstraction to make sense of the data" (p. 187).

I conducted a formal miscue analysis for each student participant at the beginning, middle, and end of the study using the Miscue Analysis In-Depth Procedure Coding Form. This process consisted of each student reading a passage of text aloud to me individually and I analyzed the miscues from the oral reading. When each student finished reading the text orally, I asked him or her to provide me with an oral retelling of

the story by instructing him or her to "retell the story that you just read by telling me what you remember from the story."

I used a holistic retelling rubric for literary text to assess each student's oral retelling on a scale of one to five. See Figure 3 – Holistic Retelling Rubric for Literary Text to see the holistic rubric I used in the study (Richardson & Walther, 2013). A score of one meant that the reader recalled few or no story elements while a score of five represented the retelling of all important story elements and events in sequence and additional personal thinking was included. I selected this holistic retelling rubric for literary text because it provided me with an overall score of students' comprehension about the story read and it was closely related to students' learning in the classroom about story structures including characters and plot (beginning, middle, and end).

Figure 3 - Holistic Retelling Rubric for Literary Text



I analyzed the miscues by looking at the types of miscue made and how the miscues affected the meaning of the text. In this analysis of the miscues, I studied each miscue for syntactic and semantic acceptability as well as graphophonic similarities in the actual miscues. Ultimately, this analysis helped me answer the question about whether or not miscues changed the meaning that students gleaned from their reading.

From the miscue analyses from before the study began, I noted that all three students in the study were attending to both graphic and sound similarity in their miscues. Even when students miscued using a nonword substitution, the miscue was of high graphic and sound similarity. Examples included: *distructed* for *distracted*; *mendering* for *meandering*; and *devored* for *devoured*. When students miscued, they often did not correct the miscues. Even though students miscued while reading, overall, students were producing words as substitutions or insertions that maintained the meaning of the sentences. This was somewhat surprising to me because teachers shared that with at least two of the students, they often "plowed right through missed words without paying attention to the meanings of the words," according to one teacher.

Writing was also an important part of my analysis in this study. Miles and Huberman (1984) wrote, "Writing, in short, does not come after analysis; it is analysis, happening as the writer thinks through the meaning of the data in the display. Writing is thinking, not the report of thought" (p. 91). One key way that I analyzed the notes and transcriptions of the BIMOR interviews, the documentation log of the video recorded CRMA sessions and coding notes, the formal miscue analyses, the TORP data, and notes from the teachers' video recorded viewing sessions was that I spent over five weeks analyzing all of the data through writing. Miles, Huberman, and Saldana (2014) called

this writing "interim case summaries" (pp. 131-134). I wrote over 130 pages of thinking, analyzing, and testing out themes from my coding analysis. These pages were filled with descriptions of the student participants, teacher subjects, procedures, and results from the various forms of data collected throughout the study and represented first attempts at making sense of what happened through the CRMA study.

Considerations for Reliability and Validity within Qualitative Traditions

Considering the reliability and validity of research studies is often a much sought-after delineation within quantitative studies. However, within qualitative studies, it is common to think of reliability more in terms of the "consistency" of a research study and to view validity as the "transferability" to new and unique contexts, instead of seeing it as generalizability. In qualitative research, generalizability is not the main purpose.

Protecting the reliability, or consistency, of my research study entailed three common strategies: triangulation, member checks, and the establishment of an audit trail throughout my study. In triangulation, I sought to use multiple methods of data collection and multiple sources of data. Through multiple methods of data collection, I employed student and teacher interviews, observations during CRMA sessions as well as sessions with teachers observing video recorded CRMA sessions, and miscue analyses of students' oral readings to establish triangulation. Yin (2009) illuminated the use of triangulation using multiple sources of data and termed this an important advantage in the "development of converging lines of inquiry" (p. 115).

Member checks, or respondent validation, means that "you solicit feedback on your emerging findings from some of the people that you interviewed" (Merriam, 2009, p. 217). In this way, I sought input from the teachers in my study. This included the use

of the collaborative interpretation method, in which I asked teachers to view and interpret the same data I collected (Whitmore & Crowell, 1994). As teachers viewed the student CRMA video recorded sessions, it was valuable to hear teachers' interpretations of the events on the video. Essentially, video recording of the teachers watching the CRMA sessions was a form of collaborative interpretation.

Merriam (2009) described the audit trail as describing "in detail how data were collected, how categories were derived, and how decisions were made throughout the inquiry" (p. 223). Through the use of my documentation log, I tracked my emerging questions; my reflections; my reasons for analysis of certain data; and generally logged my thoughts throughout my study (See Appendix E for Documentation Log Sample). To keep track of all the data collected, I used an expandable file to sort through and organize all of the documents and evidence. I organized each week's CRMA session through the use of folders to separate the materials. I included the documentation from the BIMOR and the TORP. I also kept copies of my documentation log for both the weekly student CRMA sessions as well as the four teacher viewing sessions of their students involved in CRMA sessions.

I adhered to the thought that generalizability within my qualitative research study was not feasible. However, as Merriam (2009) stated, "In qualitative research, a single case or small, nonrandom, purposeful sample is selected precisely because the researcher wishes to understand the particular in depth, not to find out what is generally true of the many" (p. 224). I was more interested in the specific student participants and their classroom learning context rather than making a generalizable statement of findings that can be applied to all fourth grade classrooms. Therefore, I used "rich, thick description"

(Merriam, 2009) to report my findings. In the findings chapters, I discuss in full detail the settings of my study and my findings so that other educators find value in my research in order to best determine how the findings might be transferred, or applied, in different settings.

Role of the Researcher

Determining the unique perspective and role I assumed as the researcher was important to this qualitative case study because my positioning colored my thinking, my planning, my data collection, my analysis, and ultimately—my findings. As Glesne (2011) stated, "As a researcher, you need to clearly define your research roles. This definition is situationally determined, depending on your philosophical perspective, the context, the identities of your participants, and your own personality and values" (p. 59). As one can deduct, the role I adopted in relation to my study, my student and teacher subjects, and to my analysis were all socioculturally bound. Glesne (2011) portrayed two main researcher roles: researcher's role as "researcher" and researcher's role as "learner." The role I adopted influenced my entire study and the ways in which I interacted with my study's participants.

First and foremost, my role in my study was that of a learner. I hoped to learn about what happened when I included students in the CRMA process and how that changed students' reading behaviors, if at all, as well as the act of reading itself. I also wanted to learn how the CRMA process changed teachers' views of their readers and their views of reading. I expected that in the role of researcher as learner, I had to be a good listener with the students and teachers and to spend time in non-judgmental spaces

learning the most I could from my fellow learners. I situated myself as a co-learner with my study participants—a role I believed to be the most beneficial to the research process.

Secondly, and maybe most importantly, I situated myself within the learners' space, including both students and teachers in the study. I was the students' principal at Lincoln Elementary School and I was also the direct supervisor and evaluator for the teachers within the study from Lincoln Elementary School. I didn't want my presence, or my role as a school leader, to necessarily influence either the students or the teachers. This was a delicate balance for me and I worked to build trusting relationships.

As the researcher, and in order to check my judgments, my documentation log was invaluable as I posited and tested my own assumptions and recognized my biases that clouded my judgment. I hoped to provide a clear analysis of my observations, my interviews, and my formal student miscue analyses. According to Lincoln & Guba, (2000, p. 183) as quoted in Merriam (2009), reflexivity is "the process of reflecting critically on the self as researcher, the 'human as instrument'" (Merriam, 2009). The use of the documentation log provided rationale for the inclusion of the evidence of my thoughts, ideas, and formulated interpretations concerning the video recorded student and teacher sessions.

Implications, Significance, & Contributions

My research has implications, significance, and contributions to the areas of literacy knowledge and instructional practices. To begin with, I believe my research contributes to theory and knowledge focused on further investigating the relationships between students' oral reading behaviors and their self-identities as "readers" as well as a more enriched view of the act of the reading process. Exploring changes in teachers'

views of reading and their students as a result of viewing the CRMA sessions sheds light onto how teachers learn and how this learning changes both ideas about reading and instructional practices with students. Professional learning for teachers during which teachers have the opportunity to view their students in literacy discussions like CRMA through video recordings contributes to the concepts that professional learning is situated as meaningful problems of practice. Teachers wonder about how their students perform in different reading situations. Professional learning is also impactful for teachers when teachers participate in dialogical practices with others to question practices and instructional strategies to better inform them about their students and what their students can and cannot do in the area of literacy.

I hope to share implications for classroom practice to assist teachers of literacy in better meeting the needs of diverse learners in the classroom. This may include specific recommendations to include more learning experiences like CRMA where students take more ownership of their thinking and learning in the act of reading. Effective research studies provide applications for classrooms and I hope to impact literacy teachers and how they can help readers revalue themselves and the reading process through the use of CRMA. I also hope that my research carries significance in the ways in which teachers view literacy assessments as authentic ways to demonstrate students' learning. This is important given the current state context for literacy assessments and provides opportunities for teachers to view their students in new ways regarding their literacy strengths and opportunities for growth and change.

Chapter 4: Meet the CRMA Participants

In this chapter I introduce the students and teachers who participated in this Collaborative Retrospective Miscue Analysis (CRMA) study. I begin each "Student Profile" by describing each student so that the reader better understands who the student is and how they became a participant. I also include information learned from administering the BIMOR (Burke Interview Modified for Older Readers). The BIMOR is a reading interview administered orally that shows perceptions about students' self-concepts and identification as readers as well as students' understanding of the reading process. For the purposes of my study, I focus on four separate components of understanding gleaned from the BIMOR: self-concept as a reader; characteristics of "good" readers; strategies used during reading; and understanding about the reading process.

I conclude each student profile by sharing what I learned from administering the Miscue Analysis In-Depth Procedure (Goodman, Watson, & Burke, 2005) to provide a snapshot of students' oral reading through a miscue analysis prior to beginning CRMA. Students read a text orally while I video recorded the session, then I completed a miscue analysis procedure to determine how students orally read. The miscue analysis provided information about the kinds of miscues readers made and how their miscues potentially changed meaning construction during reading.

Teachers play an important role in the literacy lives of their students and the teachers in this CRMA study were no exception. Two teachers were selected as adult participants mainly due to the fact that they were the two teachers of the fourth grade students in the study. Both teachers had experiences with listening to students' miscues

during oral reading while one teacher maintained a log of students' miscues when she listened to her students read aloud to her at various times during school.

Defining Assessment Language

I include descriptions of various assessments pertinent to the following student profiles in order to provide further clarity about the assessments used at Lincoln Elementary School while these students were involved in this study. Understanding the particularities of each assessment is useful in delineating the features of and the information that each assessment is able to provide to teachers and administrators in schools because it matters to the conversation about assessments used at this school. The climate in the state was centered on the implementation of new literacy assessments through the Iowa TIER student information system.

The state mandated standardized assessment given in third through fifth grades at Lincoln Elementary School is a battery of assessments called the Iowa Assessments. These assessments are given to students each spring in the areas of Reading, Mathematics, Social Studies, and Science. These multiple-choice assessments provide summative information regarding a student's proficiency in these four content areas with the student proficiencies in Reading, Mathematics, and Science serving as indicators of school accountability at the state level. Students receive a National Standard Score (NSS) as well as a proficiency level for each content area: advanced, proficient, or not proficient. Schools use the proficiency levels of students to determine how students are progressing in these content areas over time.

In 2014, newly legislated assessment rules and regulations called for the inclusion of FAST Assessments in the state. FAST stands for Formative Assessment System for

Teachers. The CBM-R (Curriculum-Based Measurement of Reading) and aReading (Adaptive Reading) assessments for students in second through fifth grades included three assessment windows throughout the school year (beginning of year, mid-year, and end of year). The CBM-R assessments included three oral reading passages in which a median score was indicated for every student. This assessment involved students reading three 1-minute timed passages in which teachers marked students' errors on a computer to track students' fluency rate and accuracy. There was no assessment for monitoring students' comprehension. The aReading assessment was a computer administered adaptive assessment focused on students' applications of reading skills and included word skills, vocabulary skills, and reading comprehension of texts. The aReading assessment generated a final numerical score called a Scaled Score.

Students' scores on the CBM-R and the aReading assessments were used to determine if students were progressing according to state benchmarks set at each grade level by the state. The FAST Assessments were intended to provide formative information for teachers in order to monitor students' progress in the area of Reading. Students were placed in one of the following performance levels, or literacy indicators: adequately progressing, at-risk, or persistently at risk. If students received a literacy indicator of at-risk, then teachers had to provide weekly progress monitoring in the Iowa TIER online student information database to monitor students' growth and changes using weekly fluency rate probes. If students received a literacy indicator of persistently at risk, then teachers were required by the state to provide both intervention support as well as weekly progress monitoring.

While Iowa Assessments, FAST CBM-R, and FAST aReading assessments have driven the assessment vehicle in the state and have shaped the assessment landscape, an alternative exists. My study involved the use of CRMA, or Collaborative Retrospective Miscue Analysis, as a way to gather information about students' thinking and understanding of language and communication during reading through a small group approach. CRMA is a process to help students collaboratively analyze their miscues during oral reading with a focus on meaning and understanding.

CRMA offers teachers a way to better understand students' thinking in regards to the miscues they make when they read. Miscue analysis, in which students talk about their thinking and what meaning they bring to texts, provides a different approach for literacy educators to learn more about their students that doesn't involve standardized assessments or other assessments like FAST CBM-R and aReading. Where these assessments call for an individualized approach to assessing student knowledge, CRMA incorporates student discussion, questions about miscues, meaning, and language, and a social approach to learning. See Table 3 – Comparison of CRMA Study Assessments for a summary of the assessments previously discussed to better understand the nuances between the different assessments.

Table 3 - Comparison of CRMA Study Assessments

Assessment	Purpose	Score Reporting	Method of Administration	Time
FAST CBM-R (Curriculum-Based Measurement for Reading)	Universal screener and progress monitoring	Words Read Correct (WRC) per minute (median); accuracy percentage	Individual; 3 reading passages; 1-minute timed oral reading fluency	5 – 7 minutes per student; 3 times per year; weekly for progress monitoring
aReading (Adaptive Reading)	Universal screener	Scaled score	Individual or group; Computer administered adaptive measure (multiple choice and fill in blanks)	15-30 minutes; 3 times per year
Iowa Assessments (Reading only)	Summative evaluation of student growth	National Standard Score (NSS)	Whole group; standardized fill in the bubble test sheets	60 minutes total for Reading I and Reading II tests
CRMA (Collaborative Retrospective Miscue Analysis)	Formative or Summative assessment focused on collaboratively analyzing student miscues to focus on reading for meaning	Miscues per Hundred Words (MPHW); percentages for syntactic, semantic, and graphophonic information; analysis of student miscues as high quality vs. low quality	Small group; real texts; student discussion and analysis	20-50 minutes; can be conducted 1-3 times per week

Student Profile – Meet Neil

Neil (pseudonym) was a fourth grade boy at Lincoln Elementary School who was very interested in gaming including Minecraft. He had been identified as having a reading disability and therefore qualified for special education supports and services and

he had an active IEP with one goal for improving reading comprehension. Neil's family consisted of his parents and two younger brothers. Neil's mother worked for a local nursing home as a director and his father was a retired veteran on disability who was no longer employed. In fact, Neil shared that his dad spent a lot of time in the basement playing games on the computer. Neil was a happy boy who was often seen smiling and working with others in his class.

On the Iowa Assessments from the previous school year, Neil's reading achievement was in the "proficient" category for Reading. During the school year at the same time as the study, Neil's fall FAST Assessment CBM-R score was 86 wcpm (words correct per minute) for fluency with 99% accuracy. The fourth grade expected benchmark for fall was 116 wcpm, which indicated that Neil was below the benchmark. The FAST Assessment reading comprehension score from the fall aReading test was a 471 and the fourth grade expected benchmark was 500. Both his fluency score and his aReading score placed him in the category of "at-risk for a substantial reading deficiency" as part of the new state reading assessments required by all students in K-6 in the state.

According to the BIMOR (Burke Interview Modified for Older Readers) administered before the study began, Neil identified himself as a "good reader." In response to the interview question, "Describe yourself as a reader: What kind of reader are you?" Neil stated, "I am like a helper. Sort of like a helper when I'm reading." He even referenced helping a classmate in his specially designed instruction time with the special education teacher. He then added, "I'm a good reader because I kept practicing.

Everybody has to practice reading—that's what I do a lot so I can be a good reader." Neil held the belief that practicing reading made him a good reader.

Several questions on the BIMOR interview were intended to determine the student's perspective about what it means to be a good reader. One question was: "Who is a good reader that you know?" Neil identified four students in his class that he thought were "good readers." Knowing student assessment information due to my role as principal, all of these students identified by Neil as "good readers" performed in the top 25% of the fourth grade on reading assessments like Iowa Assessments, FAST CBM-R, and FAST aReading. The follow up BIMOR interview question, "What makes _____ a good reader?" helped to surface what Neil thought about specific characteristics of good readers. Neil explained, "He sits quietly reading a lot…umm...he...when he's reading, he reads and tries to like...he's always reading to himself." This revealed that Neil's beliefs that good readers are quiet and always reading to themselves.

When I asked the BIMOR interview questions that were related to the use of particular strategies during reading, and specifically about what Neil did when he came to something he didn't know, Neil's main strategies consisted of using a dictionary, asking someone for help, and sounding it out. He stated rather quickly, "I look in the dictionary or I like…I look it up." He then added, "I ask what the word means. I ask my teacher what it is." Later he offered, "If my friends help me, I ask them." This response situated Neil as a reader who sometimes relied on others to come to his aid when he was reading and he faced unknown words. Neil also answered, "Like...I like...just try to sound it out." Even when I asked the interview question, "What would a teacher do to help that person?" Neil responded, "She helps her sound it out." Each of Neil's responses

illuminated his belief that reading was about the specific reading of individual words and that sounding it out was a major strategy when coming to unknown words.

Several of the questions on the BIMOR aimed to elicit Neil's understanding of the basic process of reading itself. One of the interview questions was "Do you think _____(insert name) ever comes to something that gives him/her trouble when he/she is reading?" Neil's response to this question revealed a lot about his idea of the process of reading. Neil responded, "No. Not at all. He never does anything wrong." In his answer, Neil revealed that he believed that good readers never made errors during reading. Another question was, "Is there anything you would like to change about your reading?" Neil replied, "I would like to change if I have a problem, I would write it down...then I would put it against a teacher who knows what it is or what it means. They will help me." Again, Neil's disposition related to the reading process positioned him as a reader in need of help from while reading. To the question, "How did you learn how to read?" Neil's response was "I started to learn how to read in kindergarten. I keep reading and reading. I kept getting better. I listened to the book if somebody was reading to me." Neil believed in the importance of practicing reading in order to improve reading.

Something interesting resulted from the BIMOR concerning the question "Is there anything you would like to change about your reading? Neil's response was, "My Lexile is about orange. I keep reading that so if I get 100% I might move to blue." One of the things that Neil wanted to change about his reading was about his Lexile level. A student's Lexile level is "a scientific way to match readers with text" (https://lexile.com/about-lexile/lexile-overview/lexile-infographic/). Teachers sometimes use Lexile level information to help readers select books. When Neil talked about the

colors orange and blue, he was describing how some books in this teachers' classroom library were color-coded according to the Lexile level of some books.

The last question of the BIMOR was "What is the most difficult thing you have to read?" Neil thought for several seconds and then answered, "I have to read my Lexile color. I can't really read other colors like blue, red, green, or black. But I know the other books I like are the conspiracy books. I just read them. My head is in them." Neil was cognizant of the Lexile levels in his classroom and understood that his reading was restricted to only certain levels of books, even though he subversively read the "conspiracy books" that he mentioned. Neil was very interested in topics such as war, military, and combat, so it is not surprising that he would enjoy books about conspiracy theories.

Prior to the beginning of the CRMA study, I met with each child to conduct a formal miscue analysis. I used a book entitled, *Orphan Train Journey*, by Janine Rancourt (Rancourt, 2004), which was determined to be at a Level S, or appropriate for fourth graders near the end of the fourth grade. *Orphan Train Journey* is a piece of historical fiction that describes the tale of a young orphan boy, named Jeremiah, who travels by train across the county in 1872 from a New York City orphanage all the way to Kansas. The story tells about Jeremiah's journey, leaving his tenement, orphan life behind him to be adopted by a farming family living in the fields of Kansas.

During the early part of my study, students had learned about historical fiction as a genre of study in their classroom and I wanted to use a connected text that was part of the fourth grade curriculum in order to build on students' background knowledge and interests since this was related to Neil's classroom learning. When Neil was in third

grade, his class had also completed a unit of study about pioneer life and had compared and contrasted pioneer life with his own life as part of his learning.

Drawing from the work of Goodman, Martens, and Flurkey (2014), I numbered every sentence of the typed manuscript of *Orphan Train Journey* by Janine Rancourt. After numbering every sentence, I then analyzed every sentence to determine, at a sentence level, the degree of understanding in each sentence. Next, I describe the process I used to code each sentence of the students' oral readings from the first formal miscue analysis.

According to Goodman, Martens, and Flurkey (2014), "We read each sentence with all miscues *as finally produced by the reader*" (p. 20). I was interested in the meaning of the sentence as finally produced, including miscues such as: substitutions, repetitions, omissions, self-corrections, and even nonword substitutions. All of these miscue types may or may not impact a reader's understanding of the text. In analyzing each sentence, I asked three main questions (Goodman, et al., 2014, pgs. 20-21):

- Is the sentence syntactically acceptable? In other words, was the sentence grammatically correct, or did it sound like English? This involved thinking about verbs, nouns, and other parts of speech. This question was coded either "Y" for Yes or "N" for No.
- Is the sentence semantically acceptable? This question was asked to determine whether or not the sentence made sense as it was finally produced. This question was also coded either "Y" for Yes or "N" for No.
- To what degree does the sentence (with the miscues as the reader left them) change the meaning of the story or article? I was interested in whether or not the

final production of the sentence changed the meaning of the sentence at all. This question was coded "Y" for yes, "N" for no, or "P" for partial change in meaning.

My process in analyzing every sentence that students read and applying the aforementioned questions resulted in several pages of lined codes. After first numbering every sentence, I read each sentence as the student finally produced it, with miscues included, and asked myself the three questions as noted above. I then coded each numbered sentence with one of the following codes: YYN, YYP, YYY, YN-, or NN-. I wrote these codes on the side of the typed manuscript to track the different codes for each sentence. The reason for the "-" is that if the code to the second question was "N", meaning that the sentence was not semantically acceptable, or made sense, then there was no reason to code the third question as to the degree of meaning change.

According to Goodman, Martens, and Flurkey (2014), "The first three codings (YYN, YYP, and YYY) indicate "language strength" because the miscues are high quality or are self-corrected. The remaining two codings (YN- and NN-) show weakness that result from low quality miscues" (pgs. 24-25). High quality miscues are those miscues that "do not disrupt meaning" (Goodman et al., 2014, p. 13), whereas with low quality miscues, meaning is lost to some degree. Using these coding guidelines, I then coded every sentence in each reader's typed manuscript text that was used for the formal miscue analysis.

While coding each sentence allowed me to better understand each student's abilities to produce syntactic and semantic acceptable sentences, as well as gain a better understanding about whether or not the miscues made during reading changed the meaning of sentences, I was also very interested in obtaining greater detail at the miscue

level. I wanted to better understand how each miscue was syntactically and semantically acceptable. I also wanted to know the degree to which the students' miscues resulted in meaning change. More specifically, I was interested in whether or not miscues resulted in the loss of meaning construction for students as they read and to some degree, how their miscues affected their sense of grammatical understanding of the text. In addition, I wanted to determine to what degree students read with both graphic and phonemic (sound) similarity. This information was contained in the Miscue Analysis In-Depth Procedure Coding Form (Goodman, Watson, & Burke, 2005).

Upon completion of the sentence level coding on the typed manuscripts for each student, I then utilized the Miscue Analysis In-Depth Procedure Coding Form (see Appendix F – Miscue Analysis In-Depth Procedure Coding Form and Typescripts) to further analyze each student's oral reading from before the beginning of the CRMA study. I numbered each miscue during the excerpted portion of the book, *Orphan Train Journey*, on each students' typed manuscript that I used to mark the miscues made during students' oral readings. I was able to study each miscue in its relation to the sentence and to the story in this manner. This in-depth procedure allowed me to understand how each student miscued and how each miscue affected the meaning of the story. I coded the form using the following components:

- Syntactic Acceptability (Y for yes or N for no)
- Semantic Acceptability (Y for yes, P for partial, or N for no)
- Meaning Change (N for no, P for partial, or – for not scored)
- Correction of the Miscue (Y for yes or N for no)
- Meaning Construction (no loss, partial loss, or loss)

- Grammatical Relations (strength, partial strength, overcorrection, or weakness)
- Graphic Similarity (high, some, or none)
- Sound Similarity (high, some, or none)

After Neil and I sat down at the table in the counselor's office, he seemed slightly nervous. His eyes darted back and forth between the papers on the table and the iPad on the tripod in the room. I read aloud to him the directions for what he needed to do as the reader and shared with him that I was going to video record his oral reading so I could get to know him better as a reader. It must have been slightly awkward for a fourth grader to sit in the counselor's office with his principal, but I did my best to make him feel at ease so I could capture what he could do as a reader. After reaffirming him that he just needed to do his best, Neil read the text aloud for me. He looked at me periodically as if for validation. I smiled at him often with encouragement to keep reading. After he was finished, it was near the end of our time and he needed to get back to his classroom.

Table 4 represents Neil's pre-CRMA study miscue analysis using the coded markings I used for each sentence he read for the text, *Orphan Train Journey*.

Table 4 - Neil's Pre-CRMA Miscue Analysis

Coding Marks	Total Number	Percentage	Totals	Percentage
YYN	49	78%	50	80%
YYP	1	2%		
YYY	0	0%		
YN-	9	14%	13	20%
NN-	4	6%		

Taken holistically, Table 4 illustrates that Neil read 80% of the text with "language strength," meaning that in 80% of the sentences, or roughly 4 out of every 5 sentences, he self-corrected miscues or miscued with high quality miscues, thus holding the meaning of the text. That means 20%, or 1 out of every 5 sentences was problematic in that Neil did not self-correct, or these sentences contained low quality miscues that affected the overall meaning of the text.

I next address the following aspects of miscues that Neil demonstrated on this pre-CRMA study reading to provide a picture of how Neil approached text before the study began: nonword substitutions and self-corrections. These were the main themes I noted after analyzing his miscues. As I illustrate these aspects of miscues, I utilize the use of italics for the words representing his miscues and place additional information about what Neil did during reading within parentheses in the lines of text.

Neil's Use of Uncorrected Nonword Substitutions

In eight of the 63 sentences that Neil read, he substituted words in the text with nonword substitutions. On the typed manuscript, I labeled these with the use of "$" as this indicated a substitution of a non-word. This revealed some of Neil's misunderstandings about the text. This also revealed that sometimes Neil was not monitoring his reading to make sure what he was reading made sense to him and made sense within the sentence. All of Neil's nonword substitutions were graphically very similar to the word(s) in the text as well as sounding very similar to the expected response of the word. This showed me that Neil looked at the words and tried to approximate the pronunciation of those words, however unsuccessfully.

For example, in:

Sentence 17:

The text: *Jeremiah* was distracted by the *commotion* around him.

Neil: *Jermah* was distracted by the *conderation* around him.

Sentence 26:

The text: He was a little less frightened when he learned that Henry, his best friend from the *orphanage*, had been assigned to sit with him.

Neil: He was a little less frightened when he learned that Henry, his best friend from the *orphamage*, had been assigned to sit with him.

Sentence 29:

The text: He saw tall *tenement* buildings and narrow streets crowded with horse-drawn carts.

Neil: He saw tall *tenment* buildings and narrow streets crowded with horse-drawn carts.

Sentence 33:

The text: It followed a *meandering* river lined with trees flecked with new spring leaves.

Neil: It followed a *mendering* river lined with trees flecked with new spring leaves.

Sentence 42:

The text: *Jeremiah* soon *devoured* his jelly sandwich, apple, and milk.

Neil: *Jermah* soon *devored* his jelly sandwich, apple, and milk.

These nonword substitutions all showed high graphic similarity that illustrated that Neil paid attention to the words carefully, but did not know these words: *conderation/commotion, orphamage/orphanage, tenment/tenement, mendering/meandering, and devored/devoured*. In each instance, the graphic similarity was strong. Furthermore, in each instance, Neil's nonword substitutions maintained the syntactic meaning of the sentences, using nonsense verbs for verbs and nonsense nouns for nouns—it still sounded like proper English that was grammatically correct. I also noted that most of these words were complex vocabulary words for fourth grade readers and proved to be difficult for many intermediate-aged readers. Neil looked carefully at the words to attempt substitutions that were graphically similar, even though they were nonword substitutions.

Neil's Use of Self-Corrections

There were many examples of Neil monitoring for understanding during reading that ultimately resulted in meaningful self-corrections. These self-corrections showed that Neil knew that some of his miscues didn't make sense and he needed to self-correct. I included several examples below:

Sentence 12:

The text: Only one hour later, *Jeremiah* stood on the train platform at New York's Grand Central Station with thirty other *children* from the orphanage.

Neil: Only one hour later, *Jermah* stood on the train platform at New York's Grand Central Station with thirty other *child* (self-corrected *children*) from the orphanage.

Sentence 31:

The text: He remembered helping his dad *sell* newspapers.

Neil: He remembered helping his dad *smell* (self-corrected *sell*) newspapers.

Sentence 45:

The text: The swaying of the train lulled them *to sleep*.

Neil: The swaying of the train lulled them *asleep* (self-corrected *to sleep*).

Sentence 54:

The text: "*Smile*, children!" Mrs. Miller told them.

Neil: "*Stop* (self-corrected *Smile*), children!" Mrs. Miller told them.

These self-corrections demonstrated Neil's important thinking about making meaning during the act of reading. He knew that the miscues didn't quite make sense. When he substituted *smell/sell*, he even laughed out loud during the reading because he knew how funny it sounded. Interestingly, when he substituted *asleep/sleep*, he self-corrected even though his substitution made sense in the sentence. Less proficient readers often self-correct substitutions when they are graphically similar, even if it made sense. Out of a total of 36 miscues, Neil self-corrected 11 of them, or just at 31%. This is important to consider that Neil self-corrected roughly one-third of the time during his initial reading before the CRMA group began. The percentage of self-correction is not as important as understanding what the reader is doing because "self correction indicates the amount of problem solving the reader engages in" (Goodman, Watson, & Burke, 2005, p. 89). In addition, Goodman et al. also indicated that the percentage of self-correction among readers is between 10-40 percent. Neil was considered to exhibit similar self-correction behaviors on this initial formal miscue analysis.

Using the information collected from the Miscue Analysis In-Depth Procedure Coding Form, I dug deeper into Neil's miscues starting first with the number of miscues per hundred words, which is a threshold that is used in communicating about students' miscues during reading. From his excerpted reading, I documented 36 total miscues, including those that he self-corrected. The total number of words that he read was 784. This translated into 4.59 MPHW, or roughly 4.6 Miscues Per Hundred Words. This number was important to compare to Neil's post-study formal miscue analysis to determine how that number changed over the course of the study. The Miscues Per Hundred Words was just an indication of a rough estimate for a reader's amount of miscues per hundred words. What was more important was the analysis of the miscues as a whole through the formal miscue analysis procedure to determine the behaviors the reader used when reading and when they miscued.

Through the evaluation of miscues, I ascertained that Neil's miscues resulted in 62% of either "no loss" or "partial loss" of meaning. 39% of his miscues resulted in a loss of meaning during his oral reading. For this formal miscue analysis, it was important for me to consider that a little over a half of Neil's miscues resulted in only partial loss or no loss of meaning. On a holistic scoring guide for retelling literary text, I scored Neil in the "2" category because he was able to retell the story with basic story elements but didn't share much beyond the characters in the story even with prompting.

In terms of graphic similarity and sound similarity, Neil used the letters and sounds in words to help him read. 92% of his miscues were either of "high" or "some" graphic similarity. Neil used his graphic knowledge, or his understanding of the letters in words, to assist in his reading. Even the miscues in which Neil substituted non-words

were graphically very similar. Equally important, Neil's miscues were very high for sound similarity. 96% of his miscues were either "high" or "some" in sound similarity. His use of the phonemes in words illustrated his keen sense of observation and understanding of the sounds that letters make to create words.

Student Profile – Meet Bella

Bella (pseudonym) was a fourth grader at Lincoln Elementary School and came from a family with three children. She lived with her father and stepmother and a toddler stepbrother. Bella had a vision impairment that affected her ability to read and wore corrective lenses. In the classroom, Bella had several accommodations to help her manage her poor vision including assessments using a large screen and the use of an iPad to increase the size of text while reading various types of text.

On the Iowa Assessments from the previous school year, Bella's reading achievement was in the "proficient" category for Reading. During the school year of the study, Bella's FAST Assessment CBM-R score was 105 wcpm (benchmark was 116 wcpm) for fluency with 95% accuracy. The CBM-R assessment is a set of three 1-minute timed fluency assessments aimed at measuring students' fluency rate, number of errors (state language), and accuracy. The FAST Assessment reading comprehension score from the aReading test was a 481 (benchmark was 500). Both her aReading score and her fluency score placed her in the category of "at-risk for a substantial reading difficulty" according to the state reading assessments.

Bella suffered from nighttime blindness, and also Nystagmus (shaking of the pupils from side to side). Her poor nighttime vision affected her reading when the lights were dimmed or if the class was working on the SmartBoard with the lights off.

Nystagmus also affected her ability to focus on words for a long period of time. She often got very close to the text that she was reading to help focus. Bella had been on an IEP (individualized education program) from preschool through third grade. Bella's IEP goals targeted social skills and reading. In third grade, she was dismissed from her IEP reading goal because she closed the gap between herself and her peers in both the literacy areas of fluency and comprehension. After she was dismissed from her IEP, a team determined that Bella needed a 504 Plan to help with vision accommodations to support her learning. These accommodations included permission that Bella could move around the room to see the board better and have access to larger text if needed.

Interview question #10 on the BIMOR was "Describe yourself as a reader. What kind of reader are you?" Bella's response demonstrated her uncertainty about what kind of reader she was. Initially, she responded, "Umm...like a good reader, because I read a lot of books at home and at school." But then she added, "I'm sometimes best at reading and sometimes not good." Bella struggled with knowing whether or not she was a good reader. This may have been because of how she approached the idea of a "good" reader. In her thinking, being a "good" reader was correlated with reading a lot of books.

Bella added more confusing information to this same question when she stated, "I read really slow and might lose my place because sometimes I read too slow and then I end up losing my place." Her self-concept appeared to be connected with her perceived inability to read fast. She also lost her place during reading. I can't help but question what connections existed between her poor vision and her ability to track words adequately so she didn't lose her place? At any rate, the fact that she read slowly and lost her place frequently impacted her ability to picture herself as a strong reader.

To determine what Bella thought about the characteristics of a good reader, I asked her BIMOR interview questions #2 and #3. These were, respectively, "Who is a good reader that you know?" and "What makes _____ a good reader?" Bella identified two different students in her class, Kara and Anna right away. Neil also identified one of these students, Anna, in his BIMOR interview. When I questioned Bella about what made Anna and Kara good readers, she responded, "Anna mostly knows a lot of the words and Kara can kind of get mixed up and then she'll start over the sentence." Bella equated good reading with being able to know a lot of words when reading. This was mainly a word-centered approach to her understanding about what made a good reader. Concerning Kara, Bella realized that Kara made mistakes during reading and then started over as a way to show that she was a good reader.

One of the best questions to reveal a student's strategies that they feel are important during reading is BIMOR interview question #1: "When you're reading and you come to something you don't know, what do you do? Do you ever do anything else?" Bella was very confident in her answers when she responded, "I try to sound them out, otherwise you could go to a dictionary." When I pressed her for any other strategies, she added, "Umm…nothing else. I usually say it out loud and sound it out."

Bella identified two strategies she used during reading when she faced something she didn't understand. Her "go-to" strategy was to sound it out. Sometimes she even said the word aloud to hear herself say the word to better understand the word. I was surprised by her addition of going to a dictionary for support. This was not a preferred strategy that was used in our school as a way to solve the problem of encountering unknown words, but it certainly was one strategy on Bella's mind.

Pushing Bella further, I asked BIMOR interview question #4: "Do you think _____ ever comes to something that gives him/her trouble when he/she is reading?" Bella answered, "Well…some of the books that Kara reads gets hard a little bit." Inferring from her answer, what gave a reader difficulties dealt with their reading level and when readers read sometimes it gets hard to read.

To further investigate Bella's use of reading strategies during reading, I asked BIMOR interview question #5: "When _____ does come to something that gives him/her trouble, what do you think he/she does about it?" Bella simply replied, "She probably will ask somebody or she'll probably ask the teacher." Seeking outside help placed the emphasis of control outside of the reader—placing the solution with someone else.

BIMOR interview question #6, "How would you help someone having difficulty reading?" attempts to discern what the reader thinks about helping others. Bella quickly added, "I would tell them to sound it out, otherwise they, umm…., they could sound it out loud to me or go to a dictionary." Again, I discovered that her two main strategies were "sound it out" and "consult a dictionary." BIMOR interview question #7 revealed even more about Bella's thinking about reading strategies. This question was: "What would a teacher do to help that person?" Bella answered, "She usually says go look it up in the dictionary." The strategy of using a dictionary to look up an unknown word was a strongly held strategy in Bella's repertoire for strategies used during reading and seemed to be one her teacher suggested during reading challenges.

I asked BIMOR interview question #9 in order to better understand what Bella thought about the reading process. That question was: "Is there anything you would like

to change about your reading?" For this question, Bella said, "I would like to get better so I can know the words. Ummm…I would like to get better at…I want to read a little faster." Bella's orientation about the reading process was preoccupied with a word-centered approach as well as a focus on reading faster. This revealed her understanding about what's important to her about the reading process.

Table 5 represents Bella's pre-CRMA study miscue analysis using the coded markings for each sentence she read from the text, *Orphan Train Journey*. This sentence level information showed me more about Bella and her ability to read.

Table 5 - Bella's Pre-CRMA Miscue Analysis

Coding Marks	Total Number	Percentage	Totals	Percentage
YYN	53	84%	54	86%
YYP	1	2%		
YYY	0	0%		
YN-	9	14%	9	14%
NN-	0	0%		

At first glance of Table 5, Bella's overall percentages for her initial reading of *Orphan Train Journey* before our CRMA study began were considered high. However, miscue analysis is less concerned with percentages than it is with analyzing miscues to determine what students are doing and thinking in the act of reading. Bella's miscues largely maintained the meaning of the sentences. I was surprised at these behaviors due to the fact that she had been identified as a "struggling" reader yet there was evidence from this first miscue analysis that she read for meaning. An assumption is often made

about readers who struggle with reading that they fail to monitor for meaning. Even in my own thinking, I made this assumption. That being said, Bella had been termed a struggling reader but she read with meaning even on the initial miscue analysis. While she may have been identified as a struggling reader using other assessments, initial analysis of her miscues led me to think differently.

For my analysis, I now address the following aspects of miscues that Bella demonstrated on this pre-CRMA study reading to provide a picture of how she approached text: use of substitutions; nonword substitutions; and self-corrections. As with Neil's analysis, when I illustrate these aspects of miscues, I use italics for the words representing her miscues and place additional information about what Bella did within parentheses in the lines of text.

Bella's Use of Substitutions

One of Bella's highest quality substitutions was in Sentence 26. In this sentence, she substituted *found* for *learned*, which could have been a better choice of words for this story. This carried forward the meaning of the sentence and made absolute sense in this sentence. This form of substitution was an example of a miscue that lacked any graphic similarity. Goodman, Watson, and Burke (2005) shared that "proficient readers may not consider the miscue significant to their development of meaning; in fact, readers are often unaware of making high-quality miscues and therefore seldom correct them" (p. 87). Substituting *found* for *learned* is an example of proficient reading.

Sentence 26:

The text: He was a little less frightened when he *learned* that Henry, his best friend from the orphanage, had been assigned to sit with him.

Bella: He was a little less frightened when he *found* that Henry, his best friend from the orphanage, had been assigned to sit with him.

Bella made another acceptable miscue that remained uncorrected in Sentence 41 when she substituted *that* for *the*. She also substituted *that* for *the* in Sentence 62, which worked in the sentence grammatically and semantically. Most of her substitutions like these examples were of high graphic similarity, too. While not terribly interesting, these miscues showed that when Bella read, there were times in which she chose not to self-correct her substitutions because she knew they maintained the meaning of the story and made sense. In fact, she may have not even been aware of the fact that she miscued, which is a trait of more efficient readers (Goodman, Watson, and Burke, 2005).

Sentence 41:

The text: At lunchtime on *the* first day, *Mrs*. Miller came down the aisle carrying a heavy food basket.

Bella: At lunchtime on *that* first day, *Miss* Miller came down the aisle carrying a heavy food basket.

Sentence 62:

The text: He didn't like people staring at him, and *the* place was hot and stuffy.

Bella: He didn't like people staring at him, and *that* place was hot and stuffy.

Bella's Use of Uncorrected Nonword Substitutions

Bella also miscued when she substituted nonwords that did not sound like standard English, but she kept them as produced without self-correcting. The following examples illustrated that Bella was unfamiliar with the printed words and ended up using nonword substitutions words to continue reading despite any confusion the words may

have caused her. Bella's use of nonword substitutions provided information about the graphophonic cues she used while reading since all of her nonword substitutions were high in graphic and sound similarity.

Sentence 28:

The text: The window was covered with coal *soot*.

Bella: The window was covered with coal *sout*.

Sentence 33:

The text: It followed a *meandering* river lined with trees flecked with new *spring* leaves.

Bella: It followed a *mendering* river lined with trees flecked with new *springs* (self-corrected *spring*) leaves.

Sentence 42:

The text: Jeremiah soon *devoured* his jelly sandwich, apple, and milk.

Bella: Jeremiah soon *devored* his jelly sandwich, apple, and milk.

As I analyzed each of these non-word substitutions, I noticed that all of them had high graphic similarity and sound similarity to the printed text. This showed me that Bella was doing her best to produce a word that was very similar to the printed text, but she left those miscues as uncorrected. She approached these words in this way because she was relatively unfamiliar with those particular words and didn't know what to say for them as she read this text. Keene (2008) explained that words like this are not part of the reader's "lexicon—a mental library of instantly recognized words" (p. 116). Words that readers encounter and learn become part of their visual memory. Each of these nonwords, while not part of Bella's lexicon, was also of high sound similarity.

Bella's Use of Self-Corrections

During this oral reading, there were some key times when Bella self-corrected miscues when she realized that the word she used as a substitute did not make sense in the sentence and thus produced the self-correction. I included several examples below:

Sentence 13:

The text: A stout *woman* with a loud voice introduced herself *and two* other adults.

Bella: A stout *man* (self-corrected *woman*) with a loud voice introduced herself *to the* (self-corrected *and two*) other adults.

Sentence 60:

The text: After listening to some *speeches*, he lined up with the others on a stage.

Bella: After listening to some *peaches* (self-corrected *speeches*), he lined up with the others on a stage.

Using the Miscue Analysis In-Depth Procedure Coding Form, I noted that Bella miscued 32 times during this oral reading. Bella self-corrected 13 out of the 32 miscues for an overall percentage of 41%. Bella read 784 words in this selection. I calculated that Bella made 4.08 MPHW, or miscues per hundred words.

Bella's miscues resulted in 72% of "no loss" or "partial loss" in meaning. Roughly 75% of the time, Bella's miscues allowed her to maintain the meaning of the story during reading. Even more impressive was her ability to read with appropriate grammatical meaning—only 3% of her miscues were not syntactically acceptable when reading text.

While Bella may have miscued 32 times in this text, she approached words with high graphic and sound similarity. In fact, 92% of her miscues were of "high" or "some"

graphic similarity. 96% of her miscues were of "high" or "some" sound similarity. Using a retelling rubric for literary text, I scored Bella at a score of three for her retelling because she basically was only able to retell important story elements including the characters and problem in the story.

Student Profile – Meet Jessica

Jessica (pseudonym) was also a fourth grader at Lincoln Elementary School who lived with her father and three siblings. Jessica's mother was estranged from the family and therefore Jessica's grandmother supported the family with financial and childcare assistance and other supports to ensure that the children in her family were cared for properly.

On the Iowa Assessments from the previous school year, Jessica's reading achievement was in the "proficient" category for Reading. During the school year during the study, Jessica's FAST Assessment CBM-R score was 91 wcpm for fluency (benchmark was 116 wcpm) with 96% accuracy. The FAST Assessment reading comprehension score from the aReading test was a 496 (benchmark was 500). Jessica's fluency score placed her in the category of "at-risk for a substantial reading difficulty" according to the state reading assessment benchmarks.

Jessica's teacher, Mrs. Madison, initially recommended her as a potential study subject due to classroom experiences with her during running records because Jessica made many errors while orally reading. Framing miscues as errors in this way is found in the use of running records. While running records indicate a student's total number of errors and place a high emphasis on accuracy, miscue analysis seeks to better understand the meaning behind the miscues through that analysis (Weaver, 2002). Mrs. Madison felt

that she would benefit from the study experience of learning more about miscues and she wanted to know what might work best to help Jessica improve in overall fluency, accuracy, and comprehension.

Interview question #10 on the BIMOR was "Describe yourself as a reader. What kind of reader are you?" Jessica thought about the question, and then slowly answered, "Not so good because I make mistakes a lot. Like if I'm making a mistake, I make more so I always be careful." Jessica's self-identity as a reader was based on a mistake, or deficit mindset. In her own eyes, she made a lot of mistakes when she read. This lead to a negative viewpoint of herself as a reader. According to Jessica, once she made one mistake, she then continued to make more. Jessica believed she just needed to be more careful as a reader, and that would lead to greater success during reading.

Jessica added, "I look at the words and if it doesn't make sense, I read it over again." Jessica's response demonstrated her ability to think about how she needed to make sense when she read text. She also shared a potential strategy she used during reading when she encountered words that didn't make sense—she reread for meaning. The fact that she shared that she looked at the words to determine sense or not indicated to me that Jessica focused more on single words during reading, rather than focusing on overall meaning.

To ascertain what Jessica thought about the characteristics of a good reader, I asked her BIMOR interview questions #2 and #3. They were, respectively, "Who is a good reader that you know?" and "What makes _____ a good reader?" In response to interview question #2, Jessica responded, "Mrs. Madison and Emily." Mrs. Madison was her teacher and Emily was a classmate. When I asked interview question

#3 about what made them good readers, she replied hesitantly, "…Because she, umm…knows all the words in a book and if it's sad, she makes a sad voice. Or if it's happy, she makes a happy voice. She pauses when there are periods."

It is interesting that she selected her teacher and a fellow classmate, who was a very accurate reader, as "good readers." Perhaps Jessica thought teachers "know it all" and were good readers due partly in fact to their position as leaders of learning in the school. Choosing Emily as a "good reader" was not surprising because Emily performed well in school and was regarded as a "smart" student by her peers.

Jessica's responses further showed that she was thinking about what it meant to be a "good reader." At this point in time, Jessica believed that "good readers" were those readers who paid attention to the emotions in the text and the words, showing by expression how the text should be read. She added evidence to indicate that when the text is sad, Emily used a sad voice and if it was happy—a happy voice. Jessica learned about expression as part of becoming a fluent reader. Additionally, Jessica believed that a "good reader" also used the punctuation, especially periods, to indicate pauses during reading. It is likely these responses followed direct instruction about becoming fluent readers, which was part of the required curriculum at Lincoln Elementary School.

During Jessica's BIMOR interview, there was no mention of making meaning from text or thinking about how words were put together to make sense or comprehend the text. Jessica's responses provided evidence that at that time, fluency was a major instructional focus—not just fluency rate, but also expression and pausing during reading.

Aimed at revealing a student's strategies that they felt were important during reading was contained in BIMOR interview question #1: "When you're reading and you

come to something you don't know, what do you do? Do you ever do anything else?" Jessica took little time to think about this question and quickly answered, "I sound it out. If I don't get it by sounding it out, I ask someone else." Jessica revealed two main strategies for solving problems during reading. The first was that of "sounding it out." This was her main strategy in solving these types of difficulties. She also shared the strategy of asking someone else to help her with unknown words. This word-centered approach was prevalent in her thinking and impacted her own cognitive strategies to be a strategic reader to solve problems during reading.

To further investigate Jessica's use of reading strategies, I asked BIMOR interview question #5: "When _____ does come to something that gives him/her trouble, what do you think he/she does about it?" Jessica replied, "She like…looks…if she doesn't know the word and what it means, she probably looks in the dictionary to find out what it means. She might ask Mrs. Madison for help." This response showed that Jessica was very concerned with the making of meaning of specific words, rather than longer texts. Two very similar strategies to the other study participants emerged from this interview question. Jessica shared that Emily might look in the dictionary to find out what the word meant. The dictionary as a viable strategy was still present in her thinking. She also raised the strategy of "asking for help." This response positioned her as needing the aid of someone else to help her when she encountered difficulties while reading. In my analysis, this demonstrated a passive approach to reading.

I asked Jessica, "How would you help someone having difficulty reading?" Jessica replied very matter of factly, "If they didn't know a word, I would probably tell

them what it is and what it means. I would help them sound it out." An additional strategy surfaced from this interview question—"tell them the answer."

I asked Jessica, "Is there anything you would like to change about your reading?" Jessica replied, "I don't know. I would like to change my fluency. I want to stop where there are periods and make it exciting when it's exciting or sad when it's sad." Jessica thought that the reading process was about fluency, and more specifically, related to observing the punctuation marks in a text in order to read with expression. There was no mention of anything related to meaning making during reading.

Jessica's pre-CRMA study miscue analysis in which I used the coded markings for each sentence she read from the text, *Orphan Train Journey*, is found in Table 6. This data is for my sentence level analysis of Jessica's oral reading taken before the beginning of CRMA.

Table 6 - Jessica's Pre-CRMA Miscue Analysis

Coding Marks	**Total Number**	**Percentage**	**Totals**	**Percentage**
YYN	21	68%	22	71%
YYP	1	3%		
YYY	0	0%		
YN-	6	19%	9	29%
NN-	3	10%		

Over two-thirds of the time, or 71%, Jessica produced sentences that were meaningful and made sense to her in her oral reading. This meant that about one-third of the time, or 29%, she produced sentences that were not meaningful, meaning that she left miscues uncorrected or included nonword substitutions that affected her sentence production. This was consistent with what Jessica's teacher shared about her after listening to her read for half of the year—she often miscued non-words for unknown words with little thought to making sure that the word sounded like a real word or made sense within the sentence.

For further analysis, I addressed the following aspects of miscues that Jessica demonstrated on this oral reading to provide a picture of how she approached text before the CRMA group began: use of substitutions; nonword substitutions; and self-corrections. As with Neil's and Bella's analysis, I incorporate the use of italics for the words representing her miscues and place additional information about what Jessica did within parentheses in the lines of text.

Jessica's Use of Substitutions

Jessica made substitutions that were uncorrected—some of her uncorrected miscues maintained the meaning of the sentence and some did not. Those that held the meaning meant that Jessica was focused on making sense as she was reading, while those left uncorrected sometimes meant she was not reading for meaning. Some examples include:

Sentence 13:

The text: A *stout* woman with a loud voice *introduced herself* and two other adults.

Jessica: A *shout, short* woman with a loud voice *induced her* and two other adults.

In this example, Sentence 13, Jessica finally substituted *short* for *stout*, which held the meaning about describing the stature of the woman. When Jessica first began Sentence 13, her first substitution was *shout*. Graphically similar but not making sense to her, she substituted again with the word *short*. Interesting, *short* is somewhat meaningful in this sentence as *short* would describe a *stout* woman. Having confirmed that this made sense to her, Jessica left it as *short* and continued reading. However, when she miscued with *induced* and *her*, Jessica was not looking at all parts of the words and left some parts out when she produced the miscues.

Sentence 16:

The text: So that we lose no one, you will have a number *pinned* to your clothing.

Jessica: So that we lose no one, you will have a number *planned* to your clothing.

Sentence 19:

The text: *Porters* pushed carts loaded with *baggage*.

Jessica: *Posters* pushed carts loaded with *bags, packages*.

In Sentence 16, Jessica produced the word *planned* for *pinned*, which was graphically similar, but lost the meaning. Jessica continued reading without thinking whether or not that word made sense in the sentence. She did the same in Sentence 19 when she miscued *Posters* for *Porters*. Jessica was not familiar with the word porters, nor did she have experiences or background knowledge about riding trains. However, later in Sentence 19, she demonstrated a high quality miscue that showed that she was actively attending to meaning when she stated *bags*, then *packages*, for the word *baggage*. This was an example of a rather sophisticated high quality miscue that maintained the meaning of the sentence.

Jessica's Use of Uncorrected Nonword Substitutions

In five of the 20 sentences that Jessica read, she miscued using nonword substitutions that did not make sense in the sentence and she left them as uncorrected. Several of her nonword substitutions sounded like an attempt at the word but ended in something unintelligible, like a muffled murmur. In talking with her teacher, she shared that Jessica often did this in the classroom whenever she encountered unknown words. In Mrs. Madison's observations, she just kept reading and paid no attention to these non-words. For instance, in:

Sentence 28:

The text: The window was *smeared* with coal *soot*.

Jessica: The window was *sm(erghm…other unintelligible sound)* with coal *shoot*.

Sentence 29:

The text: He saw tall *tenement* buildings and narrow streets crowded with horse-*drawn* carts.

Jessica: He saw tall *ten(eghm…other unintelligible sound)* buildings and narrow streets crowded with horse-*dawned* carts.

As in these two examples, her non-words attempted to produce the words in the text, but little effort was given to finally produce the words. As I previously stated, this was consistent with what her teacher noticed about her attempts at some unknown words. In Sentence 28 and Sentence 29, she produced sounds that were graphophonically similar in the first few letters in those two words, but then she abandoned the pronunciations and left them unaddressed.

Jessica's Use of Self-Corrections

During her initial reading of *Orphan Train Journey*, Jessica had several instances where she self-corrected miscues as a result of her monitoring for understanding during that oral reading. Of the twenty sentences she read, she had self-corrections in only three of the sentences. For instance, in:

Sentence 12:

The text: *Only* one hour later, Jeremiah stood on the train platform at New York's Grand Central Station with thirty other children from the orphanage.

Jessica: *One (self-corrected Only)* one hour later, Jeremiah stood on the train platform at New York's Grand Central Station with thirty other children from the orphanage.

Sentence 25:

The text: He didn't know where *this* journey would take him.

Jessica: He didn't know where *his (self-corrected this)* journey would take him.

The miscues Jessica self-corrected were both of high graphic similarity, meaning that the miscues were comprised of most or many of the same letters that were in the words in the text. Jessica focused on creating meaning as she read and on these two occasions, self-corrected her miscues since they interrupted her meaning making process. On Jessica's oral retelling, I assessed her with a score of three for her retelling since she was able to retell important story elements, which included the characters and problem in the story.

As I reviewed the information from the Miscue Analysis In-Depth Procedure Coding Form, I noticed several important points from Jessica's oral reading. First, she

only self-corrected three out of 20 miscues, or just at 15%. This is a relatively low percentage especially when compared to Neil and Bella. It also holds true according to what Mrs. Madison shared with me about Jessica's lack of self-corrections during reading. Secondly, 45% of her miscues resulted in loss of meaning construction representing nearly half of her miscues. Lastly, 100% of Jessica's miscues were rated "high" or "some" similarity for graphic and sound similarity. Even when she lacked self-correction strategies, her miscues looked and sounded very similar to the intended words in the text. Jessica's oral reading excerpt from this formal miscue analysis contained a total of 388 words with 20 miscues. That resulted in a numerical value of 5.15 miscues per hundred words, slightly higher than the other students in my study, but not dramatically different.

In Table 7 – Similarities and Differences in Student Assessments, I summarize the similarities and differences of the students in the study illustrating student performance on the various assessments previously mentioned.

Table 7 - Similarities and Differences in Student Assessments

Assessment	Neil	Bella	Jessica
FAST CBM-R (Curriculum-Based Measurement for Reading)	86 WRC	105 WRC	91 WRC
Accuracy Percentage of FAST CBM-R	99%	95%	96%
aReading Scaled Score (Adaptive Reading)	471	481	496
Iowa Assessments National Scaled Score (Reading only from previous school year)	Proficient	Proficient	Proficient

Table 7 - continued

Miscue Analysis Percentage of Producing Sentences with Language Strength	80%	86%	71%
Miscue Analysis Percentage of No Loss or Partial Loss of Meaning	62%	72%	55%
Miscue Analysis Percentage of High or Some Graphic Similarity	92%	92%	100%
Miscue Analysis Percentage of High or Some Sound Similarity	96%	96%	100%
Miscue Analysis Retelling Holistic Score (1-5)	2	3	3
Miscues Per Hundred Words (MPHW)	4.59	4.08	5.15

Table 7 yields some interesting results. In reviewing all of these assessments, it was confusing that all three students scored in the proficient category on the Iowa Assessments for Reading the previous school year and yet had other data that indicated substantial deficiencies according to other state assessments. In addition, while students were below the expected benchmark on the FAST CBM-R fluency assessment, all three students read with an accuracy of 95% or greater. The formal miscue analyses showed that these students read with high percentages of graphic and sound similarity. Students performed differently on different assessments and not all of the assessment scores aligned with one another.

Teacher Profile – Meet Mrs. Ryan

Mrs. Ryan (pseudonym) was in her seventh year of teaching fourth grade at Lincoln Elementary School. In her classroom, she taught literacy, mathematics, and

science to fourth graders. During my study, she was in her first year of graduate school to complete her master's degree in the area of literacy instruction. This was an online degree program and she was a member of a teacher cohort group at Lincoln Elementary School with five other teachers studying about literacy and effective literacy instruction. Her research interest was in the area of response to literature—dialogue between teacher and students about literature.

Mrs. Ryan's classroom was a buzz of activity with small groups of students' desks arranged around her triangular shaped classroom to foster student talk and collaboration during learning. A small space of classroom floor was designated for whole group teaching and learning and each student claimed their own green "spot" during such times. Classroom walls were decorated with bulletin boards celebrating students' excellence in their work samples and reminded students about learning themes. Student work even hung from the ceiling, which was adorned by student-created ceiling tiles with encouraging quotes to capture even the attention of students looking at the ceiling. The classroom exuded a sense of learning and color, and always celebrated student learning.

Mrs. Ryan aimed to know her students better as literacy learners as she listened to students read aloud to her from books they were reading for self-selected, independent reading. Mrs. Ryan took copious notes about the miscues that students made and tracked their accuracy over time using a simple spiral notebook to record her observations. When I asked Mrs. Ryan about students who might benefit from my study on Collaborative Retrospective Miscue Analysis, her notes guided her discussion of her students.

"I know exactly who should be in this study," she shared after consulting her notebook. "Neil is a real puzzle to me. He often just plows through his reading with little attention to the words. Sometimes he even makes up non-words just to keep on reading. I wonder how analyzing his miscues would affect his reading."

Mrs. Ryan sent me an email with more of her thoughts regarding Neil. Her email description of Neil is included below to gain a better understanding of Neil as a reader and why he might be a good participant in my CRMA study.

> He enjoys reading, but I think he likes looking at pictures more. He still reads picture books and often the books I use with him from Reading A-Z, (a website that offers online curriculum resources including thousands of books) he will use the pictures to help himself remember the story. He also does this with non-fiction books as well, in order to remember facts. He is still working on building up his reading stamina, he is very distractible, and very often starts a book, but never finishes it. He still does not understand that he should read at his current reading level to be most successful. He reads with expression, but often places the emphasis on the wrong words—it is not yet fluid. His pausing is often incorrect, but he tries hard. He needs some reminders about pausing and pacing before he begins reading. His current instructional reading level is L. His corresponding Lexile would be 350-399. His aReading score was a 471 and he is currently reading around 99 wcpm. Neil does not complete his reading homework of 15 minutes per night regularly—in fact it is rare. His progress is not stalled, but really slow.

An explanation of the assessment jargon Mrs. Ryan shared with me is important at this point. A reading level of L is a guided reading level that means a student is able to understand text at around a late second grade or early third grade level. This indicated that Neil was reading below grade level according to some measures. A Lexile level of 350-399 placed Neil at about a second grade level for instructional level of text and indicated an approximate reading level ability at the second grade. The term "aReading" referred to a state computer-adapted assessment that determined to provide teachers with information about a student's ability to comprehend text. The benchmark for the end of the school year in fourth grade was an aReading score of 513, which indicated Neil was below grade level according to the state assessment. The term "wcpm" stood for words correct per minute and was a reporting of a students' fluency rate on the state assessment. The end of year benchmark for fourth grade is 150 wcpm, which meant that Neil read grade level text with a significantly lower fluency rate that what was expected by the end of fourth grade.

Mrs. Ryan also shared other data from what she had collected on Neil including standardized test results from the state assessment in the area of reading as well as results from his most recent state computer-adapted reading comprehension assessment, which both showed that he was "at risk" for developing reading deficiencies. She mentioned that Neil had also once been in special education for the area of reading, but had been exited due to improved data through specially designed instructional services.

"I know just exactly who else you should select—Bella. Bella has visual problems and often has to put the books she's reading very close to her face. I want to know more about how she reads and whether or not her vision causes her difficulties in

the area of reading. Maybe that's why her data isn't the best." Mrs. Ryan's wonderings about Bella's eyesight led to a strong recommendation for her inclusion in my study. I, too, began to wonder if her vision issues impacted her reading ability, and whether that also affected her self-concept as a reader.

Mrs. Ryan also shared additional thoughts about Bella in the email description below that helped to shed other evidence about why Bella might be a good match for my CRMA study as well.

> Bella loves to read and comprehends pretty well at her current level. I would consider her to be a successful reader in that she has reading stamina and does a good job of self-monitoring her reading. She reads with good expression and does a good job with her pausing, speed, and pacing. I think many of her reading difficulties stem from her limited eyesight and her rapid eye movement. She completes her reading practice of 15 minutes every night and has good parental support. She enjoys all types of books. The last one she read was a Fancy Nancy book. Her aReading score was 481, which puts her Lexile at 500-599. Her current instructional reading level is N-Q, and she reads 128 wcpm, although there have been times this quarter when she has read 138 wcpm. She is making steady progress.

Bella's aReading assessment score of 481 was well below the expected grade level end of year benchmark of 513. Her reading level of N-Q indicated that her reading ability was like that of a third grade student and her Lexile level of 500-599 also suggested that she was about one grade level below in her reading ability. Her fluency rate of 128-138 wcpm was only slightly below the end of year fourth grade benchmark of

150 wcpm, and as Mrs. Ryan stated, she was making progress. State literacy assessments such as FAST CBM-R and the aReading assessment both identified Bella as a student who exhibited a "substantial deficiency" in the area of reading according to those measures. This may well have contributed to her selection as a reader who would benefit from inclusion in the study.

In the short time that I had spoken with Mrs. Ryan about students from her classroom that might be potential study participants, she had been able to share a lot of information about both of the students she recommended and eventually became a part of my study. She shared school assessment data including standardized test scores as well as other state assessments mandated for schools in the state. But she went a step farther and shared data from listening to her students and watching her students during oral readings. She knew it was important to listen to and converse with her students in ways that would allow her to know her students better and be able to design instruction based upon each student's unique needs. She had indicated to me that she had always kept notes about students' reading because it helped her better understand her students as readers.

While I had selected Mrs. Ryan more out of convenience sampling, I was very excited to see how she would respond to her students when we viewed the video recordings of their CRMA sessions in which she could view her students actively communicating about their own miscues in their reading. Mrs. Ryan, in my estimation, would benefit greatly from observing her students outside the classroom setting involved in CRMA sessions with another teacher. I hoped this would free her up to thinking about

how the power of observation might be a real learning tool in her own professional learning about reading as well as her views about her students as readers.

Teacher Profile – Meet Mrs. Madison

Mrs. Madison, the other fourth grade teacher in my CRMA study, had been teaching for 18 years at the time of the study. She had taught various grade levels in her teaching career but had been teaching fourth grade for the past five years. She had previously obtained a master's degree in Elementary Education with a Social Studies emphasis. Her room was also a flurry of literacy activity and she worked diligently to integrate literacy into her Social Studies curriculum to draw naturally on her students' interests in research, writing, and oral presentations.

After discussing my study with Mrs. Madison, she had an idea right way for the perfect student who she described as a "mystery." Jessica was a girl in her class that often miscued by saying nonsense words and sort of "plowed through reading" without a clear purpose to make sense of what she was reading. Mrs. Madison also sent me an email description of Jessica to help me understand more about her as a reader:

> Not real consistent...sometimes she can use decoding skills, other times not so much. She will mumble through words that are unknown to her, usually able to get the beginning sound(s). Comprehension (literal) and predicting is good, but higher level is much harder for her (why someone is doing what they are doing—inferring). She really enjoys reading, especially fiction books. I believe she sees herself as a good reader, and volunteers to read aloud in class. I think she's done a really good job getting by with looking like a good reader—she's outgoing,

confident, wants to read aloud, pays attention, and being "bossy" in groups helps her to look like a good reader.

I was intrigued about Jessica after talking with Mrs. Madison and reading her description of Jessica's strengths and her reading profile. Would the CRMA process help Jessica become aware of her tendency to mumble through words? Would I notice the same issue during her oral reading? Would she emerge as a natural leader in this group? These questions, along with her standardized test scores and other assessment scores, led me to select Jessica. I was interested in this "mystery reader" as described by her teacher.

Conclusions

Using teacher recommendations, BIMOR information, and the Miscue Analysis In-Depth Procedure Coding Form, I learned a lot about my three student participants in my CRMA study before we even began the official CRMA sessions. Teachers painted a picture of multiple miscues during reading with little to no self-corrections. All three students in my study often provided nonwords for substitutions when they miscued. They often focused more closely on words as they read. Teachers had helpful questions about each reader. Why does Jessica "plow her way" through reading, often mumbling words without thinking about the meaning behind her miscues? Does Neil think about what he's reading? What does Bella think about when she miscues? I wanted to know more about how these students would work together in a small group to read and discuss their miscues. Would they be respectful with one another in order to have honest conversations about their thinking during miscues? Do they have strategies to approach unknown words? Do they read for meaning, and if so, what does that look like?

After reviewing all of the information from the BIMOR, I formed some ideas about how they might approach difficulties in reading. "Sound it out" and "consulting a dictionary" were two main strategies all three students provided when asked for strategies to solve unknown words. I also saw a bit into how they saw themselves as readers. The students' teachers had identified each student as a "struggling reader." For the most part, the BIMOR shed light onto their lack of confidence in themselves as readers. Neil actually identified himself as a good reader that needed a lot of practice to be good. Bella initially thought she was a good reader, but then shared she was good and "sometimes not good" because she read slow and sometimes lost her place during reading. Jessica was honest and stated that she was "not so good because I make mistakes a lot." I also caught a glimpse of the fact that all three thought about reading as word calling with little insight into whether or not they had any ideas about reading as a meaning making, or sense making process.

The formal miscue analyses shed light onto the fact that all three readers relied on graphic and sound similarities in words to approach unknown words in texts they read. None of the children used self-corrections with any regularity. The majority of the time, all three readers miscued with some loss of meaning construction as a result of their miscues. All three readers substituted nonwords in their readings with little thought to what those words meant or how they affected their sense of meaning during reading. Both Bella and Jessica left uncorrected, high quality substitutions that showed they used proficient strategies. The wealth of information I gleaned about my three student participants as well as the teachers provided a good base to start with learning more about miscues and collaboratively analyzing miscues to better understand reading.

Chapter 5: The CRMA Study and Emerging Themes

In the state where this study occurred, students are commonly asked to demonstrate proficiency in reading through assessments that focus on fluency rates and accuracy percentages. Students come to believe they are poor readers when they don't read as fast as they should according to assessment benchmarks. A deficit mentality is perpetuated by viewing miscues as errors, or mistakes, during reading instead of analyzing miscues to determine what strengths readers bring to the reading process (Comber & Kamler, 2007). CRMA, or Collaborative Retrospective Miscue Analysis, is a strength-oriented process used to help readers focus on collaboratively analyzing miscues in order to make meaning during reading (Costello, 1996).

The purpose of my study was to determine what would happen if I engaged a small group of fourth grade readers in the CRMA process. During the first four chapters I introduced the theoretical foundations of CRMA and described the problem and significance of the study. I also included a review of the literature pertinent to the study and its components as well as a description of the methodological design. I presented rich descriptions to better understand the setting and both student and adult participants in the study.

In this chapter, I provide details about how I structured the CRMA sessions as well as some basic components of the student sessions. I describe what happened in the CRMA study and I share the findings of my study based upon the data collected through documentation, interviews, and participant-observation that included three fourth grade students at Lincoln Elementary School who were involved in CRMA for 14 weeks during the spring semester of 2015. In addition, I share the findings resulting from the inclusion

of the students' two teachers in viewing selected portions of the students' video recorded CRMA sessions four times throughout the study. To review, CRMA is a process to engage a small group of students in analyzing and discussing their miscues made during oral reading. I began by recording students reading a text and we collaboratively viewed the video recordings, marked various miscues, and then analyzed selected miscues to better understand the reader's process in reading. I also wanted to see what happened to students' reading behaviors over the course of the CRMA study and hoped that they would learn to revalue themselves as readers.

This qualitative study using case study methodology included data from various documents including a structured reading survey for students, formal miscue analyses, observational data from video recorded student CRMA sessions, a teacher reading profile about orientation to reading, and data from teacher viewing sessions of student CRMA sessions. The overarching research question in my study was: "What happens when a group of fourth graders at Lincoln Elementary School participates in Collaborative Retrospective Miscue Analysis (CRMA)?" I was also interested in how CRMA changed students' reading behaviors and their teachers' ideas about the reading process. Additional research questions for my CRMA study were:

1. How are fourth grade students' reading behaviors shaped through the CRMA process?
2. How are fourth grade students' ideas about reading and their self-perceptions as readers shaped through the CRMA process?
3. How do fourth grade teachers' views of students as readers change through the CRMA process?

4. How do fourth grade teachers' ideas about reading change through the CRMA process?

In light of the aforementioned research questions, I share my findings from analyzing video recordings of the CRMA small group over 14 weeks, the Burke Interview Modified for Older Readers (BIMOR) pre-study and post-study results, and the Miscue Analysis In-Depth Procedure before and again after CRMA. Additionally, I analyze discussions of the teachers' video recorded viewings of selected CRMA student sessions. For a sense of the study schedule and to when CRMA student and teacher sessions were held, see Table 8 – CRMA Student and Teacher Sessions Schedule. Highlighted sections indicate video recorded sessions of the students' teachers viewing researcher selected CRMA student session video recordings.

Table 8 - CRMA Student and Teacher Sessions Schedule

Date	Location	Session Notes
2/5	Counselor's Room	CRMA Session #1
2/12	Counselor's Room	CRMA Session #2
2/19	Counselor's Room	CRMA Session #3
2/26	Counselor's Room	CRMA Session #4
2/27	Conference Room	Teacher Session #1
3/5	Counselor's Room	CRMA Session #5
3/12	Counselor's Room	CRMA Session #6
3/19	Counselor's Room	CRMA Session #7
3/19	Conference Room	Teacher Session #2
3/26	Counselor's Room	CRMA Session #8
4/9	Counselor's Room	CRMA Session #9
4/16	Counselor's Room	CRMA Session #10
4/23	Counselor's Room	CRMA Session #11
4/30	Counselor's Room	CRMA Session #12
4/30	Conference Room	Teacher Session #3
5/14	Counselor's Room	CRMA Session #13
5/21	Counselor's Room	CRMA Session #14
5/26	Conference Room	Teacher Session #4

Components of CRMA Reading Sessions

I included some basic components into each CRMA reading session in order to use our time most effectively and to ensure that students developed a sense of miscues. These basic components included:

- Definition of miscue and purpose of reading,
- Identification of miscues and discussion about meaning associated with specific miscues,
- Specific prompts to think critically about what was happening in the mind when a miscue occurred,
- Reflective questions including "What do you notice about miscues in your classroom?" and "How have you changed as a reader?"

I began CRMA sessions with a short discussion about what students believed a miscue was in their own definition always followed by the definition I promoted which was "when we're reading and we say something we didn't expect." I was interested to see how or if that definition changed over the course of the study. Early in the study, students shared their definitions of miscues as "mistakes," or "when you miss a word." Over time though, this definition remained static. Towards the end of the study, while the students used the term "miscue" most of the time to refer to the unexpected words that were said while reading, they still maintained that miscues were negative in nature. In response to the question "What is a miscue?" near the end of the study, Bella replied, "A word that you mess up." Jessica added, "And that you fix." Neil explained, "Every time I make a miscue…I think…I should go back and fix it. Sometimes I get it right…and sometimes it is wrong."

We also frequently spent brief moments throughout CRMA sessions talking about the purpose of reading to see if and how that understanding changed over time, too. I made the identification of and discussions of various miscues the centerpiece of our sessions, but I also wanted to make sure that I was helping students learn how to read and think using the semantic cueing system. While I didn't introduce that term to the CRMA students, I wanted them to take time to think about the meaning of words and their relationship to the sentence as they read and consider whether or not what they were reading made sense to them and in the particular sentence. Many times throughout the study, I asked questions like, "Did it make sense to you?", or "Does the sentence make sense that way?", or "Did that miscue change the meaning of the text?"

After reading and viewing students' oral read aloud video recordings and discussing miscues, I ended CRMA group sessions with the question, "How have you changed as a reader?" so that I could gather a sense of whether or not perceptions of their views of themselves had changed as a result of our sessions.

Very early in the study, students offered answers that reflected their perceptions about any changes they had noticed. Jessica answered, "I'm getting better because now I don't make that much mistakes. When I do, I go back and fix them." Neil thought and shared, "A miscue is like a mistake." Later in the study, when asked the same question, Bella responded, "I mostly make high quality miscues." When I pressed her on why she thought that, she replied, "I've been tested a lot." Her answer demonstrated how pervasive assessments are in classrooms and how they affect students' thinking. Jessica answered, "I make less miscues." Neil offered, "School taught me to be a better reader."

To assist students with questioning during our CRMA sessions, I provided a set of question prompts (Marek, 1996). My intention was that if these prompts were in front of readers during our sessions, that they would become more commonplace in their language and conversations. Those questions included:

1) Does the miscue make sense?
2) Was the miscue corrected? Should it have been?
3) Does the miscue look like what was on the page?
4) Does the miscue sound like what was on the page?
5) Why do you think you made the miscue?
6) Did that miscue affect your understanding of the text?

These components produced predictable structures within our CRMA group sessions so that students were comfortable in the routines that were established. In addition, these components were important for me to determine whether students were changing in their views of themselves as readers as well as what they thought about the reading process.

Structure of CRMA Group Sessions

I designed the CRMA sessions to best support students' learning about miscues with three strategies. Initially, I met with each student two to three days before our CRMA group session in order to have each student read orally from a researcher-selected text that integrated with his or her learning in the classroom and so that I had time to review the video recording of the oral reading to prepare for the CRMA session with students. I video recorded these reading sessions using an iPad so that students could view selected portions later in the CRMA group sessions. For texts in the beginning of

the study, I selected historical fiction texts that accompanied the school's literacy curriculum so that we could focus on texts that aligned with their learning and their interest level as well as to model the use of district-selected reading materials for teachers in the study. These texts were easily accessible and were interesting to the students. Using the format of video recording and then viewing at the CRMA sessions worked well initially as I introduced students to the CRMA process and to miscues.

After several weeks into the study, I noticed students failed to remember what they were thinking when they miscued on the video recording. For instance, I asked Jessica, "What were you thinking about when you said "city" instead of "central?" Her response to me was, "I don't know. I don't remember what I was thinking." In all honesty, Jessica was recorded two days prior to the CRMA session, so it is not surprising that she had difficulty with remembering her thought process. Serving as a building principal made scheduling the video recorded sessions somewhat difficult at times due to my availability. Because there were multiple instances where students failed to remember what they were thinking, I changed the format so that students read aloud the same texts in the group session we used during the CRMA session earlier. Instead of watching a video recording of the oral readings, students read aloud for us during our CRMA sessions. This eliminated the awkwardness of not being able to remember what they were thinking when they miscued. It also helped students to react naturally "in the moment."

While this was a variation of the procedures I had studied about CRMA, it was one that affected our CRMA group sessions positively because students had no troubles remembering what they were thinking since the reading happened immediately before the

discussion. Group sessions became more collegial and discussions were more based on their thinking because students could share their thinking about their miscues very near the time of the occurrence of the miscue without forgetting about what they had been thinking during the time of the miscue.

Towards the end of the study, I noticed that students, Neil and Jessica specifically, became less engaged with the texts, so I decided to switch texts to cultivate increased student interest. We ended the CRMA study by using student-selected free choice reading texts that students were reading both in class and at home. Neil's self-selected free choice book was a graphic novel called "The Adventures of Ook and Gluk: Kung Fu Cavemen from the Future" (Pilkey, 2010) that was set in 500,001 BC and featured a time traveling machine to the future. Jessica's choice of a free book was "The Ghosts of Tupelo Landing" (Turnage, 2014), a Southern mystery book featuring a historical ghost character. Bella's book choice was "Little House in the Big Woods" (Wilder, 1994), the first book in the Little House series and told about pioneer life in 1871. Something I found very interesting was the fact that Bella and Jessica selected books related to historical fiction, which was the same genre of books I had chosen for the students for the formal miscue analyses while Neil's book was a fantasy book set in both ancient history and the future. By changing the texts we used, we explored the reading that each student was doing independently and students were more engaged in the CRMA group sessions. Group members were very interested to read what others were reading and this practice promoted a greater range of reading for all three students.

Neil was elated to read aloud from his book, "The Adventures of Ook and Gluk: Kung Fu Cavemen from the Future" (Pilkey, 2010) with his friends in the CRMA

session. I asked him to talk with the group, "Neil, tell us why you like graphic novels." He shared, "It reminds me of comics. I feel like I was in the future when I read this!" As a graphic novel, this book contained a loose structure when it came to reading direction. Sensing that Neil was reading out of sequence, Jessica interjected, "I think he's reading it wrong. Neil's reading down the page. But I think it would make more sense to go across." Jessica then pointed out arrows as text features to help the reader know how to read this particular text. Neil read aloud with very animated expressions for this text, unlike we had seen before. He even chuckled while reading and after miscuing "*Hooba-Hooba*" for "*Hubba-Hubba*," he laughed out loud and exclaimed, "That is funny!" Reflecting upon Neil's very enthusiastic oral reading, I was reminded about the importance of text choice for students when they read. Text choice matters (Goodman, Martens, & Flurkey, 2014).

The CRMA Sessions

For our very first session, I set up a table with four chairs in the Counselor's office. There were some beanbags in the corner of the room next to bookshelves that our counselor used with her students. A plush carpet was placed diagonally on the floor. I set up the table with the texts we needed, along with pencils and highlighters for marking miscues. At one end of the table, I set up the iPad on the tripod with an attachment to make it secure for video recording. At the other end of the table, I set up my laptop with speakers so we could view students' oral readings and hear the readers sufficiently in order to mark and hold discussions about miscues. See Figure 4 – CRMA Study Setting for a glimpse into the office space we used for this study.

Figure 4 - CRMA Study Setting

Nervously, after getting all three students from their classrooms, I welcomed them to our small group. Neil, always observant, noticed that the iPad was on and waved anxiously to the camera with a smile, something that he did almost every recording. I asked students to think about when they're reading, and they read something unexpected—if that happens sometimes? They all three nodded in agreement, but said nothing. I wondered if they were nervous, too, since I was their principal but I was also working with them in a small group. Having their principal in an instructional role like this small group was new territory for these students, except for times when I may have subbed in their classrooms when we were unable to secure substitute teachers. After reassuring them that we could have some fun while reading and better understand what we read, the following conversation happened:

> *Me: "When readers read aloud, they sometimes read a word that is unexpected, or different, than what the word is on the page. That is called a miscue. All readers miscue."*

Kids: (sitting silently…listening intently, nervously moving in their chairs, with slight grins on their faces, Neil trying to wave at the iPad)
Me: (thinking I needed to back up a bit in the conversation) "What is the purpose of reading? Why do we read?"
Bella: "To read better."
Jessica: "Know more words."
Neil: "Get pictures in your mind."
Me: "These are good ideas. The main purpose for reading is to understand what we're reading."
Kids: "Yeah…." (without adding much additional information)
Me: "Everyone miscues…even good readers. Are miscues bad?"
Neil: "We're just trying to do our best…visualize pictures in my mind."
Me: "Uh huh…yes." (thinking about what comes next in this conversation)

After that conversation had occurred, I knew it was time to interject and help them think about miscues and notice them in the video recorded sessions from each of their oral readings I had video recorded earlier that week. I really wanted them to start listening for miscues, so I played the video recording and we listened to several sentences being read aloud and then together. Using highlighters, we highlighted miscues we heard in the text before us. Having never really discussed miscues before, I wanted my students to start to develop that "miscue ear" to be able to notice when someone miscued. We could then start having discussions about what they were thinking about when they miscued.

After marking several miscues that they had heard using Jessica's video recorded oral reading, we had the following discussion about several miscues:

Me: "What miscues did you notice?"
Neil: "She said 'her' instead of 'herself'."
Me: "Does that make sense?"
Bella: "Kind of…"
Me: "The sentence said, 'A stout woman with a loud voice introduced herself and two other adults.' If her miscue was 'her,' does that change the meaning of the sentence?"
Bella: "Not really."

Me: "It doesn't really change the meaning. We know it means the woman. What else do you notice?"
Jessica: "I said bags." (referring to her miscue of 'bags' for 'baggage')
Me: "Did you see what she did there? That was an excellent miscue! For the word 'baggage,' Jessica first said 'packages,' then she changed it to 'bags.' Does that make sense in this sentence?"
Bella: "They mean the same thing."
Me: "You are right. Let's listen to some of Neil's reading and see if we can hear any miscues."
Jessica: "Neil said 'devored' instead of 'devoured."
Me: "What does that mean?"
Jessica: "I think it means to eat something fast."
Me: "That's exactly what 'devoured' means…to eat really fast like you're very hungry. What did you learn about miscues today?"
Bella: "Read and record miscues."
Neil: "I lost it."
Jessica: "It's okay that if you miss a word…or misspelled it."
Me: "We were trying to make sense."

Interestingly, from this session, Jessica first substituted the word *packages* for the word *baggage*. She then substituted the word *bags* for *baggage*. Jessica knew that the word *packages* meant something related to *bags* or *baggage*. As she attended to meaning of the word, she first substituted by using the word *packages*. She then realized it didn't look like the word so she substituted *bags*, which is closer in spelling and visually higher for graphic similarity. She grappled with using the cueing systems of graphophonics and semantics, but ultimately, graphophonics prevailed. *Packages* and *bags* were both high quality miscues in this sentence because they meant the same thing as *baggage*. As I reviewed the video recording, I am unsure why I didn't take the time to talk more with the students about Neil's nonword substitution of *devored* for *devoured*. The students knew that *devoured* meant "to eat something fast." Neil's nonword substitution of *devored* for *devoured* was high graphic similarity, yet disrupted meaning, so it was a low quality miscue.

The first session was already over and we had started the CRMA student session with important learning about miscues. I had introduced students to the new concept of miscues as "something unexpected we say when we're reading" instead of as something bad. We talked about the purpose of reading as "understanding what we're reading", although it was more explicit instruction and less conversation. Students practiced listening for miscues and simply highlighted them in the text. Helping students listen for miscues was the purpose of highlighting the miscues during the first two CRMA sessions as a way to build in students the sense that intent listening was required to hear miscues during a reader's video recorded oral reading.

As early as the second CRMA session, my students were voicing ideas about miscues and that was when I introduced the concepts of "high quality" and "low quality" miscues to my group. "High quality" miscues are those miscues that mean the same as the expected word, whereas "low quality" miscues change the meaning of the expected word. I started the second CRMA session with a question to the readers in the following conversation.

Me: "What are miscues?"
Bella: "Mistakes."
Jessica: "When you miss a word."
Neil: (looking around the room)
Me: "Remember, miscues are when you say something unexpected when you are reading. What happens in your head when you come to a miscue?"
Neil: "Maybe it's not right."
Me: "What should we try to think about when we make a miscue?" (Pause) "Our brain should start thinking about what made sense there."

After listening to several paragraphs of their oral reading, we noticed that both Neil and Bella substituted the word 'mendering' for the word 'meandering.' After I asked them what rivers do, or how they look, Jessica told us that "rivers zigzag." We

then knew what that word meant, and discussed how knowing the exact word was not important, but that if they knew what that word meant, they could still understand something about rivers and the text.

At the end of the second CRMA session, the conversation concluded:

Me: "What do you notice about your reading after two sessions of CRMA?"
Jessica: "Getting better because now I don't make that much mistakes. When I do, I go back and fix them."
Bella: "It helps you because you could read a little faster."
Neil: "I notice my miscues at home with my mom. I taught her how to…sometimes she has miscues on Harry Potter books. A miscue is like a mistake."
Me: "We want to remember that a miscue is something that you say that was unexpected when you read aloud."

Students were already becoming more aware of miscues in the second CRMA session as they began to listen carefully for times when readers miscued. They still held deeply rooted beliefs about miscues being more like mistakes, or something bad when they read. The concept of a miscue as an error, or mistake, was something that was difficult to counter with these students who have viewed miscues as errors since they started school. I worked hard in this session to explain, "High quality miscues are those miscues that mean the same as the expected word, whereas low quality miscues change the meaning of the expected word."

During CRMA Session #3, trying to move students to the next level of miscue analysis, I taught students how to mark the following miscues on a typescript of the oral readings: substitutions, omissions, insertions, repetitions, self-corrections, reversals and nonword substitutions using the "Explanation of Markings for Miscue Analysis" (Goodman, Martens, & Flurkey, 2014, pp. 54-55.) See Appendix L – Explanation of Markings for Miscue Analysis for additional insight into what I shared with students

about how to mark miscues to develop an understanding about miscues. For the purposes of this study, I selected the miscue markings of substitutions, omissions, insertions, repetitions, self-corrections, reversals, and nonword substitutions because these were the basic miscue markings that I felt were appropriate for intermediate-aged students and offered us ample opportunities for thinking about the different types of miscues readers make.

CRMA Session #4 revealed the kinds of questions or prompts I used to elicit students' thinking as we analyzed miscues. These questions demonstrated how focused I was on helping students consider their thinking and others' thinking during miscues. Questions included in CRMA Session #4:

- Why do you think you repeated *ascended*?
- Does that change the meaning?
- Tell us what you were thinking when you said that.
- What makes sense there?
- Does it sound like a real word?
- Would that make sense in this sentence?
- Think about the meaning.
- What did she do well there?
- Our brain can add a word that makes complete sense.

Students started to question one another more freely in this session and included student-to-student questions such as:

- Why did you want to stop there? (Bella to Jessica)
- Is that a repeat? (Neil wondered)

Jessica's last statement indicated a change in the way she thought about miscues when she shared, "When I find a miscue, I go back and try to fix it so it makes sense." To conclude this session, I asked the students to respond to the question, "How is what we're doing helping you as a reader?" They each responded,

Neil: "I'm reading better than last time."
Jessica: "It helps me when I hear miscues. I know I have to fix it—if it doesn't make sense. I don't have to fix it if it makes sense."
Bella: "I'm not making as many miscues. It helps me read faster and read longer books."

Unpacking these three statements reflected several key points thus far in the CRMA process. Neil noticed he had improved, although I wish that I had pressed Neil to explain what he meant by that statement so that I better understood how he was reading better. Jessica understood that miscues were connected with sense of meaning in the sentences and that she didn't have to correct miscues that made sense in the sentence. Bella, though, realized that she wasn't making as many miscues, but she added her thoughts about her fluency rate and reading longer books, which from her BIMOR interview I knew that she equated reading better with increased rate and longer books.

One of the main ways I learned more about teachers' views of their students and changes in their own thinking about reading and reading instruction occurred when I engaged teachers in viewing carefully selected excerpts from the student CRMA sessions. In this way, I learned about teachers' responses to, thoughts of, and reactions to what they observed in their students as their students were engaged in CRMA sessions. Short of including the teachers in the CRMA sessions, this was the best way for me to see their thinking over time. I engaged teachers in viewing student CRMA sessions for a total of four times throughout my study, which ended up being about once per month.

During the four teacher sessions I showed teachers selected excerpts from various sessions that I felt were indicative of students' progress with the CRMA process over time. After viewing, I asked the two teachers to have a conversation about what they observed. I presented them with two basic questions intended to be open ended:

1. What did you notice?
2. What do you want to talk about? (in relation to students and the reading process changing over time)

After the fourth student CRMA session, I met with the students' teachers and began the viewing session by explaining what students in the CRMA group had learned already, which consisted mainly of the basics of what CRMA meant to students at that time. I explained that students in the CRMA group had been involved in reading orally while being videotaped, had learned how to have a CRMA discussion in the small group of three students, had learned basic miscue markings (substitutions, repetitions, omissions, insertions, self-corrections, and nonsense words), and had learned how to have a conversation about particular miscues given some guiding questions and what those miscues meant to their understanding about the text. I shared our definition of a miscue, "when oral reading, anytime a reader says something unexpected—that's a miscue."

In addition, I shared the same questions I had shared with students in the CRMA group used as guiding questions to drive their conversations. The original RMA guiding questions (Goodman, Martens, & Flurkey, 2014) included: 1) Does the miscue make sense? 2) Was the miscue corrected? Should it have been? 3) Does the miscue look like what was on the page? 4) Does the miscue sound like what was on the page? 5) Why do you think you made this miscue? 6) Did that miscue affect your understanding of the text? (pp. 31-32).

To begin the teacher CRMA viewing session, I asked teachers the general question of "What did you notice?" to gain a sense of their impressions of, or observations about students and the reading process, as it unfolded before their eyes in

the videotaped sessions. After reviewing teachers' responses during the videotaped session, their responses to that first question were characterized in the following ways: general observations about miscues, a developing student awareness, and student growth and progress.

In the area of general observations about miscues, Mrs. Ryan observed, "The students are more able to understand what miscues mean and how it can affect their reading and comprehension." It was important for her to realize that students were not referring to those "unexpected words" as errors, but as miscues now. Further, she added, "this process helps them think about their own reading." Mrs. Madison then shared, "they can now articulate when they make miscues—they need to go back and fix it." This was a huge revelation for the teachers. In fact, as they watched their students engaged in the CRMA session vignettes, the teachers could see that their students recognized when they made miscues and that they wanted to go back and correct them if needed.

Both teachers noticed a growing awareness about miscues in their students. "They are more aware of their miscues," Mrs. Madison shared during the viewing. Even Mrs. Ryan added, "Neil is just more aware. He just said that he made a miscue. What did he do? He fixed it…and it made sense." Becoming more aware of their miscues showed that students were increasing their understanding about the role of miscues during reading. Mrs. Ryan also stated, "Sometimes Neil doesn't go back and fix words." Intermediate-aged readers have all sorts of reasons why they may or may not go back and fix words during reading. Sometimes students may not have noticed that they miscued, or sometimes they substituted a word that made sense.

After viewing this first CRMA session, teachers noticed some changes in their students, or lack thereof in the evidence found in the vignettes. Mrs. Madison shared, "Jessica still slurs through words she doesn't know." Jessica often mumbled for unknown words, as I observed on the very first formal miscue analysis when she read *smer…(*mumbled something) for *smeared* and *ten.*…(mumbled something) for *tenement*.

Mrs. Madison continued, "On Jessica's last progress monitoring probe, she read faster and had fewer mistakes with only three miscues—a substitution, one related to accessing language, and one she just skipped." According to Mrs. Madison, this reflected a change in Jessica's ability to perform better on her progress monitoring with a greater fluency rate and less miscues. Finally, Mrs. Madison added, "I'm surprised at how quickly Jessica picked up on that substitution." This meshed with my own judgments about how fast Jessica noticed miscues shortly after our student CRMA sessions began.

After it seemed that teachers exhausted their thoughts about what they had noticed, I asked them the second general question—"What do you want to talk about in relation to students and the reading process changing over time?" This question initially proved to be a more difficult question for the two teachers to consider, but once they started conversing, evidence of changes poured out of their mouths.

After a few moments of silence, Mrs. Ryan talked about the reading process. She thought aloud, "I'm thinking about ways to build Neil's reading stamina. I'd really like him to stick to one book." This statement reflected the current language in schools related to developing students' stamina in relation to either time spent reading silently or the ability to select one book to read at a time. Many teachers at Lincoln Elementary School spent time practicing silent reading with their students to build their reading

stamina and to "stick" with books. Mrs. Ryan continued, "Maybe Neil can read aloud to a friend or his brother." Reading aloud to someone else might be one way to build Neil's stamina for oral reading.

Mrs. Madison took the conversation in a different direction. She began, "I'm not sure why Jessica miscues, but it speaks volumes to me. She's just not aware. However, she doesn't let her reading hold her back." Then, she questioned, "Does she realize all the miscues that she has when she reads?" Her final statement was most illustrative of Jessica's plight as a reader who didn't realize that she miscued when she read aloud. She concluded, "When reading aloud, she doesn't think about the meaning. She often doesn't go back and fix her miscues, or self-correct." This strong conclusion spoke volumes as I realized that Jessica's teacher was mostly concerned about Jessica's inability to read with a sense of making meaning during reading.

Mrs. Ryan reflected on Mrs. Madison's comment about self-correction and added, "Bella self-corrects and is getting faster. Title One, readers' theater, and practice have all helped." Teachers in the current progress monitoring era of literacy education in the state were held to high standards for teaching students to read with ever-increasing fluency rates in order to demonstrate their proficiency for reading. Thus, it was not surprising to hear Mrs. Ryan describe Bella in the context of fluency rates.

Mrs. Ryan continued with a call for a change in her thinking about the teaching of reading. She shared, "I need to change the way I think I need to teach reading. I need to refer to miscues more often and teach kids about kinds of miscues. I need to catch my own miscues and go back and fix it. It is important for kids to hear the teacher miscue—they think teachers don't make mistakes. Sometimes substitutions are visually similar

and they sound the same. This is really a metacognitive strategy. Fixing up and monitoring…modeling is very important." In this statement, Mrs. Ryan showed awareness that she needed to change the way she teaches reading to include more attention on miscues and miscue analysis. Her desire to make her own miscues transparent to her students showed her understanding of sharing one's thinking with students to portray the teacher as a learner, too, and the importance of modeling thinking for students.

As our time together waned, Mrs. Ryan summarized, "We need to teach this to all students. We need to start with running record-type lessons. We all should be helping our students with marking texts, taping their sessions, and highlighting miscues." Professional development that begins with interested teachers was confirmation that the learning involved in this type of professional development was satisfying to teachers.

Based on a conversation with Mrs. Ryan before the sixth CRMA session, I noted something interesting that occurred in Neil's classroom. Mrs. Ryan shared that Neil had been talking with his small group team members during a guided reading lesson about miscues. He told his peers about what he learned about miscues and actually taught his peers about miscues. Mrs. Ryan shared that Neil's peers were interested in what "Neil was doing with his principal" during our CRMA sessions. Hearing that there was some transfer to other settings besides our CRMA sessions confirmed that Neil took his learning seriously and wanted to share it.

During this same CRMA session, students were more comfortable talking with each other, rather than having me direct all of the conversations.

Me: "Talk to your people, your friends, about that miscue. Did it make sense to you when you said 'remembered' for 'reminded'?"
(Neil and Bella were having an argument about the meanings of these two words)
Neil: "It's a high quality." (referring to the miscue)
Bella: "No, it's not. It's low quality."
Neil: "It's still a high quality."
Me: "Did it change the meaning of the sentence?"
Bella: "Sort of."
Neil: "They're the same."
Bella: "No…it doesn't make sense…it's a low quality."
Me: "What other miscues did you notice?
Jessica: "He said 'mostly' instead of 'almost' there.
Neil: "It's a low quality…"
Me: "Is it?"
Neil: "No. It's a high quality. 'Mostly' and 'almost' are the same thing.

Bella and Neil argued about the relative quality of the miscue *remembered* for *reminded* in this exchange. Neil held that *remembered* was a high quality miscue for the word *reminded*; Bella thought it was a low quality miscue. They were thinking about the meanings of the words and how each related to the sentence. I did not interject in this discussion because I wanted to see where the discussion led and if they would find some sort of answer through their discussion about the meaning. Neil's reflection about *mostly* and *almost* meaning the same showed that he was thinking that they made sense in the sentence if one was substituted for the other. Interestingly, *mostly* and *almost* are both adverbs and were syntactically appropriate. However, these two examples showed that students grappled with the differences between miscues of high graphic similarity versus high quality miscues. These are not synonymous, although many readers might think so. High graphic similarity means that a miscue is very similar in spelling and looks like the intended word. High quality miscues are those miscues that have the same meaning as the intended word (Goodman, Martens, & Flurkey, 2014). Substituting the word *remembered* for *reminded* shows high graphic similarity because the two words look

similar. However, they do not mean the same thing. Likewise, substituting *mostly* for *almost* showed that the meanings were similar, but more as an example of a low quality miscue, where meaning was disrupted as a result of the miscue because the two words don't have the same meaning (Goodman et al., 2014). Hearing the students arguing about the meaning illustrated that they were reading for meaning and felt comfortable discussing miscues with one another.

For CRMA Session #7 I changed the format. A child read aloud to the group followed by a discussion based on miscues they noticed or I brought up to the group. During this session, I also moved my chair away from the group to encourage the students to hold discussions without me providing prompting questions. The following conversation occurred after I removed myself from the group and encouraged them to talk together about the miscues they heard.

Neil: (reading aloud) "Old Smokie's making fun of me," Samantha complained as she climbed out of…of…of the river."
Jessica: (immediately points to Neil and murmurs, "Uh!")
Bella: (before Neil can finish the sentence) "You said, "of…of. That's a repeat."
Neil: (repeating himself) "Samantha complained as she climbed out of the river." (chuckles to himself nervously)
Neil: (continuing) "While they ate, Gramps told Samantha about…about…"
Bella: (again, pointing to Neil) "Stop. Stop. You said a repeat."
Neil: (chuckling again and all three students mark the miscue on the typescript)
Jessica: (leans over and makes sure Neil has the miscue marked correctly on his typescript)
Bella: "Start." (indicating she wanted Neil to begin reading again)
Neil: (several sentences later) "Samantha spent time…spent the…"
Bella: (interrupting Neil with a tone of impatience) "He said time."
Jessica: "Write it above the word the because he said time. In line 0815." (showing the other two how to mark the substitution correctly)
Jessica: "I can't read upside down."
Jessica: (continues and turns towards Neil) "Why do you think that?"
Neil: (chuckling) "Because I think they're the same."
Bella: "Does it look like it?"

Neil: "Sort of." (then continues reading) "Sitting on the riverbank with a pen and notebook, she…(chuckles to self)…admindered…"
Bella: "Isn't that wrong? He said admindered. It's admired."
Neil: (chuckling again and wiping his forehead) "I'm sweaty."

This short exchange of student conversation raised several issues. Positively, students were reading and locating miscues quickly. They even asked each other questions and were attempting to teach one another. On the negative side, students were "catching" the reader miscuing almost simultaneously as the miscue happened, allowing no time for thinking or reflecting upon the miscue. Additionally, Jessica and Bella, feeling more confident in their abilities to notice and record miscues, made Neil feel literally "in the heat of the moment" as characterized by his nervous laughter and his actual physical feeling of being hot and sweaty. In retrospect, I wish that I had stepped in earlier to instruct students to wait until after a paragraph or a page of reading before mentioning miscues noted during reading. To end this session after I rejoined the group, I said to the students, "When someone makes a miscue, let them make the miscue. I noticed that you brought up the miscues before he could self-correct. It feels like they caught you. We're not trying to catch you. We should let readers read an entire page before discussing any miscues."

Immediately after CRMA session #7, I met with the students' teachers to hold our second teacher discussion. After asking the first general question, "What did you notice?" Mrs. Madison noted, "Jessica is quicker when finding miscues—she finds them and doesn't miss them." It was interesting that Mrs. Madison brought this up, because as the researcher, I had also noticed that Jessica was very good at locating miscues during reading sessions. She added, "Jessica takes care of the others during the student led

CRMA sessions." Later, Mrs. Madison shared, "Jessica is like the little teacher. Just there, she was marking miscues before they even talked about it." Since the study began, Jessica had developed "miscue ears" and heard miscues easily during oral readings. "Miscue ears" refers to the notion that the more opportunities readers have to practice marking miscues, the easier it becomes and Jessica often heard miscues before her peers (Goodman, Martens, & Flurkey, 2014).

Mrs. Madison then shifted into a short discussion about progress monitoring and shared several insights into how Jessica had recently improved on classroom-based progress monitoring as per state guidelines for assessing students' oral reading fluency. "I tried it (talking about miscues) with her at the last progress monitoring…she would just say she didn't know. She didn't know what kind of miscues she was making. I'm thinking that there is a lack of transfer and application to real reading." Mrs. Madison questioned Jessica's ability to use her new learning and knowledge about miscues to transfer to the classroom level. Jessica heard and located her own miscues as well as others' miscues with ease, but she didn't yet name the types of miscues such as substitutions, omissions, insertions, or nonwords substitutions.

"You can tell Neil is anxious while reading," Mrs. Ryan stated after seeing Neil on the videotaped session. "He sometimes sweats due to his anxiety. He's afraid of making mistakes. It's like he needs constant approval for his reading. He doesn't have as much anxiety reading with me compared to reading with his peers." Mrs. Ryan shared that she noticed that he was sort of giggling nervously after making a miscue and often looked to me for reassurance in what he was reading. Then, Mrs. Ryan intuited, "I wish Bella would give him a little longer so he has a chance to correct himself." At that point,

I realized that Bella was, in her desire to notice miscues quickly, inadvertently adding to Neil's anxiety by stopping him when he miscued. After this exchange, I knew something within the design of my student CRMA group had to change.

Even after noting some issues with Neil's anxiety, Mrs. Madison continued, "Because of their learning about miscue analysis, they pay more attention to their reading. They are more thoughtful of their reading. They are even catching their own miscues and stopping." This was a shift in student reading behaviors even from just three weeks earlier at our first student CRMA session videotaped viewing. "Neil is good at high quality or low quality miscues. Does he do that on his own?" Mrs. Ryan wondered. But then she concluded, "He talks about miscues, but not high quality or low quality." While I had often noted that Neil was adept at knowing the difference between high quality and low quality miscues during our student CRMA sessions, Mrs. Ryan again raised a similar issue that Mrs. Madison raised—that of the transferability of new understanding related to miscues and miscue analysis to the students' classrooms. This idea of applicability raised questions for me as to how students incorporated their new knowledge of miscues in the classroom.

Even though Mrs. Ryan had expressed concerns about Neil's ability to transfer learning to the classroom, she then went on to share the positives she noticed in the classroom. Mrs. Ryan shared, "On our last progress monitoring probe, Neil self-corrected every miscue he made. That is a huge difference from before. He read with less words correct per minute because he's fixing and correcting everything he miscued on." While Neil's reading fluency rate may have decreased some, it was because he noticed his miscues and self-corrected.

Mrs. Ryan then continued, “Bella still talks about miscues as mistakes. They are all so used to thinking that they are making mistakes.” It was evident from Mrs. Ryan’s shared observation with us that the connotation of the word “miscue” held deeply engrained feelings of negativity and “wrongness”—even despite seven weeks of discussions about how miscues were made by all readers—even proficient readers. But what Mrs. Ryan shared next illustrated the problem. She admitted, “Even teachers call them errors.” As I reflected on what she shared, I knew that a major hurdle was our state progress monitoring system for early literacy implementation in which teachers are instructed to track the number of errors during a one-minute timed reading on a weekly basis. It was also the fact that students heard about miscues as errors since they were younger reading with their parents. Everywhere, students heard miscues situated in the context of miscues as mistakes, or errors. Even though this was the case, Mrs. Ryan shared with us that she had decided to call them miscues instead of mistakes, or errors.

I then asked teachers the overarching question, “What do you want to talk about in relation to students and the reading process changing over time? Mrs. Ryan talked about how both of her students noticed their own miscues so much more now after participating in the study for just seven weeks and were doing a lot of self-correcting during oral reading.

Learning from the episode in the previous student session when Bella and Jessica tried to “catch” Neil making miscues before he had time to think, I structured CRMA Session #8 by announcing, “We won’t interrupt the reader DURING the miscues. We’ll read a whole page before stopping and saying anything.” This provided a safer

environment to be free to make miscues without feeling any repercussions from group members. This format was then used for the remainder of the study.

CRMA Session #10 demonstrated that assessment language and influences on children were strong, especially with fourth grade students. The students' teachers had shared with me the day before that these students were attending to miscues and correcting them when they heard themselves make miscues. At the very beginning of this session, Neil came to the table and announced, "I had no miscues." I asked, "What do you mean, Neil?" He replied, "On my probe…I had no miscues. And 110 words correct." Neil was referring to the weekly progress monitoring teachers were required to provide to students whom were identified by the state reading assessments as "substantially at risk" for developing reading difficulties. Shortly after Neil's sharing of his progress monitoring, Bella also included, "I mostly make high quality miscues." But then she added when prompted about why, "I've been tested a lot." This short conversation demonstrated how tightly connected a student's perception was about their reading and their reading quality. To these fourth graders, one's sense of reading self equated to how well she or he performed on these official assessments.

By CRMA Session #11, student conversations had shifted in ways that helped me understand that participating in CRMA sessions encouraged thinking about text and the meaning in what they read aloud. Students discussed what they thought about their miscues:

Neil: "When I make miscues, they are often high quality. I had a dream about reading books last night."
Jessica: "Even though it's wrong, it might make sense."
Neil: "Wait a minute…that doesn't make sense…I need to go back and fix it."
Bella: "We are getting a lot of high qualities." (in relation to miscues)

Neil: "Does that affect your understanding of the text? (reading from the list of questions) Was it a high quality or low quality?"

Bella: "Everybody makes miscues…even the Lord!" (followed by laughter from all)

In the last few CRMA sessions, I tried to remove myself from the group to allow the students to direct their conversations without prompting from me. This was difficult as they had come to rely on me to get the conversations started, but I tried to remove myself for 10-15 minutes at a time. Significantly, Neil volunteered during this session to read aloud to the group so they could pay attention to his miscues and discuss them after he read a full page so as not to distract him from his reading. After taking a deep breath as if to calm his nerves before reading, Neil read a page and then the conversation happened below:

Neil: "Every time I make a miscue…I think…I should go back and fix it. Sometimes I get it right…and sometimes it is wrong."

Me: "What do you think about when you say that word? ('wild beasts' for 'wildebeests'?

Neil: "I knew it was more than one."

Jessica: "I've heard of that word but have never seen a picture of it."

Neil: "Are they sort of like a horse?"

Me: "That's exactly it. Knowing that 'wildebeests' are like horses, you can also use the picture on the page to check your thinking. What did you think in your brain when you said 'wedged' for 'weighed'?"

Neil: "I thought it didn't make sense so I had to go back and fix it."

Me: "Kiss your brain! Before we end, how has your thinking changed over time about miscues?"

Neil: "It helps me think of stuff…it reminds of the pictures in your mind."

Jessica: "I made a bunch of miscues, but I didn't notice them. Especially if they made sense."

Bella: "Now I go back and fix them."

Me: "Remember, reading is about making sense. Your brain is thinking what would make sense in that sentence. The purpose of reading is to make sense."

At the second teacher viewing session, the majority of the discussion was about what the teachers noticed from the student CRMA session. After 12 student CRMA

sessions, this third teacher viewing session focused mostly on teachers' talk in relation to students and the reading process, including a call to "push back."

For the teacher CRMA third session, I wanted to see what would happen if I asked teachers to record the miscues Neil made during an oral reading example. This slight change in the viewing protocol brought about some interesting insights and passionate teachers. Neil read aloud from Chapter 4 of his free reading choice book, *Lions at Lunchtime – Magic Tree House No. 11* (Osborne, 1998). Annie and Jack, the main characters, were on the plains of Africa. Annie started to help hundreds of wildebeests cross a rushing river when a vulture flew overhead.

"What did you notice?" After watching Neil read aloud for a short time, Mrs. Ryan started, "Neil needs some background knowledge on *wildebeests* to help him make sense of this piece. He wasn't saying the same word each time. He changed it each time. He must have sort of known that it wasn't making sense or didn't sound right. '*Wild beasts*' made sense to him, but not '*wild-bestess*.'" Neil had come to the word *wildebeests* several times in this selection but didn't nail down what that word was. It didn't matter for Neil because he eventually chose "*wild-beasts*" as that made sense to him.

"Neil said '*considerate*' for '*concentrate*.' He thinks that visually similar miscues are high quality. Just today, he miscued *brought* for *bought* and thought that *brought* was a high quality miscue. But they don't actually mean the same thing in the sentence he was reading." Two words that were visually similar didn't automatically mean that these two words could be high quality miscues if substituted for one another. Neil needed to understand that a high quality miscue is a miscue that holds the meaning in the text. Mrs.

Ryan then thought aloud, "I think I would start with visually similar words, like *concentrate* and *considerate* to show him the differences in meanings of the two words so he knows that these two words would not be high quality miscues."

"He used the pictures. He paused to do a picture walk before reading the text," Mrs. Ryan stated. "However, the picture didn't help him because he didn't know what a *wildebeest* was."

She then continued, "He said *frandactric* for *frantic*. Why didn't he go back and fix it?" Neil's reading behavior was perplexing to Mrs. Ryan, who really wanted him to self-correct because it didn't make sense. In the same paragraph, Neil also miscued *charged* for *changed* without any attempt at self-correction. Then Mrs. Ryan explained Neil's lack of self-corrections in this particular text, "Neil is not thinking about what makes sense when he reads and this is evident in his reading with comprehension. Some of his miscues won't change the meaning through the retelling. Sometimes he's missing the main ideas and supporting details because he may not be paying attention to the details." Mrs. Ryan's insights raised the question about when readers decide to self-correct and how aware they are of the need to self-correct during the act of reading. The concept of reading for meaning is directly related to this notion of self-correction and played an important role in Neil's reading.

Similar to the other teaching viewing sessions, I asked the question, "What do you want to talk about in relation to students and the reading process changing over time?" Mrs. Ryan again started the conversation noting some of the differences she noticed in Neil after having 13 student CRMA sessions. She began, "Neil is more conscious of reading as an important part of school. He knows that he needs to pay attention to this at

home as well as at school. He is more self-confident as a student." Interestingly, Mrs. Ryan spoke about Neil's increased self-confidence in the context of school, not just in the area of reading.

"He knows to go back and fix it if he doesn't think it makes sense, which is a change from the beginning of the year," Mrs. Ryan added. However, then she countered, "I don't see it transferring to his comprehension of his reading. He'll get there if he continues with miscue analysis." These insights again raised the question of transferability between the CRMA group of students and their work back in their classrooms. But, it was also a reason to celebrate as Mrs. Ryan had noticed a change in Neil's reading behaviors from the beginning of the year. Neil was more apt to self-correct miscues if they didn't make sense—that was a huge change in Neil's reading behaviors.

Next, Mrs. Ryan opened up about her own shifts in her thinking related to the CRMA group and what she noticed about her students. "We should all be teaching about miscue analysis. Everyone should be doing this. We want them to understand that this is about meaning and making sense." What a testament to the power of this type of learning—viewing videotaped sessions of student CRMA groups prompted this particular teacher to advocate for this type of change in practice for all teachers.

What happened next was highly personal for Mrs. Ryan, "I didn't struggle as a reader. It just always made sense to me. This has all made me more aware of miscue analysis and to talk about their miscues. We've always talked about making sense." Having had discussions with Mrs. Ryan previously, I knew that she kept a journal for each student in her class when she held individual reading conferences. In that journal, I

also noticed that she recorded students' miscues during reading, however, she didn't often ask them to talk about why they made the particular miscue. Having viewed these CRMA sessions, she wanted to make that change in her own practice to have readers think aloud about their miscues to determine what kind of sense making was occurring during that oral reading.

Mrs. Ryan continued, "It's important to teach about what you are thinking about when you are reading and reflecting about what you are reading. It's really important to teach kids to think this way to make it better." This was a key piece of information that demonstrated the need to teach readers about the role of metacognition in the act of reading.

Mrs. Madison then wondered aloud, "When kids read together and they make mistakes, they jump in to fix it. I'm wondering...kids need 'think time' to process for miscues." Mrs. Madison then noted, "Something else I've noticed is about the FAST assessment. On the FAST, my kids are trying to read a words correct per minute of 157, but my kids are not focusing on any of the strategies that we've taught them. But they'll say, 'But I made it to 160 words.' However, I'd rather them do what I have taught them." Unpacking these statements points to a variety of unintended consequences brought about from having our state system of early literacy implementation aimed at "catching reading problems early" in order to provide intervention. Students were taught many useful strategies about fluency such as reading with expression, pausing for the punctuation marks, and slowing down when they don't understand something, but then on the state assessment and progress monitoring, they couldn't afford to use that knowledge due to the time factor in the administrative directions for standardized assessments.

Mrs. Ryan contained herself no longer when she practically burst aloud saying, "Someone is getting paid BIG bucks from these standardized tests…and it's not me. We need to find our collective voice and push back." With that public outcry, our time was over and both teachers needed to leave. "Pushing back" against these standardized assessments seemed to be a very rational thing to do given the current climate with students and assessments.

During the final session, my students revealed the importance of this CRMA reading group to me through their demeanor and their words. As we wrapped up that final session, after discussing several miscues that Neil had made including a funny one, '*Hooba-Hooba*' for '*Hubba-Hubba,*' Bella announced, "I'm sad that the year is ending and that we have to end our CRMA sessions." As Neil made a sad face that looked like he could cry, he even asked, "Can we have our reading group over the summer?" He added, "I really liked these times because we talked about reading."

At the last teacher CRMA viewing session, both teachers were slightly anxious as our school year was quickly winding down and students only had several days left of school. Both teachers were present but I could tell they had a million things on their minds. Despite their end of the year busy-ness, they were patient with the viewing of the last student CRMA session excerpts and were willing to share their ideas.

After posing the question, "What did you notice?" Mrs. Ryan started the conversation. "Neil uses expression when he's reading. He even knows the reading is actually wrong (referring to "caveman" language). Jessica even connected that this was caveman language and that it was okay to have poor grammar because the whole book is like that." Neil was reading from a graphic novel that contained cavemen so the language

was definitely not grammatically correct, but nonetheless, Neil chuckled every time he read aloud. In fact, this book pulled out of Neil the perfect caveman voice and he gave it all he could when he read from this text with full expression, volume, and guttural cries as called for in the text.

It was Mrs. Madison that furthered this conversation, "The kids still feel like miscues are bad—all kids feel that way. They are 'judgey' to each other and to teachers when they make mistakes. It's like in math, kids are afraid to make mistakes if you get the wrong answer." Mrs. Madison had unearthed some generalized thinking regarding the negative undertones of miscues. While we may refer to miscues as unexpected, or natural occurrences within all readers, in the educational system they are still viewed as mistakes and wrong.

Mrs. Madison then posed, "What is it about our education system that they believe that they have to be right all the time? They point it out to others when they are not right." That was a great question. Have we created a deficit-based system that privileges being correct to all ends? The teacher CRMA sessions were over and teachers were ready for summer to begin, although I think their inclusion challenged their thinking.

Next, I turn to the formal miscue analyses for each of the students in the CRMA study to show what happened after the study was completed. I used the Miscue Analysis In-Depth Procedure Coding Form to analyze students' miscues. I continue with a description of each student's post-CRMA miscue analysis to showcase student changes in their reading after participating in the CRMA process. I selected a piece of historical fiction called *Coming Home* (Simons, 2004). This text was one of the books that

accompanied Lincoln Elementary School's fourth grade literacy curriculum. I chose this book because it was a piece of historical fiction, which was a genre the fourth graders had studied and enjoyed, especially Neil. This book was a leveled book used for small group reading instruction and was determined to be at a Level U. A Level U means that the text was written at approximately a fifth grade level, so that by the end of the school year, fourth graders ventured into this level of reading. To compare this book to the book that I selected for the formal miscue analyses before the study began, that text, *Orphan Train Journey* (Rancourt, 2004) was evaluated to be at a Level S, or a book appropriate for fourth graders near the end of the year.

Neil's Post-CRMA Study Miscue Analysis

Table 9 represents Neil's post-CRMA study miscue analysis using the coded markings for each sentence he read from the text, *Coming Home*. To see Neil's actual miscue analysis forms, see Appendix I - Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (After Study).

Table 9 - Neil's Post-CRMA Miscue Analysis

Coding Marks	Total Number	Percentage	Totals	Percentage
YYN	53	90%	55	93%
YYP	1	2%		
YYY	1	2%		
YN-	3	5%	4	7%
NN-	1	2%		

Neil's percentage of "language strength" sentences increased from 73% to 90% in the post-CRMA miscue analysis. Any sentence coded YYN, YYP, or YYY is considered to have been read with meaning since the reader either self-corrected miscues or had few miscues that affected the overall meaning at the sentence level. Sentences coded YN- or NN- often contain miscues or non-words that lead to confusion and misunderstanding at the sentence level and therefore could affect the overall understanding of the text. Neil's percentage of sentences that resulted in YN- or NN- decreased from 27% to 7%. In addition, more than half of Neil's sentences in this reading had no miscues at all, meaning he was actively processing the words and understanding the story.

While this data showed one side of Neil's miscues, I now address specifics in Neil's reading behaviors after the CRMA study was completed to illustrate change in those reading behaviors. I address Neil's use of self-corrections; repetitions; and nonwords substitutions. I provide specific miscue examples from his oral reading that served as the basis for this miscue analysis.

Neil's Use of Self-Corrections:

One of the first things I noticed in Neil's self-corrections is how much he was attending to the text in order to read it accurately and with good expression. This was reflected in his choice of words to self-correct. Some of his self-corrected miscues were sight words that were unnecessary to correct, but others were more difficult words that he may have just left uncorrected before our CRMA group. I like to think about Neil's use of self-corrections as his skills to engage in problem solving while reading text (Goodman, Watson, & Burke, 2005). The following are some examples of Neil's self-corrections that were important to his reading and demonstrated his problem solving:

Sentence 15:

The text: I stayed home with Grandma and my uncle *Juan*.

Neil: I stayed home with Grandma and my uncle *Jehhh.* (self-corrected *Juan*).

Sentence 26:

The text: But those memories don't fit with the letters he *sends* us.

Neil: But those memories don't fit with the letters he *sent* (self-corrected *sends*) us.

Sentence 52:

The text: It gives me *satisfaction* to know *that* you are pitching in and doing your part in the war by being a good young lady and studying hard.

Neil: It gives me *satisfiction* (self-corrected *satisfaction)* to know *what* (self-corrected *that*) you are pitching in and doing your part in the war by being a good young lady and studying hard.

In Sentence 15, Neil was thinking very hard to determine the name of the character's uncle, but to know that the word was *Juan* is an example of a vocabulary word that is based in Spanish—so this was a smart self-correction. Sentence 26 showed Neil's ability to think about the verb tense in the sentence and to realize that *sent* wasn't syntactically acceptable, since all of the other verbs in this text were in the present tense. Neil noticed that *satisfiction* didn't make sense or sound right, so he self-corrected to *satisfaction*, which made more sense to him. In that same sentence, Sentence 26, he self-corrected *what* for *that*. This was another example of a simple sight word confusion that is often miscued by fourth graders. Overall, Neil showed his ability to monitor his oral reading for meaning and to make self-corrections as needed to make sense of the text. He

also showed that he was capable of problem solving during his reading to gain more meaning from the text.

Neil's Use of Repetitions

Neil miscued with repetitions more frequently on this final post-CRMA reading than he did on his initial miscue analysis reading at the beginning of the study. This was due to the fact that Neil checked for understanding much more actively at the end of the study. While repetitions are not coded on the formal miscue analysis form, Goodman, Watson, and Burke (2005) mentioned that repetitions provide "evidence of strategies readers use for a variety of purposes and may be the topics for special research" (p. 132). His repetitions occurred at the beginning, middle, and end of various sentences, and they often included main characters in the text. Neil tracked character traits and development and kept sense of what various characters were doing in the text. Some examples included:

Sentence 3:

The text: *Dad* is wearing a funny, old-fashioned swimsuit.

Neil: *Dad* (repeated *Dad*) is wearing a funny, old-fashioned swimsuit.

Sentence 8:

The text: Then they started changing the words in the songs to be silly *and* laughed so loudly that *Grandma* came out and told them to be quiet.

Neil: Then they started changing the words in the songs to be silly *and* laughed so loudly that *Grandma* (repeated *Grandma*) came out and told them to be quiet.

Sentence 17:

The text: The flag has a blue star on *a* white background, with a red *border*.

Neil: The flag has a blue star on *the* white background, with a red *border* (repeated *border*).

These instances of repetitions were Neil's attempts at confirming his production of text during reading. The easiest way to do that was to repeat to make sure it (the word(s)) made sense in the sentence and within the context of the text.

Neil's Use of Uncorrected Nonword Substitutions

Despite Neil's improvement on this final text reading for my miscue analysis, he still included several nonwords that he left uncorrected. I suspected he did this because these were truly words he did not understand, so to take a long time to figure them out would have been time consuming and he may not have been successful anyway. These were also not words in his vocabulary as a fourth grader. Keene (2008) described this as related to the lexical system—when a reader recalls words from their visual memory. The words in the text that he substituted with nonwords were words that were not in his visual memory. The substitutions were graphically similar evidence that he relied on the graphophonic cueing system. For instance:

Sentence 7:

The text: Dad came over with his guitar and *serenaded* Mom as she sat on the porch.

Neil: Dad came over with his guitar and *sernadded* Mom as she sat on the porch.

Sentence 34:

The text: The letters are *definitely* written by the father in the serious picture.

Neil: The letters are *dentify* written by the father in the serious picture.

Sentence 45:

The text: She saved up other *coupons* to buy me shiny new shoes.

Neil: She saved up other *cup-pons* to buy me shiny new shoes.

In each instance of Neil's use of nonwords, he did not attempt to confirm his understanding of those words in Sentences 7, 34, and 45 because I do not think he recognized those words or could figure them out in the context of the sentences. As he was reading, it was easier to approximate the pronunciations and move on to complete the reading.

One of Neil's high quality miscues that he left uncorrected, and should have, because it held the meaning of the sentence, was found in Sentence 27.

Sentence 27:

The text: Mom reads parts of them *aloud*.

Neil: Mom reads parts of them *out loud*.

Neil did not self-correct this miscue because it made sense to him and *out loud* meant the same thing as *aloud*. This high quality miscue indicated that Neil was reading for meaning at that time and allowed himself to continue reading because he wasn't even aware of the miscue he had just made at that time—it made sense with the sentence and the story and he was using his semantic system for meaning.

Bella's Post-CRMA Study Miscue Analysis

Table 10 represents Bella's post-CRMA miscue analysis using the coded markings for each sentence she read from the text, *Coming Home*. To see Bella's actual miscue analysis forms, see Appendix J - Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (After Study).

Table 10 - Bella's Post-CRMA Miscue Analysis

Coding Marks	Total Number	Percentage	Totals	Percentage
YYN	55	94%	58	98%
YYP	3	5%		
YYY	0	0%		
YN-	1	2%	1	2%
NN-	0	0%		

Bella's reading of *Coming Home* after CRMA demonstrated that over 80% of her sentences that she read aloud contained zero miscues. When she finished this reading, I asked her, "How did you read?" To that question, she quickly replied, "Good…because I fixed all of my miscues and whatever I said in my head I'd go back to the sentence and say it again." 97% of her sentences in this oral reading were of "language strength," or a coding of YYN, YYP, or YYY. Only 3% of her sentences were coded YN- or a NN-. Bella read with a strong sense of making meaning on this reading. For my analysis, I discuss her use of self-corrections and share only one example of her use of a nonword substitution that was uncorrected.

Bella's Use of Self-Corrections

All of Bella's self-corrected miscues had strong graphic similarity so I knew that she was using her graphophonic knowledge when reading. She read with a strong sense that what she was reading aloud needed to match what her eyes were seeing and her brain was thinking. For instance,

Sentence 8:

The text: Then they started changing the words in the songs to be silly and laughed so loudly that Grandma *came* out and told them to be quiet.

Bella: Then they started changing the words in the songs to be silly and laughed so loudly that Grandma *come* (self-corrected *came*) out and told them to be quiet.

Sentence 11:

The text: *I* was six when he went away.

Bella: *It* (self-corrected *I*) was six when he went away.

Sentence 23:

The text: I want to talk to the man in the pictures, but I don't know *what* to say.

Bella: I want to talk to the man in the pictures, but I don't know *how* (self-corrected *what*) to say.

In Sentence 8, Bella paid attention to the syntax of the sentence and self-corrected the verb tense of the word *come*. Paying attention to pronouns, another form of syntax, was in Sentence 11 when she self-corrected *it* for *I*. Substituting *how* for *what* was syntactically unacceptable again, and Bella self-corrected.

Bella's Use of Uncorrected Nonword Substitutions

On this reading of *Coming Home*, Bella only had one example of a nonword that she left uncorrected as a substitution miscue. In Sentence 7, she substituted *surrended* for *serenaded*. I believe she thought the word was *surrendered*, but realized that it did not have the letter "r" near the end of the sentence, so she dropped the final "r" sound and ended up with *surrended*. This miscue was left uncorrected.

Sentence 7:

The text: Dad came over with his guitar and *serenaded* Mom as she sat on the porch.

Bella: Dad came over with his guitar and *surrended* Mom as she sat on the porch.

Overall, Bella read this text from a strong meaning base and read without many miscues. She was strategic in her use of self-corrections. Even in her own words, she knew that she self-corrected miscues when what she was saying didn't match what she was reading with her eyes. Bella didn't correct the nonword substitution of *surrended* for *serenaded* because that word wasn't a part of her visual vocabulary (Keene, 2008). Had I asked her to describe what Dad was doing, I think she very likely realized that he was singing to her mother.

Jessica's Post-CRMA Study Miscue Analysis

The following table, Table 11, represents Jessica's post-CRMA study miscue analysis using the coded markings for each sentence she read from the text, *Coming Home*. To see Jessica's actual miscue analysis forms, see Appendix I - Completed

Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (After Study).

Table 11 - Jessica's Post-CRMA Miscue Analysis

Coding Marks	Total Number	Percentage	Totals	Percentage
YYN	53	90%	55	93%
YYP	2	3%		
YYY	0	0%		
YN-	4	7%	4	7%
NN-	0	0%		

At first glance, the information on Table 11 shows remarkable change from Jessica's initial reading before the CRMA study began to her final reading of *Coming Home*. Jessica's "language strength" as demonstrated by a sentence coding of YYN, YYP, or YYY increased from 65% to 93%. Her weaker sentences scoring a sentence coding of YN- or NN- decreased from 35% to just 7%. I believe this demonstrated how much more aware Jessica was during the act of reading. Such a high percentage of "language strength" meant that Jessica read for meaning and either self-corrected miscues or read sentences correctly. In fact, over half of Jessica's sentences contained no miscues at all.

I now address specifics in Jessica's reading behaviors after CRMA to illustrate changes in her reading behaviors that I noted after analyzing her oral reading of the text, *Coming Home*. I address Jessica's use of self-corrections; nonwords; and several of her

high quality miscues she produced. I again provide specific miscue examples from her oral reading that served as the basis for this miscue analysis.

Jessica's Use of Self-Corrections

In response to breakdown in understanding, Jessica self-corrected more miscues on the post-CRMA study miscue analysis than she did on the miscue analysis before the CRMA study. She was much more aware, as her teacher had also noticed, of her ability to track her understanding and monitor her oral reading. This resulted in more evidence of self-correction. Some of her important self-corrections are included below:

Sentence 8:

The text: *Then* they started changing the words in the song to be silly and laughed *so* loudly that Grandma came out and told them to be quiet.

Jessica: *They* (self-corrected *Then*) they started changing the words in the song to be silly and laughed *out* (self-corrected *so*) loudly that Grandma came out and told them to be quiet.

Sentence 33:

The text: I *found* out later that one of the teachers, whom I didn't like, *admired* me because I was a hard worker.

Jessica: I *followed* (self-corrected *found*) out later that one of the teachers, whom I didn't like, *admeered* (self-corrected *admired*) me because I was a hard worker.

Sentence 56:

The text: I peeked into her bedroom *later* that night.

Jessica: I peeked into her bedroom *late* (self-corrected *later*) that night.

As I look at each of these examples of Jessica's ability to self-correct miscues, I noticed that most of her miscues had high graphic similarity. This meant that as Jessica was reading, she paid particular attention to the letters in each word and often produced a word that was very similar to the word she was trying to produce, indicating an overreliance on the graphophonic knowledge she used during reading. *They* for *Then; followed* for *found; admeered* for *admired; and late* for *later* all were graphically very similar miscues. Syntactically, these miscues and self-corrections meant that she thought about whether or not it sounded like language and was syntactically acceptable. I was happy to see that Jessica employed the use of self-corrections more as she seemed more purposeful in her oral reading.

Jessica's Use of Uncorrected Nonword Substitutions

There were still instances during the oral reading that Jessica included nonwords that affected the meaning of the text at the sentence level. Jessica chose not to correct them because these were all unfamiliar words to her and she didn't have another strategy to use to solve the problem of pronouncing these unknown words. Some of those examples, included:

Sentence 7:

The text: Dad came over with his guitar and *serenaded* Mom as she sat on the porch.

Jessica: Dad came over with his guitar and *sended* Mom as she sat on the porch.

Sentence 44:

The text: She *saved* up sugar *rations* to make a cake with my favorite frosting.

Jessica: She *rave* (self-corrected *saved*) up sugar *rattens* to make a cake with my favorite frosting.

Sentence 45:

The text: She saved up other *coupons* to buy me shiny new shoes.

Jessica: She saved up other *compons* to buy me shiny new shoes.

Sentence 51:

The text: But our goal is to make the world better and safer for your *generation* and for *generations* to come.

Jessica: But our goal is to make the world better and safer for your *genet* and for *greatness* to come.

In all of these examples, Jessica's miscues, while nonwords, were graphically very similar. In Sentence 51, she attempted *generations* by saying *genet*, and then later used the word *greatness* instead of *generations*. Using *greatness* indicated to me that Jessica knew that other words like better and safer were related to being "great," so she used this word instead. These were also words that were not in Jessica's vocabulary and given that they were included in historical fiction, were not words she had encountered often or used in school or at home.

Jessica's Use of High Quality Miscues

On this reading, Jessica made several miscues that were of high quality, meaning that the miscues she produced made sense in the sentence and she did not correct them.

They made sense at the sentence level and carried the meaning of the sentences in the overall story. Examples included:

Sentence 3:

The text: Dad is wearing a funny, old-fashioned *swimsuit.*

Jessica: Dad is wearing a funny, old-fashioned *swimming suit.*

Sentence 7:

The text: I can remember Dad playing *the* guitar when I was very little, but it's been tucked away in the closet since before he joined the army.

Jessica: I can remember Dad playing *his* guitar when I was very little, but it's been tucked away in the closet since before he joined the army.

In Sentence 3, Jessica read *swimming suit* instead of *swimsuit* and in Sentence 7 she read *his* for *the*. Both of these miscues make sense in the sentences and Jessica continued reading, evidence that Jessica read for meaning.

Another part of a miscue procedure is to have students complete a retelling after reading; I asked them "what they remembered from the text." Table 12 – Comparison of CRMA Students' Before and After Retelling Scores is a comparison between the before and after data regarding students' retelling scores and comprehension of the texts.

Table 12 - Comparison of CRMA Students' Before and After Retelling Scores

Student	Retelling Score (Before Study)	Retelling Score (After Study)
Neil	2	3
Bella	3	4
Jessica	3	4

As these scores demonstrate, with little instruction included in the CRMA about retellings, these students all improved their scores on the retellings. On the retelling after

the study, all three students included details about the main characters and the problem faced in the story. Students' retellings were missing additional information that demonstrated personal connections with the story characters or plot, which would have resulted in a score of a 5. Neil's retelling did not include a sense of sequence, or order, of events in the story.

Emerging Themes

I reviewed the following data from the CRMA study to develop the themes I share:

1. Burke Reading Inventory Modified for Older Readers (BIMOR) student interviews (before and after CRMA study)
2. Observational data from 14 video recorded student CRMA sessions and accompanying notes and codes
3. Observational data from 4 video recorded sessions of teachers watching and discussing excerpts from student CRMA sessions
4. The formal miscue analyses from the CRMA study using the Miscue Analysis In-Depth Procedure Coding Form (before and after CRMA study)

Next, I explain the three major themes that emerged during analysis of the data in this CRMA study and answer the four CRMA study research questions. The three themes are:

- Meaning: The CRMA process moved students to a more meaning-based orientation to reading although students still employed the use of other less emphasized reading strategies.

- Self-Efficacy: The CRMA process helped students become more confident and aware as readers.
- Revaluing: Teachers revalued readers.

Meaning

The CRMA process moved students to a more meaning-based orientation to reading although students still employed the use of other less emphasized reading strategies. This theme helps me answer question #1: How are fourth grade students' reading behaviors shaped through the CRMA process?

Using the Miscue Analysis In-Depth Procedure Coding Form for the miscue analyses showed important changes in the meaning construction readers brought to the text they read for the post-CRMA miscue analysis oral reading. Table 13 shows the changes in meaning construction.

Table 13 - Pre-CRMA vs. Post-CRMA Meaning Construction in Miscue Analysis

Student	Pre-CRMA	Post-CRMA
Neil	62%	81%
Bella	72%	94%
Jessica	55%	82%

When a reader miscues, the effect of the miscue can change the way in which the reader constructs meaning through the miscue. According to Goodman, Watson, and Burke (2005), "the patterns for constructing meaning indicate the influence of the miscues on the reader's concern for making sense of the text" (p. 152). The miscue patterns can lead to no loss of meaning, partial loss of meaning, or loss of meaning. As Table 13 demonstrates, all three of my students improved their percentages of meaning construction showing higher percentages of no loss or partial loss, indicating that the

miscues they made on the miscue analyses after the study were of higher quality and resulted in less loss of meaning while reading.

Specific examples for the formal miscue analyses illustrate students' movement towards a more meaning-based orientation about reading and Neil demonstrated his increased sense of meaning during reading when he substituted *out loud* for the word *aloud* in the sentence: "Mom reads parts of them (*out loud*) *aloud*." Neil left this miscue uncorrected and didn't pause on this word at all. He left it uncorrected because as he was reading, *out loud* meant the same thing as *aloud,* made sense in the sentence, and he didn't need to correct it as he was drawing upon the semantic system to confirm that it made sense. Another example was a reversal in the phrase "*My dear* daughter Virginia," when Neil read it as "*Dear my* daughter…" He immediately self-corrected when he realized this was a letter. Letters usually begin with the word "Dear" followed by a proper noun. He corrected this miscue after he checked to see if it looked graphically similar.

Bella had a miscue that she left uncorrected because the miscue didn't affect the meaning of the sentence and thus didn't need to be corrected. She omitted the word *later* in the sentence, "I peeked into her bedroom *later* that night." The word *later* in that sentence does not affect the meaning of the sentence if it is omitted and Bella continued on reading without hesitation. In this sentence, because it says *that night*, it is implied that this event happened later in the time sequence of the story.

Jessica miscued two separate times that illustrated a sense of making meaning while miscuing. One example was when she substituted *swimming suit* for *swimsuit* in the following sentence: "Dad is wearing a funny, old-fashioned (*swimming suit*)

swimsuit." Jessica left this miscue uncorrected because as she was reading, it made sense. This was a high quality miscue that maintained the meaning of that sentence (Goodman, Martens, & Flurkey, 2014). Another miscue which indicated Jessica's increased sense of meaning was when she substituted *greatness* for *generations* in the sentence: "But our goal is to make the world better and safer for your (*genet*) *generation* and for (*greatness*) *generations* to come." In reviewing that miscue, Jessica knew that the word had a meaning about being good or great and making the world better when she substituted the word *greatness*.

In the post-study BIMOR, I began by asking the first question of the interview, which was 1) When you're reading and you come to something you don't know, what do you do? Do you ever do anything else? To show the responses to this question, I included the actual transcript answers in the table that follows. See Table 14 – Comparison of BIMOR Question #1 (Before and After) to see how student answers changed from before the study to after the study.

Table 14 - Comparison of BIMOR Question #1 (Before and After)

Student Name	Burke Reading Interview Question (Before) 1. When you're reading and you come to something you don't know, what do you do? Do you ever do anything else?	Burke Reading Interview Question (After) 1. When you're reading and you come to something you don't know, what do you do? Do you ever do anything else?
Neil	I look in the dictionary or like I look it up. Or, like I tell somebody that knows. I ask what that word means. I ask my teacher what it is. Like, I like, just try to sound it out then after that…then…then after that I just try…if my friends help me, I ask them.	I sound it out. I ask someone to help me. I try to find out what it is. I think to myself—**what would make sense**? If it's a high quality miscue—**it makes sense in the sentence**. If it's a low quality miscue—**it doesn't make sense**.
Bella	I try to sound them out otherwise you could go to a dictionary. Umm…nothing else. I usually say it out loud and sound it out.	I sound it out. Otherwise, I will read the sentence again and see what the word is. I get the words around it and **look to see what it's supposed to mean in the sentence**. Sometimes I wait and say it again.
Jessica	I sound it out. If I don't get by sounding it out, I ask someone else.	Sound it out. I read the sentence and put a word in that **looks like the word and makes sense**.

Information in Table 14 indicates that after the study, students thought more about "making sense" when they were reading and they came to something they didn't know in the text. Neil shared that he "thinks to himself"—asking what would make sense? He even discussed both high quality and low quality miscues as important. He was always the first one to evaluate miscues in regard to being high or low quality, showing that he knew that miscues fell into two types based on their meaning to the sentence. Bella explained in her own way that she thinks about the context of the sentence when she

stated, “I will read the sentence again and see what the word is. I get the words around it and look to see what it’s supposed to mean in the sentence.” Jessica also explained using context of the sentence when she stated, “I read the sentence and put a word in that looks like the word and makes sense.” Jessica’s response also demonstrated that she uses graphophonic knowledge of the words in sentences because she tries to approximate the word (one that looks like it) and puts it into the sentence. Weaver (2002) concluded, “good readers are more sensitive to context” (p. 55). As readers increase in their understanding of the text, their miscues are more reflective of the use of context within the sentence and the story.

While these students answered with an orientation of meaning, they also employed other less emphasized reading strategies during their reading. As Table 14 indicates in their responses after the study, each student began their answer with the response “sound it out.” Sounding it out, while not a strategy that was explained, modeled, or used during 14 weeks of CRMA sessions, remained as these students’ quick response “go-to” strategy when they were pressed to answer questions about what they do when they encounter unknown words while reading. Neil also added, “I ask someone to help me.” On the BIMOR before the study, Neil also spoke of the role of asking others, peers, and teachers for help when he faced unknown words while reading.

BIMOR Question #6 was “How would you help someone having difficulty reading? Neil’s response was, “I would maybe help them sound it out. I might come along and say, what do you need help for? I’m here to help you understand what I’ve been working on in my group. I’ve been learning about miscues and being a better reader—understand what the word on the page means.” Clearly, Neil was proud of his

involvement in our CRMA group, which might also explain why he often taught the others in his classroom about miscues. His answer demonstrated that he knows that the purpose of reading is to understand and make meaning. Part of Bella's response to this question was, "It is okay to make miscues! There's different ways of fixing them. There are self-corrections and repetitions." Jessica responded by saying, "If they made a miscue, when they are done with the sentence, I would ask them if it was a high or low miscue. If it's a high quality miscue, it makes sense—it doesn't change it (the meaning). If it doesn't make sense, then it changes the sentence." Jessica realized that different types of miscues, high or low quality, impact the semantics of the sentence and affect the readers' sense of meaning (Marek & Goodman, 1996).

BIMOR Question #7 was "What would a teacher do to help that person?" Again, Neil's response indicated the strength of less emphasized reading strategies. Neil responded, "Maybe she would say, 'You have to fix what it always says.' She talks with us about miscues. She says you have to go back and fix it. If you don't know the word, you can sound it out or ask someone to help." While he showed that he understood that miscues allow a reader to "fix" their understanding, he also held on to the "sounding it out" strategy and asking for help. Bella's response was surprising when she responded, "She usually tells them to go look in the dictionary if they keep asking her what the word is."

During CRMA Session #13, I recorded some questions that students asked of each other when they were listening to the other students reading that reflected a more meaning-based orientation to reading. Some of the questions included:

Neil: "How does that miscue make sense?"

Jessica: "Should it have been corrected?
Jessica: "Does that miscue make sense?"
Jessica: "Does it change the meaning of the sentence?"
Neil: "Is it a high quality miscue or a low quality?"
Bella: "Why do you think you might have said that?"
Bella: "Does the miscue make sense?"

Miscues were not a part of these students' vocabularies before the study began, but by the end of the study, student-to-student questioning demonstrated that they knew what miscues were and that they mattered to them when they read. Students even knew that sometimes, a reader didn't need to self-correct a miscue. Goodman, Watson, and Burke (2005) considered this to be "efficient when they do not correct miscues that are semantically and syntactically acceptable" (p. 87).

On the third of four teacher viewings of the student CRMA sessions, Mrs. Ryan noted that "Neil wasn't saying the same word each time—he changed it each time. He must have sort of known that it wasn't making sense, or didn't sound right." She then added, "He knows to go back and fix it if he doesn't think it makes sense. This is a change from the beginning of the year." Mrs. Madison shared, "We want them to understand that this is about meaning and making sense."

During the last teacher viewing of the student CRMA sessions, Mrs. Madison noted after watching Jessica, "Today, kids notice that things don't make sense. Jessica has truly grown over time. She used to read just to read." These comments illustrated how powerful video recorded viewings can be for teachers to see their students in different learning contexts beyond their own classrooms. She noted that kids had changed in that they noticed now when something didn't make sense during reading. Mrs. Ryan added, "They are all thinking about the reading process and what it means."

This evidence indicates that the CRMA process moved students to a meaning-based orientation to reading although students still employed other less emphasized reading strategies like sound it out, use a dictionary for unknown words, and ask someone for help. While these strategies may serve some readers well in their quest for determining unknown words during reading, these were not the strategies that were used during the CRMA study. Throughout the study, I emphasized the quest for meaning as students read, noticed, evaluated, and discussed miscues.

Students' reading behaviors were shaped through the CRMA process; they became more intent on reading for meaning and this behavior was evident in the student CRMA sessions and the BIMOR. This CRMA process was important for helping students understand that the purpose of reading was to understand the text and that miscues played an important role in that understanding (Moore & Gilles, 2005).

Self-Efficacy

The second theme is that the CRMA process helped students become more confident and aware as readers. Students developed a sense of self-efficacy defined as one's belief in the ability to do something. This theme answers CRMA study research question #2: How are fourth grade students' ideas about reading and themselves as readers shaped through the CRMA process?

The BIMOR provided specific evidence that students became more confident in their reading abilities as a result of their participation in this CRMA study. Specifically, BIMOR Question #10 was "Describe yourself as a reader: What kind of reader are you?" Table 15 – Comparison of BIMOR Question #10 (Before and After) provides the exact words students said in response to that question after thinking about what kind of reader

they were in their own perception. Words of specific interest illustrating students' confidence are in bold-faced print and are included to direct the reader's attention to key ideas from students' responses that illustrate students' sense of efficacy.

Table 15 - Comparison of BIMOR Question #10 (Before and After)

Student Name	Burke Reading Interview Question (Before) 10. Describe yourself as a reader: What kind of reader are you?	Burke Reading Interview Question (After) 10. Describe yourself as a reader: What kind of reader are you?
Neil	I am **like a helper**. Sort of like a helper when I'm reading. I help my class. At Mrs. Flynn's I help David. I'm a good reader because **I kept practicing**. Everybody has to practice reading—that's what I do a lot **so I can be a good reader**.	I am a **pretty good reader with miscues**—I'm good at **high quality and low quality**. I have been working on, "is that a high quality or a low quality?" **It's okay to miss a miscue**—it happens. Sometimes I don't understand the word—so I try to get someone to **help me**. That's how I become a better reader. **Becoming a better reader is lots of work!** It's been a hard time for me to think what the word is. I **accidentally sounded it out**. That's what I've been trying to do. My teacher's trying to let me spell out what…try to write down the word.
Bella	Umm…like a **good reader**, because I read a lot of books at home and at school. I'm sometimes best at reading and sometimes not good. I **read really slow** and might lose my place because sometimes I read too slow and then I end up **losing my place.**	I am a (laughing out loud)…**fast reader** because I've read a ton of books that end with 200 or 300 pages. I've been reading since I was three. **I am an awesome reader!**

Table 15 - continued

Jessica	**Not so good because I make mistakes a lot.** Like if I'm making a mistake, **I make more** so I always be careful and I **look at the words and if it doesn't make sense** I read it over again.	Um…**I make a lot of miscues and sometimes I don't notice them**. Sometimes I read a little too hard of books to challenge myself. Sometimes I just get tired of reading if I read for like an hour. Then I fall asleep in my book. I am a **medium good reader**—because I **make miscues** and sometimes I use **bad miscues** and I don't notice them. Sometimes I make **good miscues** and I notice them.

Each student showed a change in confidence. Neil first identified as a good reader who practices to get better and then moved to reader who is a "pretty good reader with high quality and low quality." He even shared, "It's okay to miss a miscue—it happens." He admitted, "I accidentally sounded it out." He knows that while sound it out wasn't a specific reading strategy we used, he framed it in a way that he did it by accident. Bella changed from a "good reader who reads a lot of books but reads slow and sometimes loses her place" to a fast reader. She stated, "I am a fast reader because I've read a ton of books that end with 200 or 300 pages. I've been reading since I was three. I am an awesome reader!" Clearly, Bella is confident about herself as a reader because she is "awesome."

Jessica's response was interesting. She started by saying, "Um…I make a lot of miscues and sometimes I don't notice them. Sometimes I read a little too hard of books to challenge myself. Sometimes I just get tired of reading if I read for like an hour. Then

I fall asleep in my book. I am a medium good reader because I make miscues and sometimes I use bad miscues and I don't notice them. Sometimes I make good miscues and I notice them." In this statement, Jessica shared that she read books that were slightly hard for her to challenge herself as a reader. That was a sign of a confident reader who wanted a challenge during reading.

Specific instances from the teachers' viewings of the student CRMA sessions indicated that the teachers believed that the CRMA process helped students become more confident and aware as readers. During the very first viewing, Mrs. Ryan said early in the session, "They are all more aware of their own miscues." Mrs. Madison, however, disagreed with her and provided insight into Jessica. She said, "Jessica is not sure why she miscues. That speaks volumes to me. She's not aware. She doesn't let her reading hold her back. Does she realize all the miscues that she has when she reads? When reading aloud, she doesn't think about the meaning. She often doesn't go back and fix her miscues…self-correct."

During the second teacher viewing session, Mrs. Ryan described more about Neil when she shared, "Neil is more conscious of reading as an important part of school. He is more self-confident as a student. He knows things because we're working with him. It's worthwhile. He's developing self-efficacy as a student. This is a very positive direction for him. He didn't think he was a good reader."

The final teacher viewing session provided additional support to this finding of more confidence and awareness as readers. Mrs. Madison stated, "All three of them…they have more of an awareness of what a miscue is." Mrs. Ryan again provided additional information about Neil that was important to this study. "Neil won't just sit

and read for no understanding—he's much more aware of why he's reading." Teachers noticed that their students knew what miscues were and had developed a sense of purpose while reading.

Throughout the study, students demonstrated to me that they were increasingly more confident as readers. For example, late in the study Neil answered my question, "What do you think about when you are reading?" Neil responded, "Every time I make a miscue…I think…I should go back and fix it." In the same session, Neil wanted to read aloud to the group and volunteered before the girls could say that they wanted to read first. Neil also confided in us, "I'm good at high and low." Neil's talk about himself as a reader was positive and he felt that he was good at determining if miscues were of high quality or low quality. From my observations of Neil, he was often the very first student to say, "It's a high quality!" before anyone else had time to even think about the miscue. He was quick to judge miscues against the relative quality of being high or low and knew that it was about the miscue's meaning in the sentence that mattered. Sometimes, though, he didn't correctly identify miscues as high versus low quality despite his quick thinking. I am reminded about the time that Neil and Bella argued about the miscues *remembered/reminded* and *mostly/almost*. Neil confused high graphic similarity of these words with whether they were maintaining the meaning (high vs. low quality miscues).

Several times during the study, students shared information about their classroom assessments and the connections to the CRMA group or conversations they had in other settings. Before CRMA Session #6, Neil's teacher, Mrs. Ryan, shared with me some important information about her classroom. She said, "Neil has been telling the kids in his small group all about miscues and what he does in your group." CRMA Session #8

began with the students talking about how they had been with their Title One Reading teacher and told her all about miscues and what they are supposed to do when they miscue. During CRMA Session #9, Neil announced, "Today I didn't have any miscues on my probe." Bringing up their own assessment performance and sharing their learning with others indicated that they were confident to share with others about their learning.

Teachers Revalued Readers

The third theme from the CRMA study is that teachers revalued readers. This finding answers CRMA study research question #3: How do fourth grade teachers' views of students as readers change through the CRMA process?

Including teachers in the CRMA study provided them time to view their students participating in specific collaborative learning to better understand miscues and reading. This was beneficial to the teachers in allowing them to see their students as thinkers during reading. Viewing their students talking about miscues and grappling with the meaning of words within sentences was powerful in helping teachers revalue their readers.

Mrs. Ryan framed her thinking after viewing the CRMA students in a way that honors the process of reading and honors her readers when she shared what she thinks about miscues and the CRMA process. She described it this way, "Miscues are all about problem solving. We didn't understand what we've read. How will we fix it? How do we make it better?" Mrs. Ryan was able to describe the CRMA process as a problem solving process because she watched her students engaged in conversations and reading as problem solving. She viewed them as capable thinkers who changed as readers over the course of the CRMA study.

Several times, Mrs. Ryan advocated for the role of miscue analysis at Lincoln Elementary School. "We should all be teaching about miscue analysis…that everyone does this." She added during another session, "Miscues are huge for teachers to teach reading. We all ought to be talking about miscues with our kids from kindergarten and up." Mrs. Ryan's confidence in the role of miscues in the teaching of reading stemmed from her learning about the readers as capable and reading with a purpose for making meaning.

After watching the CRMA sessions, Mrs. Madison spoke about the unfairness of the state's reading assessments as she framed the situation about how teachers had to progress monitor their students and the conversations they held with students regarding the assessments. She said, "We have to 'count it against them'…I know…I hate that. I talk with kids about that on their progress monitoring so they know that it doesn't have to be counted against them." Mrs. Madison recognized that the assessments used in schools penalize readers when they miscue. This was as a result of her involvement in seeing the CRMA students as readers who knew about miscues and knew that miscues take time to think through. State assessments don't include room for thinking about miscues.

Chapter 6: Discussion, Implications, and Conclusion

Introduction

The purpose of the CRMA study was to introduce a small group of fourth grade readers to the Collaborative Retrospective Miscue Analysis (CRMA) process (Costello, 1996). I met with this small group weekly for 14 weeks for approximately 25-30 minutes each week to learn about miscues, to listen carefully to identify miscues during oral reading, and to help students collaboratively talk about miscues to better understand the reading process and students' thinking during reading. Students developed "miscue ears" (Goodman, Watson, & Burke, 2005), learned how to mark miscues, and talked about miscues in order to help them better understand their self-perceptions as readers and the reading process. I focused conversations on deriving meaning from text in order to better understand our reading and our selves as readers.

Through the CRMA process, I intended that students would learn to revalue themselves as readers—that they would discover something about how they think when they approach texts in all its varieties. I hoped students would develop a deeper understanding about the purpose of reading and use that understanding to read and comprehend text. I hoped that they would change in ways that would help them become more confident as readers (Goodman & Marek, 1996).

By including the students' teachers in the CRMA study, I hoped for teachers to learn more about their students and the ways they thought about reading through the lens of miscues. I hoped teachers had an opportunity to see their readers involved in CRMA to better understand "why they respond as they do to a particular reading of a text, and come to understand that their reading responses occurred because of their focus on

making sense" (Goodman, Martens, & Flurkey, 2014, p. 4). Through the viewing of video recorded student CRMA sessions, I wanted to see if students' teachers noticed anything changing about their students as readers. In a broader sense, I wanted to know if teachers changed in their own views about reading and the reading process.

The CRMA study research methods included a case study of three students who participated in the CRMA study as well as two teachers who were directly responsible for the educational programming for these three students. The study included weekly small group reading sessions with students as well as four monthly viewing sessions with the students' teachers. All CRMA sessions were video recorded so that I had opportunities to analyze discussions for all sessions. During these teacher viewing sessions, teachers watched selected video recorded excerpts from the students' CRMA reading group sessions and I asked two general questions: "What did you notice?" and "What would you like to talk about in regards to your students and the reading process?"

I administered the Burke Interview Modified for Older Readers, or BIMOR, to all three students immediately before the study began and again after the study was completed (Goodman, Watson, & Burke, 2005). I used the BIMOR to track students' changing ideas about reading, the reading process, and their self-perceptions as readers. With students, I also administered a formal miscue analysis during which students read a researcher-selected text aloud at the beginning of the study, midway during the study, and again at the end of the study. These miscue analyses were included within the study to show how students' reading strategies changed over time by analyzing their miscues. While I conducted three formal miscue analyses, I included only the first and the last miscue analyses in this thesis to show students' changes in the types of miscues students

used in their reading. I used the Miscue Analysis In-Depth Procedure Coding Form (Goodman et al., 2005) for both formal readings and reported my findings in Chapter 4.

My analysis of the CRMA study components included the following:

a) Viewed all video recordings and transcribed selected or key moments from video recorded evidence taken during student CRMA sessions
b) Coded transcriptions and key moments from video recorded portions of CRMA study (both student CRMA sessions and teacher viewings of video recorded students CRMA sessions)
c) Conducted formal miscue analyses using the Miscue Analysis In-Depth Procedure (before, during, and after the study but included only the analyses from before and after the study)
d) Transcribed all student responses on the BIMOR and compared students' responses from before and after the study

The remaining part of Chapter 6 focuses on discussing the answers to the CRMA study's research questions by interpreting the themes and comparing those themes with the literature review in order to share implications of the themes. I then offer a critical evaluation of the study by including several important limitations of the study as well as strengths of the CRMA study. I finish the chapter by outlining pertinent implications for classroom practice and professional learning for teachers, recommendations for future research, and final researcher reflections.

Discussion of the Themes

The study's research questions were 1) How are fourth grade students' reading behaviors shaped through the CRMA process? 2) How are fourth grade students' ideas

about reading and themselves shaped through the CRMA process? 3) How do fourth grade teachers' views of students as readers change through the CRMA process? and 4) How do fourth grade teachers' ideas about reading change through the CRMA process?

Three main themes from the CRMA study were: 1) the CRMA process moved students to a more meaning-based orientation to reading although students still employed other less emphasized reading strategies; 2) the CRMA process helped students become more confident and aware as readers; and 3) teachers revalued readers. I weave the themes into the answers to the research questions and make connections to previous literature in the literature review.

How are fourth grade students' reading behaviors shaped through the CRMA process?

The CRMA process moved students to a more meaning-based orientation to reading although students still employed other less emphasized reading strategies. Students learned through the CRMA process that the main purpose of reading was to develop an understanding of the text (Goodman, Fries, & Strauss, 2016). This was discussed in almost every CRMA student session and was intentional on my part to make it paramount. CRMA students also spent a considerable amount of time analyzing their miscues through collaborative discussions about what the miscues meant and what the expected response was in the texts we read during these sessions (Martens & Doyle, 2011).

From the formal miscue analyses before the CRMA study began, Neil and Jessica both substituted nonwords or even mumblings of words as they read with little attention to what the words meant in the sentences as they dealt with unknown words. Students substituted words like *tenment* for *tenement, sme(ergh)…* for *smeared, devored* for

devoured, *mendering* for *meandering*, and *crutched* for *clutched*. Throughout the study, students grappled with the meanings of words during their miscues and actively thought about how the miscues worked or didn't work in their oral readings. Students developed an understanding that there was a relative quality about miscues that included both high quality and low quality miscues and both had to do with the meaning of the words (Goodman, Martens, & Flurkey, 2014). Many of the miscues on the first formal miscue analyses reflected low quality miscues that did not maintain the meaning of the words in the sentences and students predominately used their graphophonic cueing system to identify words, as less proficient readers sometimes do (Goodman, Watson, & Burke, 2005).

The formal miscue analyses after the CRMA study indicated a shift to using meaning to make sense out of miscues as students used their semantic cueing system more and included word substitutions such as *swimming suit* for *swimsuit*, *followed* for *found*, and *out loud* for *aloud*. Students thought about the words carefully and attended to the semantic system for reading for meaning during the final formal miscue analyses.

The BIMOR administered after the study demonstrated that students thought about words from a meaning-based orientation when they answered the question about what they would do if they approached an unknown word during reading. Students believed that their purpose in reading was to make sense of what they read and this impacted the strategies they used during reading (Goodman, Watson, & Burke, 2005). Students responded that they would think about the meaning and try to use a word that made sense as they tried to make sense and construct meaning from the text (Goodman, Martens, & Flurkey, 2014). However, students also answered this same question with

other less emphasized strategies like sound it out, look in a dictionary, and ask for help, which remained important to students despite the lack of these three strategies as emphasized strategies during reading.

Readers simultaneously use the syntactic, semantic, and graphophonic cueing systems in order to make sense of the text they read (Weaver, 2002; Goodman, Watson, & Burke, 2005). Weaver (2002) explained simultaneous processes in reading as readers confirm or correct what they've just read, sample graphic cues to determine if the word is correct, and make new predictions about what is to follow in the text. CRMA students certainly used a more semantic-based way of thinking as they sought to make sense of what they read, but they continued to make use of the graphophonic system throughout the study.

Examples of students' cueing the graphophonic system included the very high percentage of high graphically similar miscues on the formal miscue analyses that showed students read with some or high graphic similarity over 79% of the time with a range between 79% and 92%. Jessica read with the highest percentage of graphic similarity. Comparing the before and after formal miscue analyses highlighted the fact that the CRMA readers actually read with less graphic similarity at the end of the study with ranges moving from 92% to 100% graphic similarity on the formal miscue analyses before the study to 79% to 92% graphic similarity after the study. This was due to the fact that readers shifted towards using the semantic cueing system more than relying solely on the graphophonic cueing system. Interestingly, Neil and Bella read throughout the formal miscue analyses with high attention to syntax while Jessica improved from 92% to 100%. This demonstrated that by the end of the study, all readers produced

syntactically appropriate sentences. More proficient readers use the semantic and syntactic cueing systems to their advantage with less reliance on the graphophonic system (Goodman, Watson, & Burke, 1996).

Sometimes CRMA readers chose not to correct high quality miscues such as the instance when Jessica substituted *packages*, then *bags*, for *baggage* on her first formal miscue analysis in the sentence, "*Porters pushed carts loaded with baggage*." She knew that the word packages meant the same thing as baggage because it made sense. Jessica used her semantic system as she initially read that sentence. However, as she then tended to the graphophonic cues, she corrected her miscue with another miscue, *bags*, which was more graphically similar to *baggage*. Ultimately, she left this miscue as uncorrected. Goodman, Watson, and Burke (2005) stated, "readers are considered efficient when they do not correct miscues that are semantically and syntactically acceptable" (p. 87). Jessica's example illustrated that while her final uncorrected miscue was both semantically and syntactically acceptable in the sentence, she would have shown more efficiency if she hadn't changed *packages* to *bags*.

Another important finding related to this theme of a more meaning-based system that was not consistent with the literature review is related to specific vocabulary words. In the study, readers sometimes substituted words and nonwords with high graphic similarity for unknown words. On the formal miscue analyses before the study began, readers substituted words like *tenment* for *tenement*, *posters* for *porters*, and *mendering* for *meandering*. Equally interesting, on the formal miscue analyses after the study, readers substituted *sended, surnadded,* or *surrended* for *serenaded, dentify* for *definitely*, *satisfiction* for *satisfaction*, and *admeered* for *admired*. As students read these more

difficult words in the text, there was an overreliance on the use of the graphophonic system to produce the miscues. How do teachers address the teaching of vocabulary words to help students better understand what they read?

Weaver (2002) described the problem with the promotion of intensive phonics by state legislatures and federal legislation as an overreliance on graphic cues and the underuse of semantic and syntactic cues as common among ineffective readers. Situated within a context of one-minute timed fluency assessments and the tracking of students' errors (Iowa Department of Education, n.d.), it is no wonder that students overuse the graphophonic cueing system. It is what they know and practice in classrooms currently in this state.

Beck, McKeown, and Kucan (2013) offered three tiers of vocabulary words that are important to this discussion. As Beck et al. explained, Tier One words are words typically found in oral language; Tier Two words are words of high utility for language users; and Tier Three words are words limited to specific domains like science or social studies words. Words like *tenement, porters,* and *conductor* as included in the first formal miscue analyses are words that students need to understand in order to make sense of the text. Because both texts in the CRMA study selected for the formal miscue analyses were historical fiction, I had to be thoughtful about how students approached these words that could be thought of as Tier Three words, or more closely connected to specific time periods in history.

As I served as the teacher in this CRMA study for this small group of readers, I wished that I had paid more attention to the inclusion of these Tier Three words as words to talk about in more depth so that readers had a more solid understanding of how these

words meshed contextually with the stories we read. Beck, McKeown, and Kucan (2013) advocated, "teachers should feel free to use their best judgment, based on an understanding of their students' needs, in selecting words to teach" (p. 31). This limitation is something to consider in future CRMA studies and would impact conversations that students involved in CRMA have with others regarding the meanings of specific words from text.

How are fourth grade students' ideas about reading and themselves shaped through the CRMA process?

The second emergent theme from the study related to this research question is that the CRMA process helped students become more confident and aware as readers. Students developed a sense of self-efficacy, defined as one's belief in the ability to do something. Consistent with the literature review, Goodman and Marek (1996) created a cyclical graphic that included the components of more risks, more reading, more effective reading, and more confidence. In other words, as students participated in the socially collaborative CRMA group, they took more risks with one another in talking about miscues, participated in more reading and discussion about their miscues and meanings of words, engaged in more effective reading by using the semantic, syntactic, and graphophonic cueing systems with more intentionality, and grew in their confidence as a result of all of these components.

Consistent with the literature review in describing students who had gained more self-confidence as readers, Goodman, Martens, and Flurkey (2014) explained that self-confident readers, "become critical of what they read, begin to question the author, and know that miscues aren't really mistakes but are evidence of their knowledge" (p. 34).

This is what happened with the students involved in the CRMA study. Multiple times throughout the study, we discussed how all readers miscue and students voiced multiple times, "Miscues are okay." By the end of the study, students developed an awareness that their miscues held meaning in the story and they had specific thoughts about what their miscues meant to them during oral reading.

As students improved in the reading process and talked about miscues, they increased their self-confidence. Adding to the literature review presented in this study, Worsnop (1996) shared that "reading improvement and self-confidence are interdependent, subject to setbacks as well as dramatic spurts forward" (p. 155). Students in the CRMA study approached each miscue with changed thinking. Instead of just skipping the miscue and continuing on in their reading, the CRMA study afforded readers with chances to talk about their miscues and the meaning they brought to the text. Sometimes readers over-relied on the graphophonic cueing system as they tried to reproduce words that looked and sounded the same as the expected word (Goodman, Watson, & Burke, 2005). By the end of the study, though, readers knew that as they read they had to monitor for meaning so that the words made sense in the context of the sentence and the story. Neil expressed his increased confidence and his understanding of his capabilities as a reader on the final BIMOR interview when he exclaimed, "Becoming a better reader is lots of work!"

How do fourth grade teachers' views of students as readers change through the CRMA process?

The third emergent theme from the study related to this research question is that teachers revalued readers over the course of the CRMA study. Observational data from

the teachers' viewing of the video recorded student CRMA sessions indicated that teachers felt that the students they observed on video and in their own classrooms were, in their own words, "more self-confident as a student; developed self-efficacy as a student; developed more awareness of what a miscue is; noticed that things didn't make sense, and were much more aware of their reading." Students changed over time as a result of their participation in the CRMA study. My own observations demonstrated that readers developed a greater awareness of the purpose of reading as sense making, or meaning making, and this led to greater awareness of the reading process that created in readers a sense of confidence.

Teachers in the CRMA study watched their students participate in conversations in which students discussed miscues and their meanings, talked about the purpose of reading as making sense of text, argued about whether words were high quality or low quality based on the meaning of the miscues, and identified how they changed through the study. Teachers saw their students as capable readers with strategies involving the cueing systems to understand what they were reading.

Adding to the literature review and helping to understand the importance of revaluing readers, Weaver (2002) cautioned that when educators use labels such as "struggling reader" or "poor reader" to describe students, students often face damaged self-esteem as a reader and often leads to readers focused more on trying to get the words right at the expense of meaning. Weaver further explained that the negative effects of viewing students as "struggling" often leads teachers to the belief that students need more work on isolated skills rather than more opportunities to read and develop strategies during reading. Goodman, Martens, and Flurkey (2014) explained that readers need to

understand that the purpose of reading is constructing meaning from the texts they read. Readers also need strategies for becoming more efficient as readers and know that they don't have to be perfect word readers (Weaver, 2002).

Educators must be sensitive to the labels we use to describe students according to available data and information about students as we design instruction and assessments for students. In discussing this finding, I include myself in the pronoun "we" because I am a part of this system of thinking at Lincoln Elementary School. We must also be careful with the assumptions we make about students with disabilities, whether they have physical, emotional, or cognitive disabilities.

Within this study, Bella was originally described as a student who had recently been exited from an IEP (Individualized Education Plan) the year prior to the study as well as a 504 Plan for accommodating her visual disability of Nystagmus, or a condition in which the eyes move rapidly back and forth. It is understandable that Bella sometimes lost her place while reading, which she disclosed in the first BIIMOR interview. It bears questioning if Bella was identified as a "struggling reader" in this study due to her data and teachers' perspectives based on that data, or if her vision disability held greater influence on her ability to interact with text than anyone was aware of in her reading performance.

Given Weaver's cautionary advice about using labels for students and the potential negative effects on students, I am aware that this study perpetuated the label of deficit thinking as I sought student participants identified by their teachers as "struggling readers." While teachers do not refer directly and overtly to students by calling them "struggling readers," our system of assessments and reporting of student performance

data is designed perfectly for the perpetuation of deficit thinking. The Iowa TIER system requires teachers to identify students who are "substantially deficient" and communicate with parents that label via official state approved letters.

Goodman (1996) used the "term *readers in trouble* to refer to all those who are not doing as well as they think (or someone else thinks) they should do in the development of reading proficiency" (p. 15). He described helping readers in trouble as a process of revaluing the reader and the reading process or a "transactive, constructive language process" (p. 15). I prefer the term "readers in trouble" over the term "struggling readers" and the language to describe such readers has been a part of my research interests for almost a decade, although I continue to search for the right words to describe such students.

As I reviewed and analyzed all of the data produced from this study, another important finding related to the revaluing of readers happened with my own thinking. When I finally selected the students to become a part of my study, as I stated previously, I sought the inclusion of students who had been identified as "struggling readers" by their teachers. Given the fact that I used available data to create student profiles consistent with my research interests within the parameters of this study, by default, I also viewed these students as "struggling readers." I used the same data as the teachers used and knew these students as readers who needed support in reading. By the end of the study, I realized that the students in this study were far more complex than the limited, deficit model of thinking about readers who "struggle."

These three students benefitted from having worked together through the CRMA study. With my help, they developed a safe environment in which miscues were okay.

This environment cultured a belief that miscues were necessary for thinking and making sense of text with a greater purpose for understanding.

Considering each reader as a complex reader, I offer additional strengths each student brought to the CRMA group by developing an overall reader profile for each student participant starting first with Neil, then Bella, and finally, Jessica. Neil was a complex reader who was adept at evaluating miscues according to its meaning related to the text. He was often the first to blurt out, "High quality!" or "It's a low quality!" in his references to different miscues. At first, he nervously chuckled in an embarrassed fashion when he realized he miscued because he viewed miscues as wrong. He relied heavily on the question prompts to drive his questioning, but he knew the right questions to ask based on the miscue. For instance, he often asked of Bella and Jessica, "Did that miscue make sense?" Towards the end of the study, Neil read with expression and brought life to his oral reading when he read aloud from his book about cavemen in the future. Neil changed most as a reader because miscues became important—both at school and at home. Neil introduced his peers to miscues and high versus low quality miscues because they mattered to him. He also talked about miscues at home with his mom as evidenced through some of his thoughts shared during CRMA sessions.

Bella was a complex reader who had learned to manage a vision disability all on her own. Her Nystagmus, or rapid eye movements, sometimes caused her to lose her place during reading. This did not stop her. In fact, she worked harder to make sure she didn't lose her place. She often held the text attached to a clipboard very close to her eyes to aid in her tracking ability. There were very few times that I noticed that she lost her place while reading, if at all. Bella was patient with her miscues and noticed and

corrected many of her miscues during reading. Like Neil, she used the scaffolded question prompts, but they became more automatic for her after several weeks of the CRMA student sessions. Bella was also very open about sharing her thinking about her miscues, which helped the other students in the group feel safe. Bella had developed a sense of reading based on making sense and that was apparent in her interactions during the sessions.

Jessica was a complex reader who relied too heavily on graphophonic cues throughout the study. Her substitution miscues, even if they were nonwords, were often highly graphically similar. Some of her best miscues happened when Jessica approached her reading using the semantic cueing system to derive sense and meaning from the text through her thinking. Although she identified herself as a "medium good reader" on the BIMOR after the study, she still persisted in the thinking that she made too many miscues and she still focused on increasing her reading fluency rate as something she'd like to change about herself as a reader.

Each of these readers brought different strengths to the CRMA study and each grew as readers to feel more confident and aware of miscues during reading. While they may have exhibited a variety of reading behaviors, they all demonstrated the ability to think about their miscues and participate in conversations focused on constructing meaning through reading.

How do fourth grade teachers' ideas about reading change through the CRMA process?

This last research question can be answered through the third emergent theme that teachers revalued readers over the course of the CRMA study. Through that revaluing

process, teachers became more insistent and vocal about a need for change in their own practice for both instruction and assessment.

In regard to reading, teachers voiced their learning that miscues were part of the thinking process to improve reading and according to Mrs. Madison, "We want them to understand that this (miscue analysis) is about meaning and making sense. By the third teacher CRMA viewing session, both teachers changed their vocabulary from "errors" to "miscues" and used that term predominately in the classroom and with all students. Viewing reading as making meaning from text and considering the renewed usage of the term "miscues" instead of "errors" allowed teachers to view their students as more self-confident and aware of miscues and the purpose of reading as understanding.

Raphael, Vasquez, Fortune, Gavelek, and Au (2014) described several components of teacher professional learning directly related to this study that impacted teachers' learning including meaningful problems of practice, inclusion of dialogical practices, the ownership of learning, and the promotion of teacher agency. While the teachers in the study met formally for four sessions, their thinking was changed. Teachers wondered about their students and their miscues in relation to the available assessment data. This data suggested that these students were discrepant from their classmates on some assessments. Teachers in the study participated in meaningful dialogue about their students and talked in length about what they noticed throughout the CRMA study. Because these students were their students from their classrooms, and because they noticed how students transferred learning to the classroom, teachers had ownership of their learning through this study.

Absent from the literature about CRMA and its connections to teacher professional learning is the concept of teachers acting with agency to voice their concerns and needs for change in instructional practices. Webster's dictionary defines agency as "active influence or power." In this sense, teachers feel some sort of power to influence their own professional learning. While Fullan (2007) stated that the most difficult thing to change is a teacher's beliefs, the inclusion of teachers in the CRMA study afforded teachers with an opportunity to advocate for change.

Several times during the study, Mrs. Ryan voiced her vision for change in her classroom as well as the other classrooms at Lincoln Elementary School. "We should all be teaching about miscue analysis—everyone should do this." "More modeling of our own miscues will be important to my students." "Miscues are huge for teachers to teaching reading. We all ought to be talking about miscues with our own kids from kindergarten and up." These were safe changes that could impact students' thinking and Mrs. Ryan felt power in advocating for this change based upon her observations of the students in the CRMA study.

There were times in which both teachers were overtly political in their views about change as a result of their learning through the CRMA study. During the third teacher session, Mrs. Ryan, after voicing frustration about the state standardized oral reading fluency assessments, raised her voice level and said, "Someone is getting money from these standardized tests, and it's not me!" During the last session, Mrs. Madison shared her frustrations about the state's progress monitoring system, and said, "We have to count it against them…I know…I hate that. I talk with kids about that on progress monitoring so they know it doesn't have to be counted against them." Mrs. Ryan voiced

frustration about the financial implications of a state standardized assessment system that ran counter to the learning and observations she made during the CRMA study. Mrs. Madison realized that the progress monitoring system sets readers up for failure because their errors, according to the state, count against them. More research is needed to explore how teachers' professional learning and agency towards professional learning is affected through participation in miscue analysis procedures like CRMA.

Limitations of the CRMA Study

Several limitations impacted the CRMA study in unexpected ways. One of the first limitations was both a barrier and an opportunity. That limitation was my inclusion as a participant-observer in the study while I also served as the building principal for Lincoln Elementary School. This created an unusual circumstance in which, to students, I was both their principal and their teacher—which proved interesting for fourth graders to navigate at times. For teachers, I served as their direct supervisor and evaluator, but I was also a co-learner and a researcher. Playing the role of researcher, student, learner, principal, evaluator, and supervisor was delicate at times and I was cognizant of these tensions during the study. I navigated all roles throughout the study in order to maintain my integrity as a researcher and scholar.

Another limitation was due to the fact that I only met with my CRMA group for one session per week. Goodman, Martens, and Flurkey (2014) recommended two to three times per week for at least 30 minutes each CRMA session. The responsibilities associated with serving simultaneously as a building principal and a researcher limited my availability to meet more frequently with the CRMA group. Still, serving as the facilitator of the CRMA group provided me with a unique perspective about students'

literacy lives in my building. As a result, I noted that students moved to a more meaning-based orientation to reading as well as they became more confident and aware as readers.

Another limitation concerns the limited number of times I met with the students' teachers to view the video recorded student CRMA sessions. In the study, I met with teachers only four times—about once per month. While the time between sessions was appropriate for noting changes in their students, more time is needed to engage teachers in the specific learning about miscues and miscue analysis. If I had to do this study again, I would invite teachers to conduct miscue analyses and mark students' miscues more frequently.

A final limitation involved the study design efforts to determine how teachers' ideas about reading changed as a result of their inclusion in the CRMA study. I used DeFord's Theoretical Orientation to Reading Profile, or TORP, with the teachers in the CRMA study and discovered their orientation to reading as one of three different views of reading including a phonics approach, a skills approach, or a whole language approach. While I was able to collect specific information about the teachers' views about reading and reading instruction, the CRMA study's length of 14 weeks was not conducive for teachers to demonstrate much change in their approaches to teaching reading. On the TORP, teachers exhibited a skills approach to teaching reading on both administrations of the profile.

Strengths of CRMA

The benefits of using CRMA with students far outweigh any limitations that may have affected the study and provide evidence for why teachers might use CRMA with

readers in their own classrooms to help students better understand their own reading processes and themselves as readers.

The CRMA process engages students in real conversations based upon their own oral reading. This collaborative dialogue requires students to take risks and talk about their reading in a small group format that allows both students and teachers the opportunity to discuss students' thinking during reading. Asking students to think aloud about their own miscues and decisions they make during reading is a strong process for helping students better understand their own reading.

Students have many opportunities to reflect upon miscues during the CMRA process. Through the CRMA process, readers discuss their own miscues and the miscues of their peers in ways that help students verbalize what they were thinking when the miscues were made. Readers are also taught that the purpose of reading is to make meaning, or make sense, of what is read. Talking about miscues helps readers think through the reasons for miscues as well as to determine relative quality of miscues as either high quality or low quality miscues, which influences the meaning they derive from reading.

In CRMA, students spend their time reading text and seeking understanding—doing what readers do. There are no worksheets or activities used with CRMA. Real texts and authentic dialogue are two hallmarks of CRMA that make it meaningful for students. Students engaged in CRMA read, discuss, and make sense out of the miscues they make during reading because that is what good readers do when they read.

One of the greatest strengths of CRMA is in its approach to viewing reading and miscue analysis, including CRMA sessions, as a problem solving approach to reading.

Readers are encouraged to take risks, think about, and share why certain miscues were made during oral reading. For instance, one of the most important questions during CRMA sessions is "Why do you think you made that miscue?" During this thinking and sharing, students solve reading difficulties through these collaborative conversations. Readers view miscues as part of the reading process to make sense of the reading. As readers do this, they work through reading problems in a social format that highlights the importance of dialogue.

Implications for Classroom Practice

In a classroom setting, teachers could incorporate Collaborative Retrospective Miscue Analysis alongside other small group structures—encouraging student discussions, readers' thinking, and reflecting about miscues to serve as the centerpiece for students' literacy learning. CRMA holds real value in developing students who think during the act of reading and focus their intentions during reading on making sense of what they read. Teaching and learning in a building where students actively sought meaning during reading and openly discussed their miscues with their peers as well as their teachers is an environment conducive to a meaning-based philosophy. Developing that "miscue ear" in students as readers is beneficial to students in developing a sense of purpose for finding meaning during reading.

Instead of a broad emphasis on state literacy assessments, the classroom use of CRMA holds potential to help teachers better understand the way students think about and approach texts they read. This information is more useful than benchmarks, aim lines, and progress monitoring information that teachers receive from the state's progress monitoring online student information system. CRMA holds real value in developing

classroom communities of active meaning making during reading and helps build literate students who talk about miscues in positive ways to further develop strong reading identities.

Using CRMA with students broadens the concept of literacy assessment and focuses on a strength-based model in which we celebrate the thinking of our students and honor students' unique perspectives about themselves as readers and their skills in metacognition, thereby helping students to revalue themselves as competent, unique, thoughtful, planful, and strategic readers. Students view themselves as strategic readers because they realize that their miscues are positive and come to understand that all readers miscues—even proficient readers.

Aligned with the discussion of the themes, an implication exists in the form of a question for teachers in classrooms: What should teachers do when readers produce nonwords with high graphic similarity in oral reading? During the formal miscue analyses, readers sometimes substituted a nonword that maintained high graphic similarity to the expected word. Teachers need a strategy to deal with those high graphically similar nonwords because they happen as readers tend more to the graphophonic cueing system instead of drawing on the meaning-based semantic cueing system.

Implications for Teacher Professional Learning

Teacher professional learning that includes opportunities for teachers to view their students engaged in the CRMA process through a video recorded format provides teachers with an in-depth look at their students' thinking, interactions with others, and their growth in the area of miscues during the actual act of reading. There is no better

way for teachers to learn about their students than to become the ultimate "kidwatchers" (Owocki & Goodman, 2002). Teachers are able to see their readers in action. This embedded way of learning impacts teachers' practice for providing quality literacy experiences for their students.

Using the CRMA process as well as administering the BIMOR to readers in one's classroom helps teachers better understand their students in ways that don't happen very often currently. Using the BIMOR survey responses in strategic ways helps teachers design learning experiences around miscues and making meaning while reading in ways that differ from an approach focused on increasing students' fluency rates and accuracy.

The shifting focus from reading fluency and "errors" on the state assessment to miscues as ways of understanding about students' thinking while reading is an important shift. Including video recordings of students' participation in CRMA groups is for teachers, a very different approach to learning about one's students. Teachers rarely have time to peek into their students' thinking through video recorded sessions similar to the design of this study. Allowing teachers to take time to view, wonder, reflect, and make decisions about how kids are learning because they see student learning in action via a video recorded CRMA session is a very powerful approach to facilitating the learning of teachers in order to know more about their students and their thinking.

Alignment of conversations about miscues in the classroom through small groups of students reading and talking about their own miscues brings further benefits to a classroom community focused on deeper conversations about miscues and how miscues impact readers' understanding of text. Students not only benefit from miscue

conversations with others, but these collaborative discussions help develop a strong sense of the purpose of reading which is to make sense of the text.

More attention is needed to explore the impact of teachers learning through video recorded sessions of their students learning in different contexts. Teachers in this study had an opportunity to observe their students participating with another teacher in a different setting. Opportunities exist to allow teachers to view their students in learning contexts with other educational specialists, like Title One Reading teachers or Reading Interventionists.

Recommendations for Future Research

My recommendation for future research calls for a continued two-fold emphasis in miscue analysis research to include additional research about the benefits of Collaborative Retrospective Miscue Analysis and its effects on student learning, student self-perceptions, and student changes in the area of reading behaviors plus additional research exploring the practices and thoughts of reading teachers. It is by studying both the student and the teacher that proves most beneficial in the area of teaching and learning.

Additional research questions include:

1. How can CRMA serve as meaningful professional learning for teachers?
2. How does CRMA with the inclusion of regular miscue analyses, impact teachers' practice?
3. How does viewing student video recorded learning sessions impact teachers' practice in the area of literacy?
4. How does CRMA affect students' vocabulary usage?

5. How should teachers respond when readers produce nonwords with high graphic similarity to expected words in text?

Classroom teachers would be interested in this study's results and findings in order to provide an additional way of thinking about improving students' reading. But more importantly, any educator who wishes to "push back" or "speak towards" the assessment climate that promulgates a deficit-based system should use the results of this study as evidence for a different assessment paradigm or shift in reading instruction and assessment to include space for CRMA in the classroom. Using CRMA with a small group of students in this study offers evidence that students can develop ownership of their reading process and become active meaning makers while reading.

A closer examination is needed for schools that use the CRMA process as professional learning for teachers in order to develop greater understanding about students, their thinking, and their development of literate beings. Using CRMA in an entire school building would be an exciting learning opportunity for any staff to undertake. A knowledgeable principal could benefit from this learning by implementing the CRMA process into the school building's goals for student learning in order to improve students' reading. In my research, I found no evidence of entire school systems devoting time and energy to including the CRMA process across grade levels with all students.

Researcher Reflections

As I reflect upon my CRMA study, I am most concerned about the current culture of assessment that exerts a powerful stronghold over students, teachers, and schools in our state. Of greatest concern is the deficit-based thinking that pervades classrooms in

which we see student identities wrapped up in “being green” or “being red” in response to their performance on a one-minute timed assessment that tracks students’ reading fluency rates as well as the number of “errors” they make while reading. The computerized system does not allow any opportunities for miscue analysis or even future conversations about what types of miscues students make and how this impacts their abilities to read text. Well-intentioned classroom teachers and school principals find themselves with few options in such an environment.

In my school, I want students to engage in conversations about miscues and the thinking they do while reading. I want my students to actively strive for making meaning as they read the books they read. I want my students to know that their performance on one assessment doesn’t define them as readers. I want them to find success in reading. I want my teachers to prevail over narrowly defined literacy assessments to understand readers’ thinking, interests, and strengths during reading. I want my teachers to become advocates for their students and their literacy lives. Including CRMA sessions within classrooms and learning more about students using the BIMOR are both excellent options to know one’s students as readers and a way to overcome deficit thinking through revaluing readers.

Conclusion

With the many benefits of CRMA in the classroom, it is time for educators to fully advocate for their students in order to raise readers who care about what they read and think actively about the meaning they make from the words and phrases on the written page. As my study showed, students engaged in CRMA became thinkers. They became students who sought meaning during the act of reading. As students became

more comfortable with miscues they gained confidence and awareness of themselves as readers with strengths. Teachers revalued readers who were in charge of their reading process and viewed students with new insights about their learning and their strategies about solving reading problems. Teachers became the voice for their students—recognizing that something needed to change.

Change will only happen when knowledgeable teachers strive for ways to allow others forms of reading assessment to occupy their classroom assessment space so that teachers learn more about their readers. Readers are more than just fluency rates or the numbers of "errors" they made on a one-minute timed oral reading fluency assessment. Readers are more than the "green" or "red" they become on a state standardized fluency assessment. Readers in our classrooms deserve to have opportunities to demonstrate what they know about text and show how reading with a sense of purpose makes them better readers.

From a school leader's standpoint, this study holds promise for informing the relationship between the school principal as "leader" and more importantly, as a leader of literacy in schools today. School principals must be leaders in literacy and literacy assessments in order to best facilitate conversations around school improvement and student learning and achievement. Bean and Swan Dagen (2012) stated that, "Literacy leaders need to be competent in assessment practices, that is, they must have assessment literacy" (p. 286). Knowing the basics of CRMA and the power that this collaborative assessment technique held for impacting students' self-perceptions as readers is vitally important to influencing school cultures centered on literacy. Through this study, I gained valuable insights into how school leaders might best lead literacy assessment

processes to better inform teachers about next steps in instruction as well as to communicate valuable information to students' parents regarding their child's success in reading.

Most importantly, this study was significant for the potential transformations that occurred with students and their self-perceptions in the area of reading. Students who struggle with reading often develop poor self-perceptions built on a deficit mentality, one that Comber and Kamler (2007) referred to as "pervasive deficit discourses" (p. 293). This study aimed to see how students revalued themselves as readers and if they changed the way they viewed the reading process. New insights may provide helpful suggestions for teachers looking to re-engage readers with the reading process and with their own learning to positively impact both student self-perceptions as reader and students' views of the reading process itself.

Appendix A – Burke Inventory Modified for Older Readers

BURKE READING INTERVIEW MODIFIED FOR OLDER READERS (BIMOR)

Name _____ Age _____ Date _____

Occupation _____ Education Level _____

Sex _____ Interview Setting _____

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

2. Who is a good reader that you know?

3. What makes _____ a good reader?

4. Do you think _____ ever comes to something that gives him/her trouble when he/she is reading?

5. When _____ does come to something that gives him/her trouble, what do you think he/she does about it?

6. How would you help someone having difficulty reading?

Goodman, Y., D. Watson, & C. Burke. (2005). Reading miscue inventory: Alternative procedures. New York, Richard C. Owen Publishers.

Appendix A – Burke Inventory Modified for Older Readers

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

8. How did you learn to read?

9. Is there anything you would like to change about your reading?

10. Describe yourself as a reader: What kind of reader are you?

11. What do you read routinely, like every day or every week?

12. What do you like most of all to read?

13. Can you remember any special book or the most memorable think you have ever read?

14. What is the most difficult think you have to read?

Goodman, Y., D. Watson, & C. Burke. (2005). Reading miscue inventory: Alternative procedures. New York, Richard C. Owen Publishers.

Appendix B – DeFord Theoretical Orientation to Reading Profile

The DeFord Theoretical Orientation to Reading Profile

Directions: Read the following statements, and circle one of the number responses that will indicate the relationship of the statement to your feelings about reading and reading instruction. *SA 1 2 3 4 5 SD* (select *one* best answer that reflects the strength of agreement or disagreement--SA is strong areement, and SD is strong disagreement)

1. A child needs to be able to verbalize the rules of phonics in order to assure proficiency in processing new words.	SA 1 2 3 4 5 SD
2. An increase in reading errors is usually related to a decrease in comprehension.	SA 1 2 3 4 5 SD
3. Dividing words into syllables according to rules is a helpful instructional practice for reading new words.	SA 1 2 3 4 5 SD
4. Fluency and expression are necessary components of reading that indicate good comprehension.	SA 1 2 3 4 5 SD
5. Materials for early reading should be written in natural language without concern for short, simple words and sentences.	SA 1 2 3 4 5 SD
6. When children do not know a word, they should be instructed to sound out its parts.	SA 1 2 3 4 5 SD
7. It is a good practice to allow children to edit what is written into their own dialect when learning to read.	SA 1 2 3 4 5 SD
8. The use of a glossary or dictionary is necessary in determining the meaning and pronunciation of new words.	SA 1 2 3 4 5 SD
9. Reversals (e. g., saying "saw" for "was") are significant problems in the teaching of reading.	SA 1 2 3 4 5 SD
10. It is good practice to correct a child as soon as an oral reading mistake is made.	SA 1 2 3 4 5 SD
11. It is important for a word to be repeated a number of times after it has been introduced to insure that it will become a part of sight vocabulary.	SA 1 2 3 4 5 SD
12. Paying close attention to punctuation marks is necessary to understanding story content.	SA 1 2 3 4 5 SD
13. It is a sign of an ineffective reader when words and phrases are repeated.	SA 1 2 3 4 5 SD
14. Being able to label words according to grammatical function (nouns, etc.) is useful in proficient reading.	SA 1 2 3 4 5 SD
15. When coming to a word that's unknown, the reader should be encouraged to guess based upon meaning and go on.	SA 1 2 3 4 5 SD
16. Young readers need to be introduced to the root form of words (run, long) before they are asked to read inflected forms (running, longest).	SA 1 2 3 4 5 SD
17. It is not necessary for a child to know the letters of the alphabet in order to learn to read.	SA 1 2 3 4 5 SD
18. Flashcard drill with sight words is an unnecessary form of practice in reading instruction.	SA 1 2 3 4 5 SD
19. Ability to use accent patterns in multi-syllable words (pho to graph, pho	

Appendix B – DeFord Theoretical Orientation to Reading Profile

tog ra phy, and pho to graph ic) shoul be developed as a part of reading instruction.	SA 1 2 3 4 5 SD
20. Controlling text through consistent spelling patterns (The fat cat ran back. The fat cat sat on a hat.) is a means by which children can best learn to read.	SA 1 2 3 4 5 SD
21. Formal instruction in reading is necessary to insure the adequate development of all skills used in reading.	SA 1 2 3 4 5 SD
22. Phonic analysis is the most important formof analysis used when meeting new words.	SA 1 2 3 4 5 SD
23. Children's initial encounters with print should focus on meaning, not upon exact graphic representation.	SA 1 2 3 4 5 SD
24. Word shapes (word configuration, b i g) should be taught in reading to aid in word recognition.	SA 1 2 3 4 5 SD
25. It is important to teach skills in relation to other skills.	SA 1 2 3 4 5 SD
26. If a child says "house" for the written word "home," the response should be left uncorrected.	SA 1 2 3 4 5 SD
27. It is not necessary to introduce new words before they appear in the reading text.	SA 1 2 3 4 5 SD
28. Some problems in reading are caused by readers dropping the inflectional endings from words (e.g., jumps, jump*ed*).	SA 1 2 3 4 5 SD

Scoring Directions

1. Identify items 5, 7, 15, 17, 18, 23, 26 and 27.

2. Score all other items 1, 2, 3, 4, 6, 8, 9, 10, 11, 12, 13, 14, 16, 19, 20, 21, 22, 24, 25 and 28 by giving the number of points corresponding to the number circled in each item, i.e., if a 4 is circled, give 4 points, etc. Do not score items 5, 7, 15, 17, 18, 23, 26 and 27 when doing this.

3. Now score items 5, 7, 15, 17, 18, 23, 26 and 27 by reversing the process. If a 1 is circled, give 5 points. If a 2 is circled, give 4 points, a 3 = 3 points, a 4 = 2 points, and a 5 = 1 point.

4. Add the total of the two scores for one total score and compare with the following scale.

- **0 - 65 decoding perspective – Bottom-Up Philosophy - Behaviorism**
- **66 - 110 skills perspective – Blended philosophy - Cognitivism**
- **111 - 140 wholistic perspective – Top-Down Philosophy - Constructivism**

Note: A score in the 85 - 120 range would probably indicate the ability to learn to use a balanced approach to reading instruction.

Appendix C – Miscue Analysis In-Depth Procedure Coding Form

APPENDIX C5: MISCUE ANALYSIS IN-DEPTH PROCEDURE CODING FORM

READER _____ DATE _____
TEACHER _____ AGE/GRADE _____
SCHOOL _____
SELECTION _____

MISCUE No./LINE No.	READER	TEXT	1 SYNTACTIC ACCEPTIBILITY	2 SEMANTIC ACCEPTIBILITY	3 MEANING CHANGE	4 CORRECTION	See 2, 3, 4 MEANING CONSTRUCTION: Loss; Partial Loss; No Loss	See 1, 2, 4 GRAMMATICAL RELATIONS: Weakness; Overcorrection; Partial Strength; Strength	5 GRAPHIC SIMILARITY: H S N	6 SOUND SIMILARITY: H S N

COLUMN TOTAL
PATTERN TOTAL
PERCENTAGE

a. TOTAL MISCUES _____
b. TOTAL WORDS _____
a ÷ b × 100 = MPHW _____

Goodman, Watson, Burke

RMA Guiding Questions:

1. Does the miscue make sense?

2a. Was the miscue corrected?

2b. Should it have been?

3. Does the miscue look like what was on the page?

4. Does the miscue sound like what was on the page?

5. Why do you think you made this miscue?

6. Did that miscue affect your understanding of the text?

Appendix E – Documentation Log Sample with Codes

Documentation Log for CRMA Study (Spring 2015)

Date	What is the event? (Meeting #1 – CRMA)	Description of what happened at this session? (Document Summary)	Critical Moments including Video Counter	Specific Quotes or Other Notable Data?
2.5.15	CRMA Session #1 reading process purpose of reading thinking during reading process of reading all readers miscue purpose of reading purpose of reading = pictures in mind understand everyone miscues visualize pictures in mind miscues thinking during miscue making sense forget miscue graphically similar	• welcome & naming of the group (didn't come up with a formal name) • talk about what we look at when we are reading • pages were all messed up - led to some confusion (pages out of order) • think about when you read something that is unexpected--does that happen sometimes? • what do readers DO during the process of reading • ALL readers make a miscue - setting the foundation for helping kids to understand the purpose of reading • purpose of reading = read better; know more words; get pictures in your mind; ME = understand what we're reading (comprehend) • everyone miscues - are miscues bad? (Evan: just trying to do our best; visualize pictures in my mind) • readers are simply highlighting any miscues that they hear; replay the video to hear better • what do you know about New York? (learning about what reader was thinking during miscue) • Make sense??? Kids all said NO but I think it did make sense • kids don't remember WHY they may have miscued or WHAT they were thinking • miscues today were all graphically similar	• reading process • defining a miscue • purpose of reading • highlighting the miscues as they listen to the video recording of Leslie reading aloud • miscue: Grand City Station vs. Grand Central Station • Do you remember what you said? No. • first instance to talk about how a miscue may or may not change the meaning of a sentence • teacher presents a challenge to students' thinking regarding miscues • miscue: shout woman vs. short woman (stout woman) • Leslie talks about not being a good speller and making a miscue (as if spelling and miscues are linked) • words LOOK the same (graphic similarity)	• "pictures in my mind" • "know more words" (word centered approach and thinking) • I wonder… • "Ask her what she was thinking • Leslie says she doesn't know • "Why not?" (teacher asking questions to help kids to explain their thinking) • Kaelyn talks about "one-person" point of view in relation to the miscue of her vs. herself • "What do you want to talk

Appendix F – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (Before Study)

APPENDIX C5: MISCUE ANALYSIS IN-DEPTH PROCEDURE CODING FORM

READER Neil DATE Feb. 4
TEACHER Ms. G AGE/GRADE 4th
SCHOOL Lincoln Elementary
SELECTION Orphan Train Journey

MISCUE No./LINE No.

READER	TEXT	1 SYNTACTIC ACCEPTIBILITY	2 SEMANTIC ACCEPTIBILITY	3 MEANING CHANGE	4 CORRECTION	See 2, 3, 4 MEANING CONSTRUCTION: Loss / Partial Loss / No Loss	See 1, 2, 4 GRAMMATICAL RELATIONS: Weakness / Overcorrection / Partial Strength / Strength	5 GRAPHIC SIMILARITY: H / S / N	6 SOUND SIMILARITY: H / S / N
1 Jermaih	Jermaih	Y	Y	N	N				
2 with	for	Y	P	—	Y		✓		
3 hard work	work hard	Y	N	—	Y		✓	✓	
4 child	children	Y	P	—	Y				✓
5 Scout	stout	Y	N	—	N		✓	✓	
6 Miss	Mrs.	Y	N	—	Y				✓
7 plan-ed	pinned	Y	N	—	Y	✓			✓
8 Conderation	commotion	Y	N	—	Y	✓			✓
9 Scouting	She'sting	Y	N	—	N	✓	✓	✓	
10 never had	had never	Y	N	N	Y		✓	✓	✓
11 But he	He	Y	N	—	Y	✓			
12 orphanage	orphange	Y	N	—	N	✓	✓	✓	✓
13 Shoot	Sfeet	Y	N	—	N	✓	✓	✓	✓
14 tenement	tenement	Y	N	—	N	✓	✓	✓	✓
15 crowd	crowded	N	N	—	N	✓	✓	✓	✓
16 horses	horse	Y	N	—	N	✓	✓	✓	✓
17 tenement	tenement	Y	N	—	N	✓	✓	✓	✓
18 smell	sell	Y	N	—	N	✓	✓	✓	✓
19									
20 meandering	meandering	Y	N	—	N	✓	✓	✓	✓
21 grazed	grazed	Y	N	—	N	✓	✓	✓	✓
22 with	with	N	N	—	Y		✓	✓	✓
23									
24 much	such	N	P	—	Y		✓		✓
25 disse	the aisle	N	N	—	Y	✓	✓	✓	✓
devoured	devoured	Y	N	—	N	✓	✓	✓	✓

COLUMN TOTAL
PATTERN TOTAL
PERCENTAGE

a. TOTAL MISCUES ____
b. TOTAL WORDS ____
a ÷ b × 100 = MPHW ____

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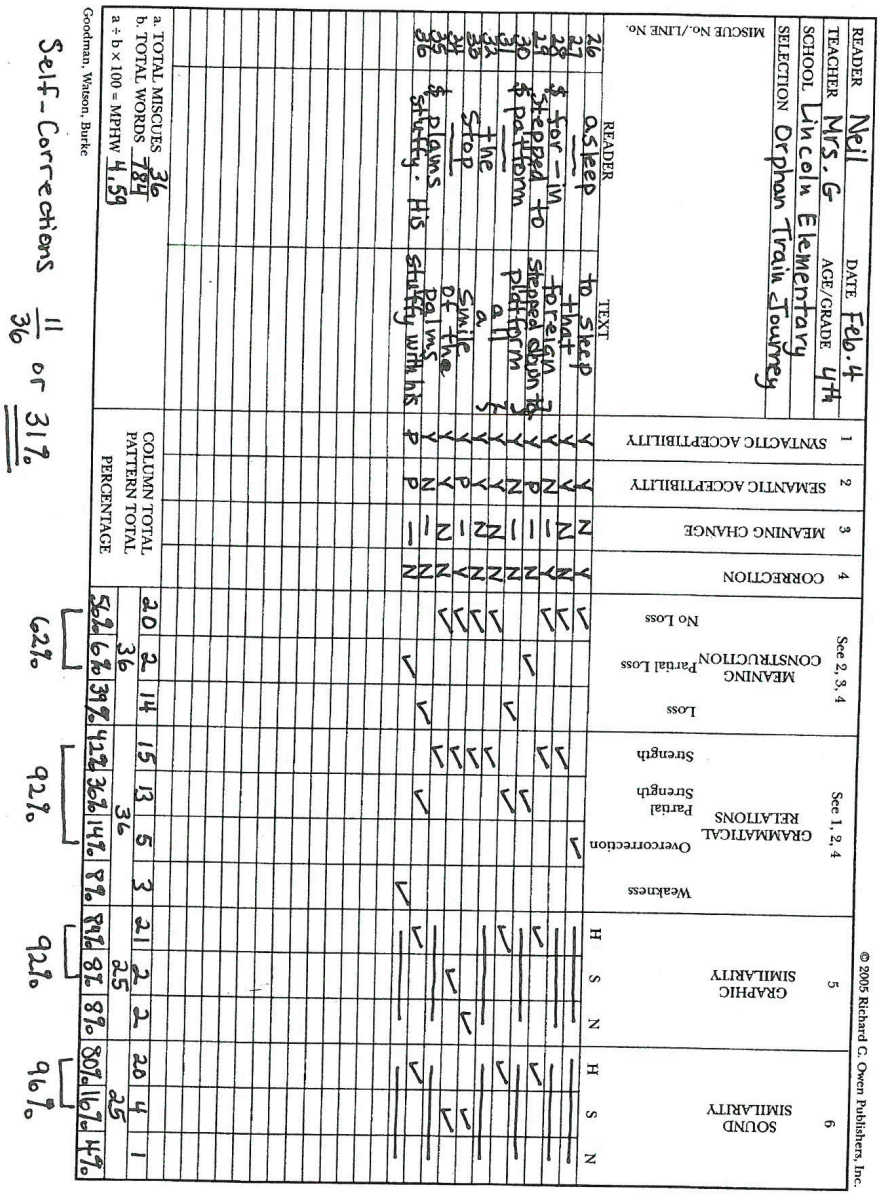
Appendix F – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (Before Study)



APPENDIX C5: MISCUE ANALYSIS IN-DEPTH PROCEDURE CODING FORM

READER Neil DATE Feb. 4
TEACHER Mrs. G AGE/GRADE 4th
SCHOOL Lincoln Elementary
SELECTION Orphan Train Journey

MISCUE No./LINE No.	READER	TEXT	1 SYNTACTIC ACCEPTIBILITY	2 SEMANTIC ACCEPTIBILITY	3 MEANING CHANGE	4 CORRECTION	MEANING CONSTRUCTION (See 2, 3, 4): No Loss	MEANING CONSTRUCTION (See 2, 3, 4): Partial Loss	MEANING CONSTRUCTION (See 2, 3, 4): Loss	GRAMMATICAL RELATIONS (See 1, 2, 4): Overcorrection	GRAMMATICAL RELATIONS (See 1, 2, 4): Partial Strength	GRAMMATICAL RELATIONS (See 1, 2, 4): Strength	5 GRAPHIC SIMILARITY: H	5 GRAPHIC SIMILARITY: S	5 GRAPHIC SIMILARITY: N	6 SOUND SIMILARITY: H	6 SOUND SIMILARITY: S	6 SOUND SIMILARITY: N
26	asleep	to sleep	Y	Y	N	Y	✓											
27	for	that	Y	Y	N	N	✓											
28	for-im	foreign	Y	N	=	N		✓										
29	stepped to	stepped down to	Y	N	=	N		✓										
30	platform	platform	Y	Y	Y	Y	✓											
31	the	a	Y	Y	N	N	✓											
32	step	smile	Y	?	=	N		✓										
33		of the	Y	Y	N	N	✓											
34	plans	palms	Y	N	=	N		✓										
35	study. His	study with his	P	P	=	N		✓										
36																		

a. TOTAL MISCUES 36	COLUMN TOTAL		20	2	14	15	13	5	3	21	2	2	20	4	1
b. TOTAL WORDS 784	PATTERN TOTAL		36								2.5			25	
a ÷ b × 100 = MPHW 4.59	PERCENTAGE		56%	6%	39%	42%	36%	14%	8%	84%	8%	8%	80%	16%	4%

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Self-Corrections 11/36 or 31%

62% 92% 92% 96%

Appendix F – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (Before Study)

Name: Neil Date: Feb. 4

[Sentence level]

Orphan Train Journey by Janine Rancourt

0301	[1]Jeremiah studied himself in the cracked mirror in	1. YYN
0302	the dim hall of the New York City orphanage. [2]The new	2. YYN
0303	wool suit made him look taller and older—a lot older	
0304	than ten.	3. YYN
0305	[3]Was the news really true? [4]At breakfast, one of the	4. YYN
0306	older boys had said, "We're going out west! [5]We're going	5. YYN
0307	to be adopted!"	
0308	[6]Jeremiah had heard that orphans were needed to help	6. YYN
0309	on farms. [7]Maybe some nice people would want him to	7. YYN
0310	work for them. [8]Jeremiah clutched	8. YYN
0311	the wide brim of his new hat.	
0312	[9]He tried to picture the faces of	9. YYN
0313	his new parents. [10]Would they	10. YYN
0314	be mean? [11]Would they make	11. YYN
0315	him work hard?	

1 Jermah (repeated Jermah for every instance of Jeremiah)

RM Jermah

C May-

C 2 with

RM Jermah

C 3

1

Appendix F – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (Before Study)

RM Jermah

0401 [12]Only one hour later, Jeremiah stood on the train — 12. YYN

0402 platform at New York's Grand Central Station with thirty —

4 child 5 scout

0403 other children from the orphanage. [13]A stout woman with a — 13. YN–

0404 loud voice introduced herself and two other adults. [14]"I'm — 14. YY N

6 Miss (repeated Miss for Mrs. for every instance)

0405 Mrs. Miller," she said. [15]"We will be traveling together. [16]So — 15. YY N

7 pinn-ed

0406 that we lose no one, you will have a number pinned to — 16. YY N

0407 your clothing." —

RM Jermah $ 8 conderation

0408 [17]Jeremiah was distracted by the commotion around — 17. YN–

9 scouting

0409 him. [18]People rushed by, talking and shouting. [19]Porters — 18. YN–

0501 pushed carts loaded with baggage. [20]Train whistles blew. — 19. YY N

0502 [21]Coal smoke from the steam engines stung Jeremiah's — 20. YY N

0503 eyes. — 21. YY N

0504 [22]Their train pulled into the station, rumbling and — 22. YY N

RM Jermah 10

0505 shaking. [23]Jeremiah was frightened. [24]He had never been on — 23. YY N

11 But

0506 a train before. [25]He didn't know where this journey would — 24. YY N

0507 take him. [26]He was a little less frightened when he learned — 25. YY N

26. Y Y P

2

Appendix F – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (Before Study)

0508	that Henry, his best friend from the orphanage, had been	
0509	assigned to sit with him.	
0601	[27]As the train pulled out of the station, Jeremiah	27. YYN
0602	pressed his nose against the window. [28]The window was	28. NN–
0603	smeared with coal soot. [29]He saw tall tenement buildings	29. NN–
0604	and narrow streets crowded with horse-drawn carts.	
0605	[30]Jeremiah remembered living in a New York tenement	30. YN–
0606	before his parents died when he was seven. [31]He	31. YYN
0607	remembered helping his dad sell newspapers.	
0701	[32]After a time, the train began to pass by small villages.	32. YYN
0702	[33]It followed a meandering river lined with trees flecked	33. YN–
0703	with new spring leaves. [34]Cows grazed in pastures crossed	34. YN–
0704	with wooden fences. [35]Large rocks and boulders rose out of	35. YYN
0705	hilly green fields. [36]The train traveled through a forest. [37]It	36. YYN
0706	chugged to the top of a mountain.	37. YYN
0707	[38]Jeremiah had never seen such wonders before. [39]For a	38. YYN

3

Appendix F – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (Before Study)

0708 while he stopped worrying about where they were going. 39. YYN

0709 [40]But then the same question returned: *How would this* 40. YYN

0710 *journey end?* _____

0711 [41]At lunchtime on the first day, Mrs. Miller came down 41. NN–

24 $ RM
To aissle Jermah
0712 the aisle carrying a heavy food basket. [42]Jeremiah soon 42. YN–

$ 25
devored
0713 devoured his jelly sandwich, apple, and milk. [43]He 43. YYN

0714 imagined a table in his new home spread with enough _____

0715 food to last a week. _____

RM
Jermah
0801 [44]That night Jeremiah and Henry stretched out on the 44. YYN

© 26
0802 train seat. [45]The swaying of the train lulled them asleep to sleep. 45. YYN

0803 [46]The next morning they found themselves riding through 46. YYN

27
that
0804 rolling farmland. [47]The conductor said they were in 47. YYN

RM
Jermah
0805 Pennsylvania. [48]To Jeremiah, Pennsylvania looked like a 48. YYN

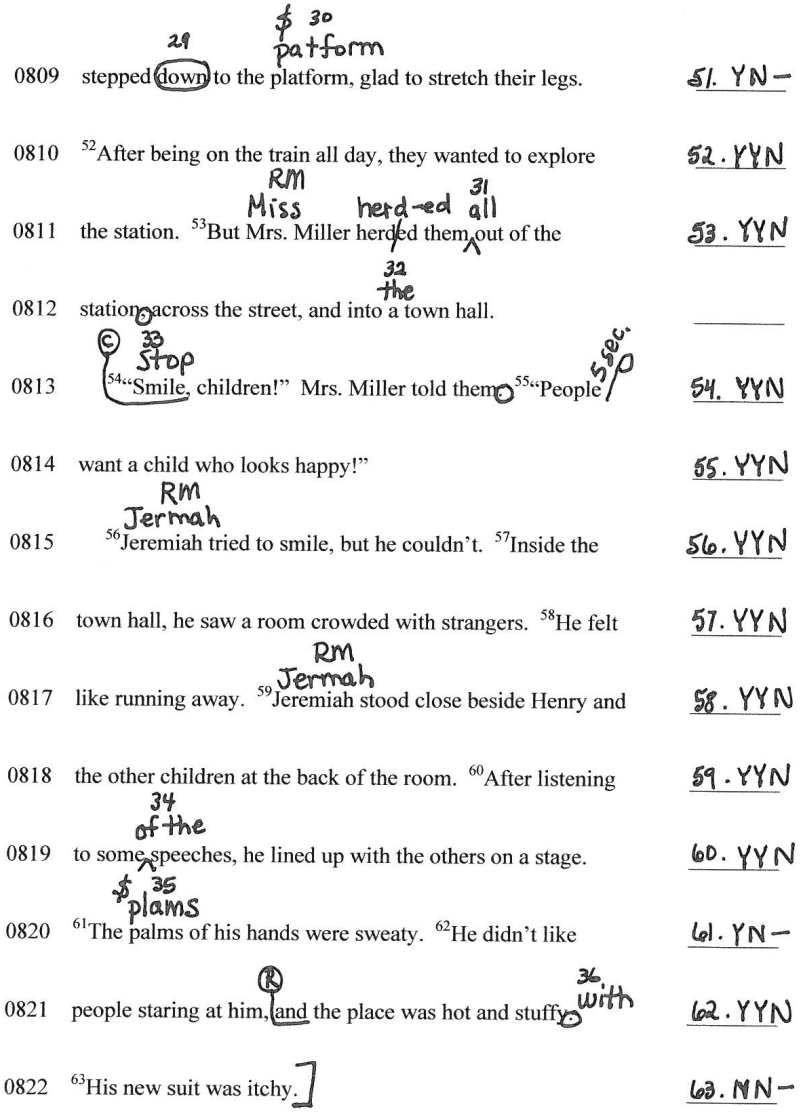
© $ 28
for-in
0806 foreign country. _____

RM
Miss
0807 [49]Finally, after a long day, the train stopped. [50]Mrs. 49. YYN

®
0808 Miller ordered everyone off the train. [51]The tired children 50. YYN

4.

Appendix F – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (Before Study)



0809 stepped down to the platform, glad to stretch their legs. 51. YN–

0810 [52]After being on the train all day, they wanted to explore 52. YYN

0811 the station. [53]But Mrs. Miller herded them out of the 53. YYN

0812 station across the street, and into a town hall. ———

0813 [54]"Smile, children!" Mrs. Miller told them. [55]"People 54. YYN

0814 want a child who looks happy!" 55. YYN

0815 [56]Jeremiah tried to smile, but he couldn't. [57]Inside the 56. YYN

0816 town hall, he saw a room crowded with strangers. [58]He felt 57. YYN

0817 like running away. [59]Jeremiah stood close beside Henry and 58. YYN

0818 the other children at the back of the room. [60]After listening 59. YYN

0819 to some speeches, he lined up with the others on a stage. 60. YYN

0820 [61]The palms of his hands were sweaty. [62]He didn't like 61. YN–

0821 people staring at him, and the place was hot and stuffy with 62. YYN

0822 [63]His new suit was itchy. 63. NN–

5.

Appendix G – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (Before Study)

APPENDIX C5: MISCUE ANALYSIS IN-DEPTH PROCEDURE
CODING FORM

READER Bella DATE Feb. 4
TEACHER Mrs. G AGE/GRADE 4th
SCHOOL Lincoln Elementary
SELECTION Orphan Train Journey

MISCUE No.	READER	TEXT	1 SYNTACTIC ACCEPTIBILITY	2 SEMANTIC ACCEPTIBILITY	3 MEANING CHANGE	4 CORRECTION	See 2, 3, 4 MEANING CONSTRUCTION: No Loss	See 2, 3, 4 MEANING CONSTRUCTION: Partial Loss	See 2, 3, 4 MEANING CONSTRUCTION: Loss	See 1, 2, 4 GRAMMATICAL RELATIONS: Weakness	See 1, 2, 4 GRAMMATICAL RELATIONS: Overcorrection	See 1, 2, 4 GRAMMATICAL RELATIONS: Partial Strength	See 1, 2, 4 GRAMMATICAL RELATIONS: Strength	5 GRAPHIC SIMILARITY H	5 GRAPHIC SIMILARITY S	5 GRAPHIC SIMILARITY N	6 SOUND SIMILARITY H	6 SOUND SIMILARITY S	6 SOUND SIMILARITY N
1			Y	Y	N	Y	√												
2	working to read	were needed	Y	P	I	Y	√												
3	York	Yorks	Y	Y	N	Y	√												
4	man	woman	Y	Y	I	Y	√												
5	to the	and	Y	P	I	Y	√												
6	Miss	Mrs.	Y	Y	N	Y	√												
7	$ com-mption	commotion	Y	Y	N	Y	√												
8	found	learned	Y	Y	N	Y	√												
9	Cela	coal	Y	Y	I	Y	√												
10	$ sout	soot	Y	Y	I	Y	√												
11	$ tenement	tenement	Y	Y	I	Y	√												
12	$ tenement	tenement	Y	Y	I	Y	√												
13	$ Dendering	meandering	Y	Y	I	Y	√												
14	spring	spring	Y	Y	N	Y	√												
15	grazed	grazed	Y	P	I	Y	√												
16	on	to	Y	Y	N	Y	√												
17	why	where	Y	P	I	Y	√												
18	it's	how	N	N	I	Y		√											
19	that	the	Y	N	I	Y	√												
20	$ devered	devoured	Y	N	I	Y	√												
21	the	a	Y	N	I	Y	√												
22	on	of	Y	N	I	Y	√												
23	$ looed	lulled	Y	N	I	Y	√												
24	for two	fer-lan	N	N	I	Y		√											
25	they tried	the tried	N	N	I	Y		√											

a. TOTAL MISCUES ____
b. TOTAL WORDS ____
a ÷ b × 100 = MPTW ____

COLUMN TOTAL
PATTERN TOTAL
PERCENTAGE

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Appendix G – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (Before Study)

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APPENDIX C5: MISCUE ANALYSIS IN-DEPTH PROCEDURE CODING FORM

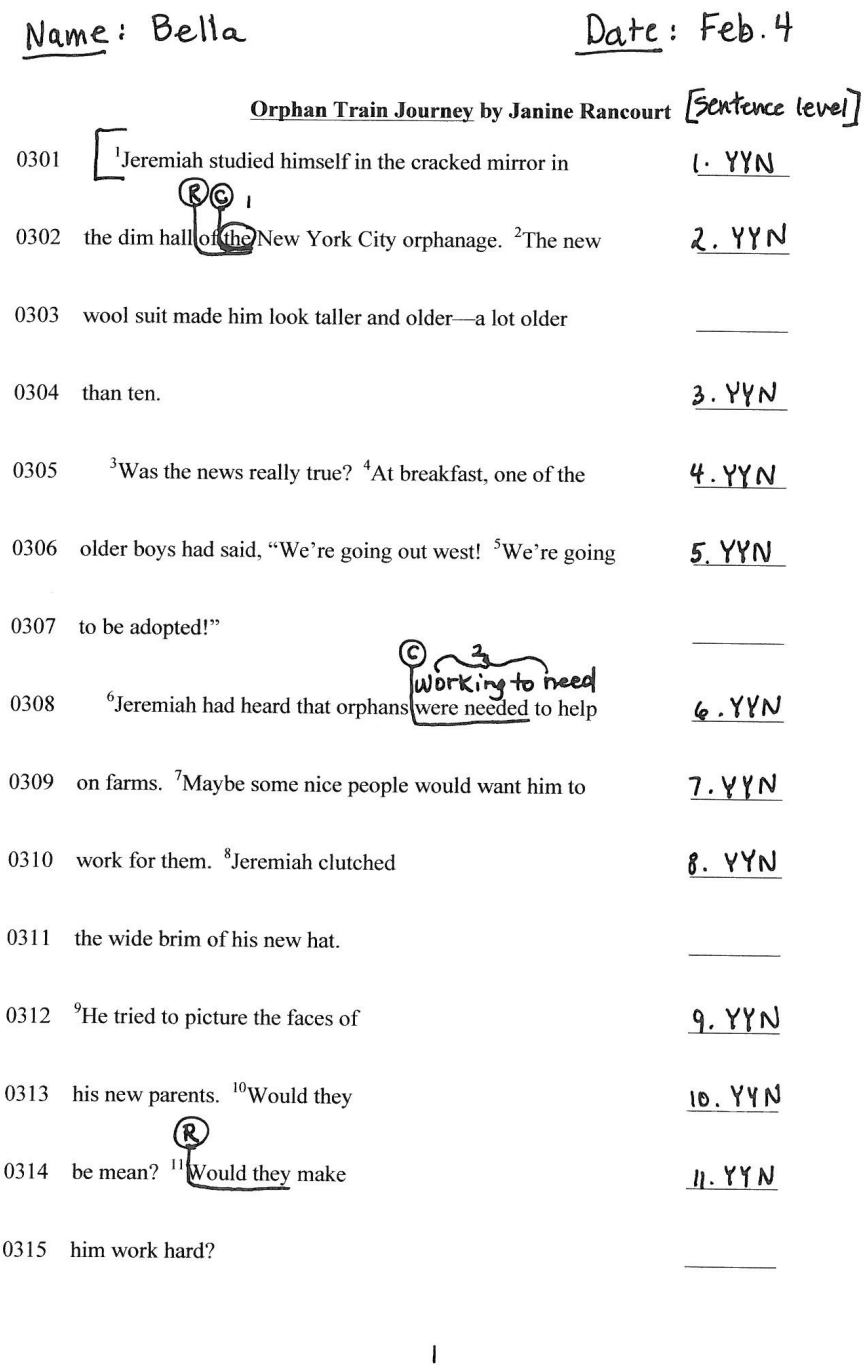
READER Bella DATE Feb. 4
TEACHER Mrs. G AGE/GRADE 4th
SCHOOL Lincoln Elementary
SELECTION Orphan Train Journey

MISCUE No./LINE No.	READER	TEXT	1 SYNTACTIC ACCEPTIBILITY	2 SEMANTIC ACCEPTIBILITY	3 MEANING CHANGE	4 CORRECTION	MEANING CONSTRUCTION (See 2, 3, 4) No Loss	Partial Loss	Loss	GRAMMATICAL RELATIONS (See 1, 2, 4) Strength	Partial Strength	Overcorrection	Weakness	5 GRAPHIC SIMILARITY H	S	N	6 SOUND SIMILARITY H	S	N
26	children's	children	Y	P	—	Y	✓			✓				✓			✓		
27	—	and	Y	Y	N	N	✓			✓				—	—	—	—	—	—
28	—	a	Y	Y	N	Y	✓					✓		—	—	—	—	—	—
29	children	child	P	P	—	N		✓					✓	✓				✓	
30	peaches	speeches	Y	N	—	Y	✓			✓				✓			✓		
31	hand	hands	Y	Y	N	N	✓			✓				✓			✓		
32	that	the	Y	Y	N	N	✓			✓				✓				✓	
a. TOTAL MISCUES 32 b. TOTAL WORDS 784 a ÷ b × 100 = MPHW 4.08			COLUMN TOTAL				21	2	9	14	12	5	1	20	4	2	12	13	1
			PATTERN TOTAL				32			32				26			26		
			PERCENTAGE				66%	6%	28%	44%	38%	16%	3%	77%	15%	8%	46%	50%	4%
							72%			98%				92%			96%		

Goodman, Watson, Burke

Self-Corrections 13/32 or 41%

Appendix G – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (Before Study)



Name: Bella Date: Feb. 4

Orphan Train Journey by Janine Rancourt [Sentence level]

0301 [1]Jeremiah studied himself in the cracked mirror in 1. YYN

0302 the dim hall of the New York City orphanage. [2]The new 2. YYN

0303 wool suit made him look taller and older—a lot older

0304 than ten. 3. YYN

0305 [3]Was the news really true? [4]At breakfast, one of the 4. YYN

0306 older boys had said, "We're going out west! [5]We're going 5. YYN

0307 to be adopted!"

0308 [6]Jeremiah had heard that orphans were needed to help working to need 6. YYN

0309 on farms. [7]Maybe some nice people would want him to 7. YYN

0310 work for them. [8]Jeremiah clutched 8. YYN

0311 the wide brim of his new hat.

0312 [9]He tried to picture the faces of 9. YYN

0313 his new parents. [10]Would they 10. YYN

0314 be mean? [11]Would they make 11. YYN

0315 him work hard?

1

Appendix G – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (Before Study)

0401 [12]Only one hour later, Jeremiah stood on the train 12. YYN

0402 platform at New York's Grand Central Station with thirty _____

0403 other children from the orphanage. [13]A stout woman with a 13. YYN

0404 loud voice introduced herself and two other adults. [14]"I'm 14. YYN

0405 Mrs. Miller," she said. [15]"We will be traveling together. [16]So 15. YYN

0406 that we lose no one, you will have a number pinned to 16. YYN

0407 your clothing." _____

0408 [17]Jeremiah was distracted by the commotion around 17. YN—

0409 him. [18]People rushed by, talking and shouting. [19]Porters 18. YYN

0501 pushed carts loaded with baggage. [20]Train whistles blew. 19. YYN

0502 [21]Coal smoke from the steam engines stung Jeremiah's 20. YYN

0503 eyes. 21. YYN

0504 [22]Their train pulled into the station, rumbling and 22. YYN

0505 shaking. [23]Jeremiah was frightened. [24]He had never been on 23. YYN

0506 a train before. [25]He didn't know where this journey would 24. YYN

0507 take him. [26]He was a little less frightened when he learned 25. YYN

2. 26. YYN

Appendix G – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (Before Study)

0508 that Henry, his best friend from the orphanage, had been _____

0509 assigned to sit with him. _____

0601 [27]As the train pulled out of the station, Jeremiah 27. YYN

0602 pressed his nose against the window. [28]The window was 28. YN–

9 $ 10 $ 11
0603 cold soot smeared with coal soot. [29]He saw tall tenement buildings 29. YN–
soout teenement

0604 and narrow streets crowded with horse-drawn carts. _____

$ 12
0605 [30]Jeremiah remembered living in a New York tenement 30. YN–
teneement

0606 before his parents died when he was seven. [31]He 31. YYN

0607 remembered helping his dad sell newspapers. _____

0701 [32]After a time, the train began to pass by small villages. 32. YYN

$ 13
0702 [33]It followed a meandering river lined with trees flecked 33. YN–
mendering

R © 14 © 15
0703 with new spring leaves. [34]Cows grazed in pastures crossed 34. YYN
springs gazed

0704 with wooden fences. [35]Large rocks and boulders rose out of 35. YYN

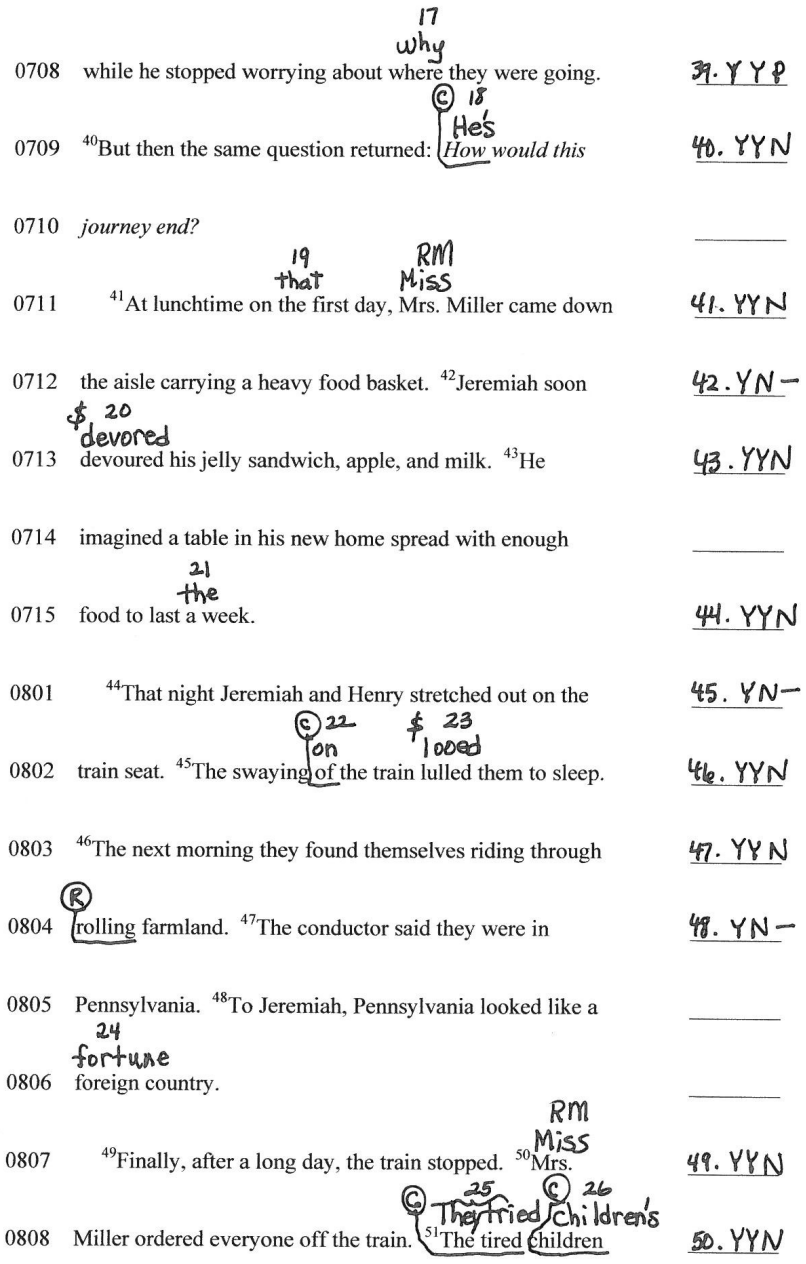
0705 hilly green fields. [36]The train traveled through a forest. [37]It 36. YYN

© 16
0706 chugged to the top of a mountain. 37. YYN
on

0707 [38]Jeremiah had never seen such wonders before. [39]For a 38. YYN

3.

Appendix G – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (Before Study)



4.

Appendix G – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (Before Study)

0809	stepped down to the platform, glad to stretch their legs.	51. YYN
0810	[52]After being on the train all day, they wanted to explore	52. YYN
0811	the station. [53]But Mrs. Miller herded them out of the	53. YYN
0812	station, across the street and into a town hall.	
0813	[54]"Smile, children!" Mrs. Miller told them. [55]"People	54. YYN
0814	want a child who looks happy!"	55. YN–
0815	[56]Jeremiah tried to smile, but he couldn't. [57]Inside the	56. YYN
0816	town hall, he saw a room crowded with strangers. [58]He felt	57. YYN
0817	like running away. [59]Jeremiah stood close beside Henry and	58. YYN
0818	the other children at the back of the room. [60]After listening	59. YYN
0819	to some speeches, he lined up with the others on a stage.	60. YYN
0820	[61]The palms of his hands were sweaty. [62]He didn't like	61. YYN
0821	people staring at him, and the place was hot and stuffy.	62. YYN
0822	[63]His new suit was itchy.]	63. YYN

5.

Appendix H – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (Before Study)

APPENDIX C5: MISCUE ANALYSIS IN-DEPTH PROCEDURE
CODING FORM

READER Jessica DATE Feb. 4
TEACHER Mrs. B AGE/GRADE 4th
SCHOOL Lincoln Elementary
SELECTION Orphan Train Journey

MISCUE No.	LINE No.	READER	TEXT	1 SYNTACTIC ACCEPTIBILITY	2 SEMANTIC ACCEPTIBILITY	3 MEANING CHANGE	4 CORRECTION	5 GRAPHIC SIMILARITY H	S	N	6 SOUND SIMILARITY H	S	N	MEANING CONSTRUCTION See 2, 3, 4 No Loss	Partial Loss	Loss	GRAMMATICAL RELATIONS See 1, 2, 4 Weakness	Overcorrection	Partial Strength	Strength
1	2	German	Jerwiah	Y	Y	N														
2	3	orphanages	had orphans	Y	Y															
3	4	& Crutched	clutched	Y	P															
4	5	one	only	Y	N															
5	6	City	Central	Y	P															
6	7	short	stout	Y	Y															
7	8	induced	introduced	Y	N															
8	9	her	herself	Y	N															
9	10	Miss	Mrs.	Y	N															
10	11	Planned	pinned	Y	N															
11	12	distracted	distracted	Y	Y															
12	13	posters	porters	Y	N															
13	14	bags	baggage	Y	Y															
14	15	tightened	frightened	Y	Y															
15	16	this	this	Y	Y															
16	17	sm	sm	N	N															
17	18	ten	tenement	N	N															
18	19	dawned	drawn	N	N															
19	20	tene	tenement	N	N															

COLUMN TOTAL PATTERN TOTAL PERCENTAGE

	8	3	9	7	7	2	4	13	6	0	12	7	0							
		20			20				19			19								
	40%	15%	45%	35%	35%	10%	20%	68%	32%	0%	63%	37%	0%							

a. TOTAL MISCUES 20
b. TOTAL WORDS 282
a ÷ b × 100 = MPHW 5.15

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Self-Corrections 3/20 or 15%

55% 80% 100% 100%

Appendix H – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (Before Study)

Name: Jessica Date: Feb. 4

Orphan Train Journey by Janine Rancourt [sentence level]

(Substituted Germany for Jeremiah each instance)

0301 [1]Germany Jeremiah studied himself in the cracked mirror in 1. YYN

0302 the dim hall of the New York City orphanage. [2]The new 2. YYN

0303 wool suit made him look taller and older—a lot older _____

0304 than ten. 3. YYN

0305 [3]Was the news really true? [4]At breakfast, one of the 4. YYN

0306 older boys had said, "We're going out west! [5]We're going 5. YYN

0307 to be adopted!" _____

0308 RM Germany [6]Jeremiah had heard that 3 orphanages were needed to help 6. YN–

0309 on farms. [7]Maybe some nice people would want him to 7. YYN

0310 RM Germany work for them. [8]Jeremiah ø 4 clutched 8. YN–

0311 the wide brim of his new hat. _____

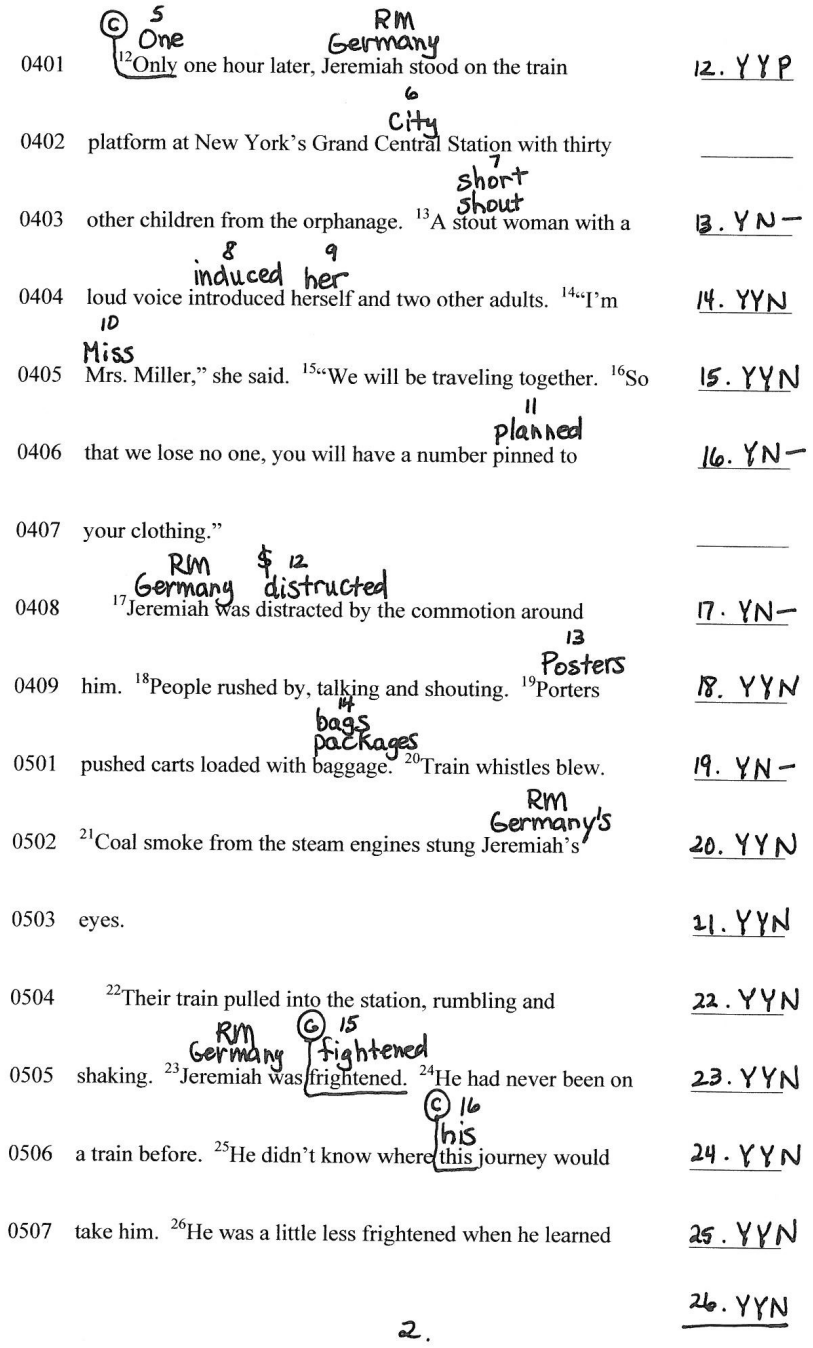
0312 [9]He tried to picture the faces of 9. YYN

0313 his new parents. [10]Would they 10. YYN

0314 be mean? [11]Would they make 11. YYN

0315 him work hard? _____

Appendix H – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (Before Study)



0401 [12]Only one hour later, Jeremiah stood on the train — 12. Y Y P

0402 platform at New York's Grand Central Station with thirty — _____

0403 other children from the orphanage. [13]A stout woman with a — 13. Y N –

0404 loud voice introduced herself and two other adults. [14]"I'm — 14. Y Y N

0405 Mrs. Miller," she said. [15]"We will be traveling together. [16]So — 15. Y Y N

0406 that we lose no one, you will have a number pinned to — 16. Y N –

0407 your clothing." — _____

0408 [17]Jeremiah was distracted by the commotion around — 17. Y N –

0409 him. [18]People rushed by, talking and shouting. [19]Porters — 18. Y Y N

0501 pushed carts loaded with baggage. [20]Train whistles blew. — 19. Y N –

0502 [21]Coal smoke from the steam engines stung Jeremiah's — 20. Y Y N

0503 eyes. — 21. Y Y N

0504 [22]Their train pulled into the station, rumbling and — 22. Y Y N

0505 shaking. [23]Jeremiah was frightened. [24]He had never been on — 23. Y Y N

0506 a train before. [25]He didn't know where this journey would — 24. Y Y N

0507 take him. [26]He was a little less frightened when he learned — 25. Y Y N

26. Y Y N

Appendix H – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (Before Study)

0508 that Henry, his best friend from the orphanage, had been _____

0509 assigned to sit with him. _____

RM Germany

0601 [27]As the train pulled out of the station, Jeremiah 27. YYN

0602 pressed his nose against the window. [28]The window was 28. NN–

$ 17 SM

0603 smeared with coal soot. [29]He saw tall tenement buildings $ 18 ten 29. NN–

19 dawned

0604 and narrow streets crowded with horse-drawn carts. _____

RM Germany

0605 [30]Jeremiah remembered living in a New York tenement $ 20 ten 30. NN–

0606 before his parents died when he was seven. [31]He 31. YYN

0607 remembered helping his dad sell newspapers.] _____

0701 [32]After a time, the train began to pass by small villages. _____

0702 [33]It followed a meandering river lined with trees flecked _____

0703 with new spring leaves. [34]Cows grazed in pastures crossed _____

0704 with wooden fences. [35]Large rocks and boulders rose out of _____

0705 hilly green fields. [36]The train traveled through a forest. [37]It _____

0706 chugged to the top of a mountain. _____

0707 [38]Jeremiah had never seen such wonders before. [39]For a _____

3.

Appendix H – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (Before Study)

0708 while he stopped worrying about where they were going. _____

0709 [40]But then the same question returned: *How would this* _____

0710 *journey end?* _____

0711 [41]At lunchtime on the first day, Mrs. Miller came down _____

0712 the aisle carrying a heavy food basket. [42]Jeremiah soon _____

0713 devoured his jelly sandwich, apple, and milk. [43]He _____

0714 imagined a table in his new home spread with enough _____

0715 food to last a week. _____

0801 [44]That night Jeremiah and Henry stretched out on the _____

0802 train seat. [45]The swaying of the train lulled them to sleep. _____

0803 [46]The next morning they found themselves riding through _____

0804 rolling farmland. [47]The conductor said they were in _____

0805 Pennsylvania. [48]To Jeremiah, Pennsylvania looked like a _____

0806 foreign country. _____

0807 [49]Finally, after a long day, the train stopped. [50]Mrs. _____

0808 Miller ordered everyone off the train. [51]The tired children _____

4.

Appendix H – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (Before Study)

0809 stepped down to the platform, glad to stretch their legs. _____

0810 [52]After being on the train all day, they wanted to explore _____

0811 the station. [53]But Mrs. Miller herded them out of the _____

0812 station, across the street, and into a town hall. _____

0813 [54]"Smile, children!" Mrs. Miller told them. [55]"People _____

0814 want a child who looks happy!" _____

0815 [56]Jeremiah tried to smile, but he couldn't. [57]Inside the _____

0816 town hall, he saw a room crowded with strangers. [58]He felt _____

0817 like running away. [59]Jeremiah stood close beside Henry and _____

0818 the other children at the back of the room. [60]After listening _____

0819 to some speeches, he lined up with the others on a stage. _____

0820 [61]The palms of his hands were sweaty. [62]He didn't like _____

0821 people staring at him, and the place was hot and stuffy. _____

0822 [63]His new suit was itchy. _____

5.

Appendix I – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (After Study)

APPENDIX C5: MISCUE ANALYSIS IN-DEPTH PROCEDURE CODING FORM

READER Neil DATE May 21th
TEACHER Mrs. G AGE/GRADE 4th
SCHOOL Lincoln Elementary
SELECTION Coming Home

MISCUE No./LINE No.

READER	TEXT	1 SYNTACTIC ACCEPTIBILITY	2 SEMANTIC ACCEPTIBILITY	3 MEANING CHANGE	4 CORRECTION	MEANING CONSTRUCTION (See 2, 3, 4): Loss	MEANING CONSTRUCTION (See 2, 3, 4): Partial Loss	MEANING CONSTRUCTION (See 2, 3, 4): No Loss	GRAMMATICAL RELATIONS (See 1, 2, 4): Weakness	GRAMMATICAL RELATIONS (See 1, 2, 4): Overcorrection	GRAMMATICAL RELATIONS (See 1, 2, 4): Partial Strength	GRAMMATICAL RELATIONS (See 1, 2, 4): Strength	5 GRAPHIC SIMILARITY H	5 GRAPHIC SIMILARITY S	5 GRAPHIC SIMILARITY N	6 SOUND SIMILARITY H	6 SOUND SIMILARITY S	6 SOUND SIMILARITY N
1																		
2	$ serenaded	Y	N	N	Y													
3	and	P	P	I	N													
4	is the	Y	Y	N	Y													
5	the	Y	Y	N	Y													
6	flag	Y	Y	N	Y													
7	sent	Y	Y	N	Y													
8	out loud	Y	Y	N	Y													
9	playing	Y	Y	N	Y													
10	chrethy	Y	N	N	Y													
11	whom	Y	Y	N	Y													
12	$ dentify	Y	N	N	Y													
13	got	Y	N	N	Y													
14	liar—	Y	N	N	Y													
15	has	N	N	N	Y													
16	it is so	Y	Y	N	Y													
17	rotations	Y	N	N	Y													
18	make cake	Y	N	N	Y													
19	$ CHO-pons	Y	N	N	Y													
20	two	Y	N	N	Y													
21	dear Ny	Y	Y	N	Y													
22	are you	Y	Y	N	Y													
23	fighting over	Y	Y	N	Y													
24	$ satisfaction	Y	P	I	N													
25	what	Y	Y	N	Y													

COLUMN TOTAL
PATTERN TOTAL
PERCENTAGE

a. TOTAL MISCUES ____
b. TOTAL WORDS ____
a ÷ b × 100 = MPHW ____

Goodman, Watson, Burke

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Appendix I – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (After Study)

APPENDIX C5: MISCUE ANALYSIS IN-DEPTH PROCEDURE CODING FORM

READER Neil DATE May 21
TEACHER Mrs. G AGE/GRADE 4th
SCHOOL Lincoln Elementary
SELECTION Coming Home

MISCUE No./LINE No.

READER	TEXT	1 SYNTACTIC ACCEPTIBILITY	2 SEMANTIC ACCEPTIBILITY	3 MEANING CHANGE	4 CORRECTION	See 2, 3, 4 MEANING CONSTRUCTION: No Loss / Partial Loss / Loss	See 1, 2, 4 GRAMMATICAL RELATIONS: Strength / Partial Strength / Overcorrection / Weakness	5 GRAPHIC SIMILARITY: H / S / N	6 SOUND SIMILARITY: H / S / N
26	of an empty	Y	Y	N	N		✓		
of an empty	of empty	Y	Y	N	✓		✓		

	COLUMN TOTAL PATTERN TOTAL PERCENTAGE																		
a. TOTAL MISCUES 26	21	0	5	10	5	11	0	13	2	4	12	6	1						
b. TOTAL WORDS 979					26				19			19							
a ÷ b × 100 = MPHW 2.66	81%	0%	19%	38%	19%	42%	0%	68%	11%	21%	63%	32%	5%						

Goodman, Watson, Burke

Self-Corrections 8/26 or 31%

81%

100%

79%

95%

Page 2 of 2

Appendix I – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (After Study)

Name: Neil Date: May 21

Coming Home by Barbara Brooks Simons [sentence level]

0301 [1]There are two pictures on Mom's dressing table, side by _____

0302 side in a single silver frame. [2]They don't look like pictures of _____

0303 the same person, but they are. [3]I think of one as the picture of _____

0304 my father and the other as the picture of my dad. _____

0305 [4]The photograph on the left is the most recent. [5]It shows _____

0306 my father with very short hair, in his army uniform. [6]The _____

0307 silver bars on his shoulders mean he's a lieutenant, someone _____

0308 who is the leader. [7]The man in the picture looks stern and _____

0309 serious, as if he would never laugh at anything. _____

0401 [8]I like the pictures on the right better. [9]It was taken on 8. YYN

0402 vacation when my parents were a lot younger—maybe ten or 9. YYN

0403 twelve years ago, before I was born. [10]Dad is wearing a funny, _____

0404 old-fashioned swimsuit. [11]He looks as if he has just heard a 10. YYN

0405 good joke. 11. YYN

0406 [12]Sometimes Mom sits with me and tells me stories about _____

1

Appendix I – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (After Study)

0407 Dad. [13]One time she told me a story that happened before they — 12. YYN

0408 were married. [14]Dad came over with his guitar and serenaded — 13. YYN

0409 Mom as she sat on the porch. [15]Then they started changing the — 14. YN–

0410 words in the songs to be silly and laughed so loudly that — _____

0411 Grandma came out and told them to be quiet. [16]I can — 15. YYN

0412 remember Dad playing the guitar when I was very little, but — _____

0413 it's been tucked away in the closet since before he joined the — _____

0414 army. — 16. YYN

0501 [17]My father has been gone for three years, since 1942. [18]I — 17. YYN

0502 was six when he went away. [19]Even Mom has seen him only — 18. YYN

0503 once in three whole years. [20]Before he went overseas, he got a — 19. YYN

0504 weekend pass—permission to leave the army training camp. — 20. YYN

0505 [21]Mom took a long train trip to New York to say goodbye, but I — _____

0506 was too little to go. [22]I stayed home with Grandma and my — 21. YYN

0507 uncle Juan. — 22. YYN

0508 [23]Ever since my dad went overseas, we have hung a special — _____

2

Appendix I – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (After Study)

0509 flag in the front window to show that someone in our family is _____

0510 in the military, away at war. [24]The flag has a blue star on a 23. YYN

0511 white background, with a red border. [25]There are other flags 24. YYN

0512 like ours up and down the street. [26]Two of the flags have gold 25. YYN

0513 stars. [27]A gold star means someone in the family was killed in 26. YYN

0514 the war. 27. YYN

0601 [28]Sometimes I sit alone at Mom's dressing table. [29]I run my 28. YYN

0602 fingers around the edge of the picture frame. [30]I want to talk to 29. YYN

0603 the man in the pictures, but I don't know what to say. [31]I can 30. YYN

0604 barely remember having fun with my dad—having picnics, _____

0605 going to the zoo, and playing games in the yard. [32]I do 31. YYN

0606 remember that he had a deep laugh that made me laugh too. 32. YYN

0607 [33]But those memories don't fit with the letters he sends us. 33. YYN

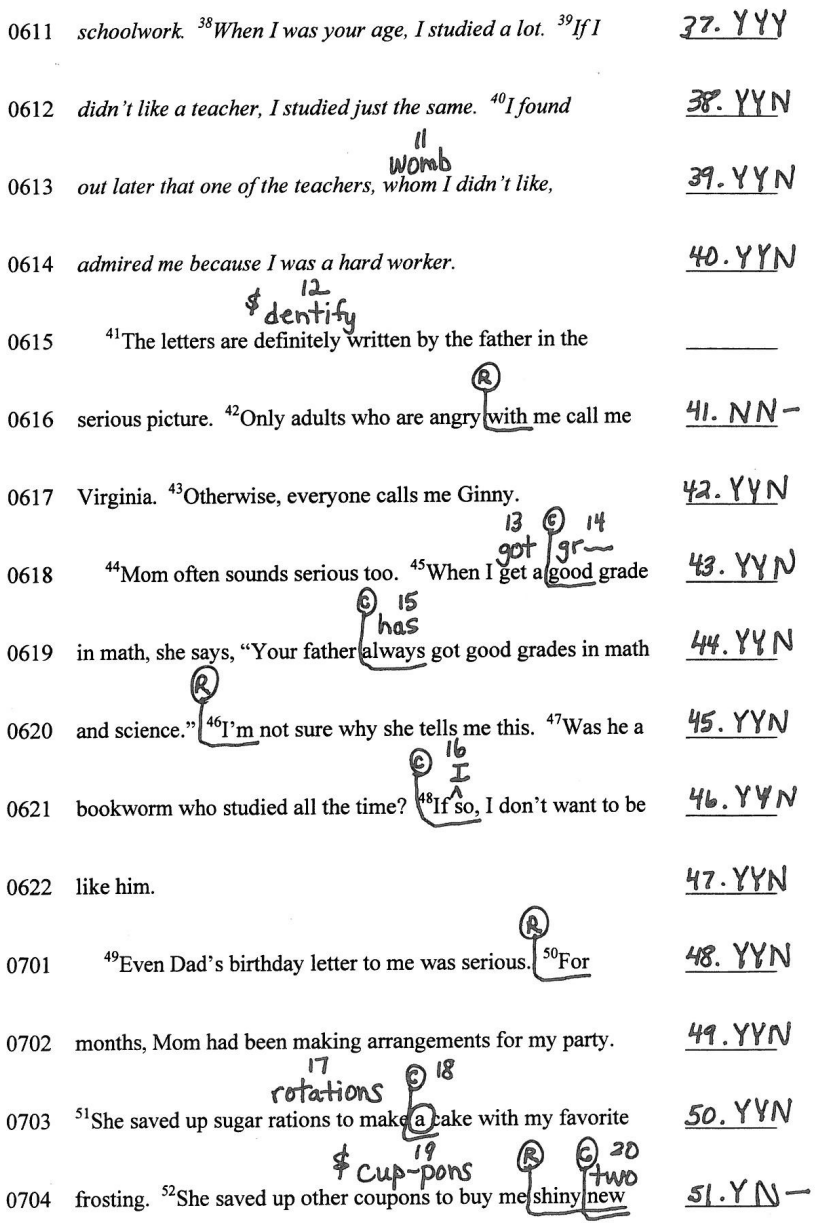
0608 [34]Mom reads parts of them aloud. [35]He writes to me too. 34. YYN

0609 [36]*My dearest daughter Virginia,* 35. YYN

0610 [37]*I hope you are paying careful attention to your* 36. YYN

3

Appendix I – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (After Study)



0611 *schoolwork.* [38]*When I was your age, I studied a lot.* [39]*If I* — 37. YYY

0612 *didn't like a teacher, I studied just the same.* [40]*I found* — 38. YYN

0613 *out later that one of the teachers, whom I didn't like,* — 39. YYN

0614 *admired me because I was a hard worker.* — 40. YYN

0615 [41]The letters are definitely written by the father in the

0616 serious picture. [42]Only adults who are angry with me call me — 41. NN–

0617 Virginia. [43]Otherwise, everyone calls me Ginny. — 42. YYN

0618 [44]Mom often sounds serious too. [45]When I get a good grade — 43. YYN

0619 in math, she says, "Your father always got good grades in math — 44. YYN

0620 and science." [46]I'm not sure why she tells me this. [47]Was he a — 45. YYN

0621 bookworm who studied all the time? [48]If so, I don't want to be — 46. YYN

0622 like him. — 47. YYN

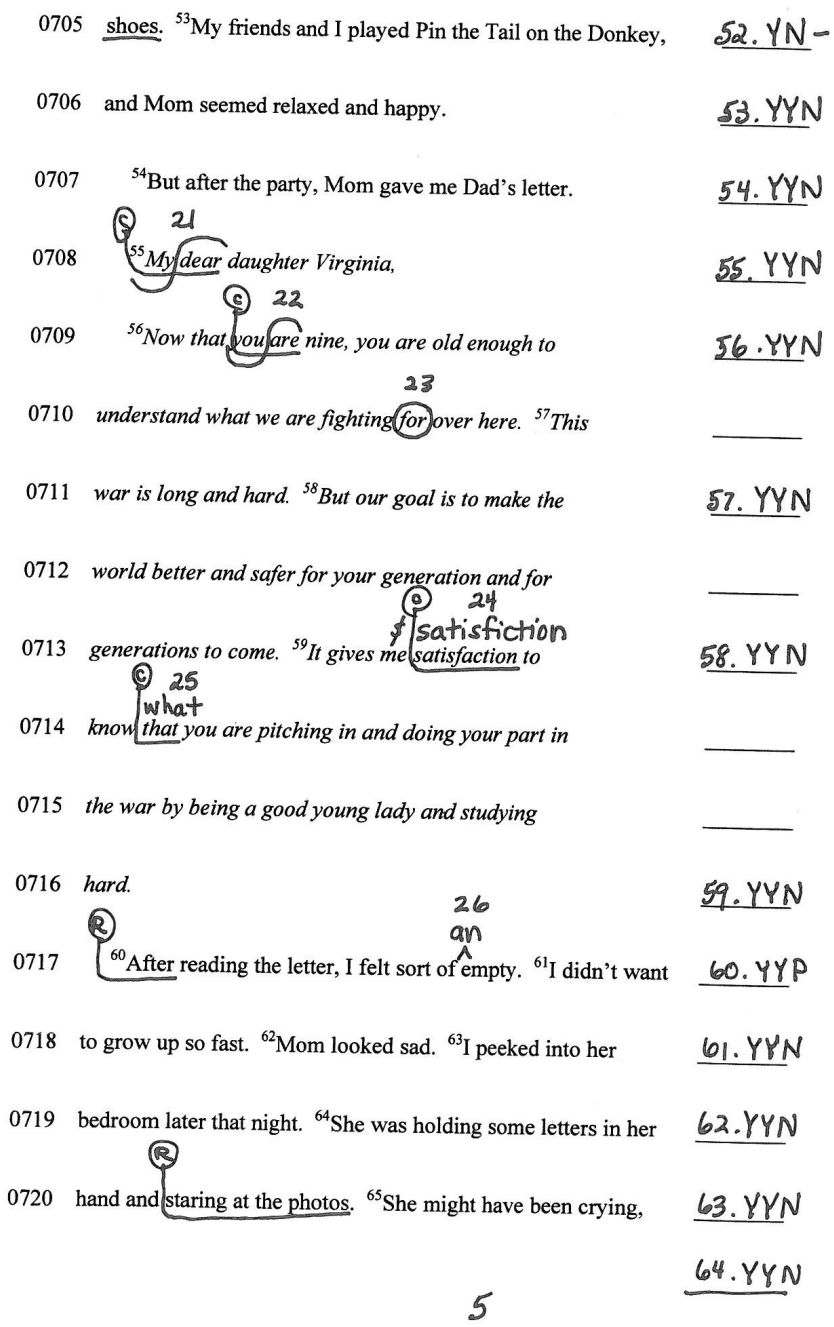
0701 [49]Even Dad's birthday letter to me was serious. [50]For — 48. YYN

0702 months, Mom had been making arrangements for my party. — 49. YYN

0703 [51]She saved up sugar rations to make a cake with my favorite — 50. YYN

0704 frosting. [52]She saved up other coupons to buy me shiny new — 51. YN–

Appendix I – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (After Study)



0705 shoes. [53]My friends and I played Pin the Tail on the Donkey, — 52. YN –

0706 and Mom seemed relaxed and happy. — 53. YYN

0707 [54]But after the party, Mom gave me Dad's letter. — 54. YYN

0708 [55]*My dear daughter Virginia,* — 55. YYN

0709 [56]*Now that you are nine, you are old enough to* — 56. YYN

0710 *understand what we are fighting for over here.* [57]*This* —

0711 *war is long and hard.* [58]*But our goal is to make the* — 57. YYN

0712 *world better and safer for your generation and for* —

0713 *generations to come.* [59]*It gives me satisfaction to* — 58. YYN

0714 *know that you are pitching in and doing your part in* —

0715 *the war by being a good young lady and studying* —

0716 *hard.* — 59. YYN

0717 [60]After reading the letter, I felt sort of empty. [61]I didn't want — 60. YYP

0718 to grow up so fast. [62]Mom looked sad. [63]I peeked into her — 61. YYN

0719 bedroom later that night. [64]She was holding some letters in her — 62. YYN

0720 hand and staring at the photos. [65]She might have been crying, — 63. YYN

64. YYN

5

Appendix I – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Neil (After Study)

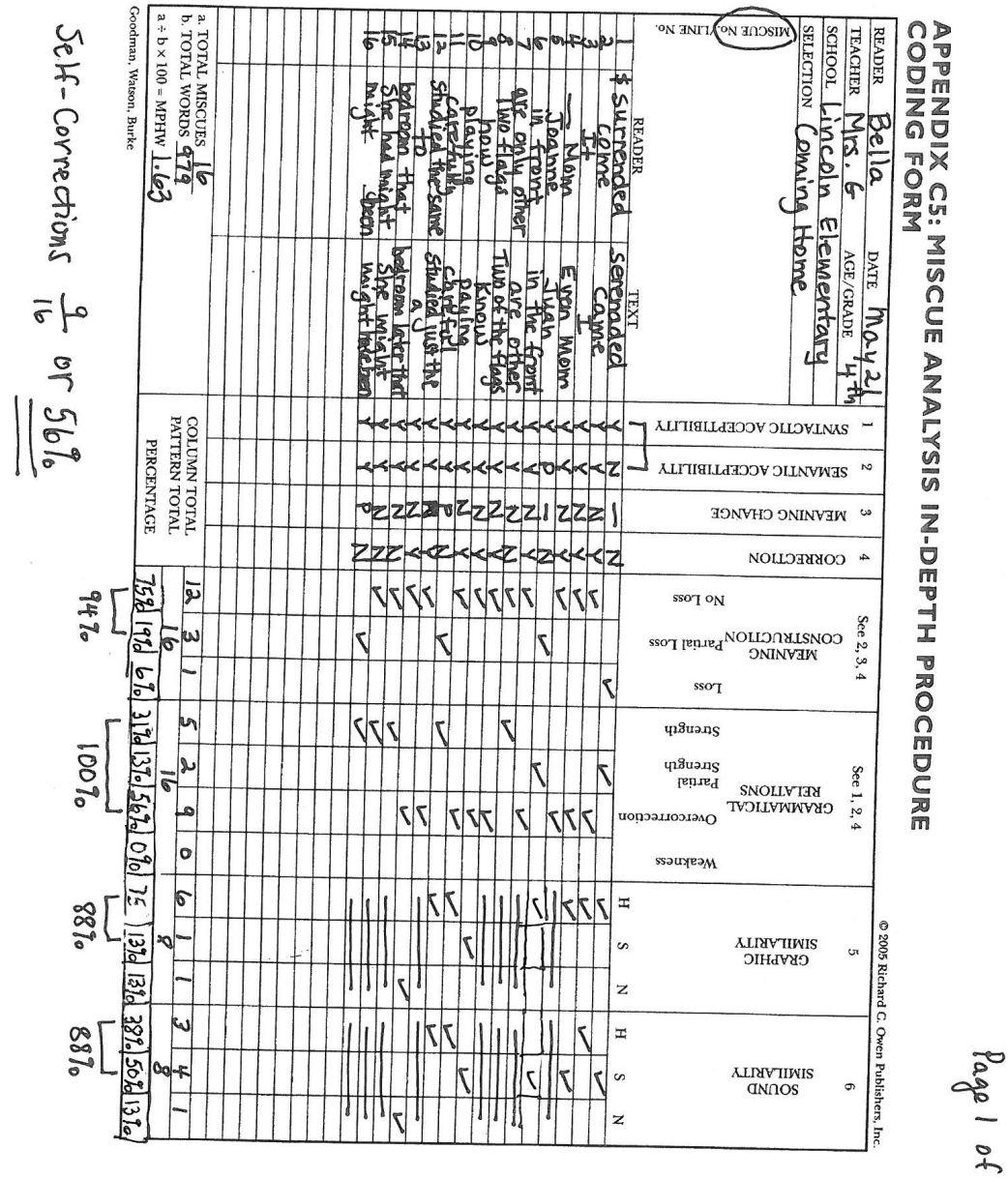
0721 so I just tiptoed back to bed. [66]She misses my dad a lot.]

65. YYN

66. YYN

6

Appendix J – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (After Study)



APPENDIX C5: MISCUE ANALYSIS IN-DEPTH PROCEDURE
CODING FORM

READER Bella DATE May 21
TEACHER Mrs. G AGE/GRADE 4th
SCHOOL Lincoln Elementary
SELECTION Coming Home

MISCUE No. / LINE No.

	READER	TEXT	1 SYNTACTIC ACCEPTIBILITY	2 SEMANTIC ACCEPTIBILITY	3 MEANING CHANGE	4 CORRECTION	MEANING CONSTRUCTION See 2, 3, 4: Loss / Partial Loss / No Loss	GRAMMATICAL RELATIONS See 1, 2, 4: Weakness / Overcorrection / Partial Strength / Strength	5 GRAPHIC SIMILARITY: H / S / N	6 SOUND SIMILARITY: H / S / N
1	Surrended	Serenaded	Y	N	N	Y				
2	Came	Came	Y	Y	N	Y				
3	It		Y	Y	Y	Y				
4	Mom	Mom	Y	Y	N	Y				
5	Jeanne	Evan	Y	P	N	Y				
6	in front	Noah in the front	Y	Y	N	Y	Y			
7	are only other	are other	Y	Y	N	Y	Y			
8	two flags	Two of the flags	Y	Y	N	Y	Y			
9	know	know	Y	Y	N	Y	Y			
10	playing	playing	Y	Y	N	Y	Y			
11	Carefully	Careful	Y	Y	N	Y	Y			
12	studied the same	studied just the	Y	Y	P	Y	Y			
13	to	a	Y	Y	N	Y	Y			
14	bedroom that	bedroom later that	Y	Y	N	Y	Y			
15	She had might	She might	Y	Y	N	Y	Y			
16	might	might	Y	Y	N	Y	Y			
		been								
	COLUMN TOTAL		12	3	1	5	2	9	0	6	1	1	3	4	8	1
	PATTERN TOTAL		16													
	PERCENTAGE		75%	19%	6%	31%	13%	56%	0%	75%	13%	13%	38%	50%	13%	

a. TOTAL MISCUES 16
b. TOTAL WORDS 479
a ÷ b × 100 = MPHW 1.63

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Page 1 of 1

Self-Corrections 9 of 16 or 56%

94%

100%

88%

88%

Appendix J – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (After Study)

Name: Bella Date: May 21

Coming Home by Barbara Brooks Simons [sentence level]

0301 [1]There are two pictures on Mom's dressing table, side by _____

0302 side in a single silver frame. [2]They don't look like pictures of _____

0303 the same person, but they are. [3]I think of one as the picture of _____

0304 my father and the other as the picture of my dad. _____

0305 [4]The photograph on the left is the most recent. [5]It shows _____

0306 my father with very short hair, in his army uniform. [6]The _____

0307 silver bars on his shoulders mean he's a lieutenant, someone _____

0308 who is the leader. [7]The man in the picture looks stern and _____

0309 serious, as if he would never laugh at anything. _____

0401 [8]I like the pictures on the right better. [9]It was taken on 8. YYN

0402 vacation when my parents were a lot younger—maybe ten or 9. YYN

0403 twelve years ago, before I was born. [10]Dad is wearing a funny, _____

0404 old-fashioned swimsuit. [11]He looks as if he has just heard a 10. YYN

0405 good joke. 11 YYN

0406 [12]Sometimes Mom sits with me and tells me stories about _____

1

Appendix J – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (After Study)

0407 Dad. [13]One time she told me a story that happened before they 12. YYN

0408 were married. [14]Dad cam over with his guitar and serenaded 13. YYN

0409 Mom as she sat on the porch. [15]Then they started changing the 14. YN–

0410 words in the songs to be silly and laughed so loudly that _____

0411 Grandma came out and told them to be quiet. [16]I can 15. YYN

0412 remember Dad playing the guitar when I was very little, but _____

0413 it's been tucked away in the closet since before he joined the _____

0414 army. 16. YYN

0501 [17]My father has been gone for three years, since 1942. [18]I 17. YYN

0502 was six when he went away. [19]Even Mom has seen him only 18. YYN

0503 once in three whole years. [20]Before he went overseas, he got a 19. YYN

0504 weekend pass—permission to leave the army training camp. 20. YYN

0505 [21]Mom took a long train trip to New York to say goodbye, but I _____

0506 was too little to go. [22]I stayed home with Grandma and my 21. YYN

0507 uncle Juan. 22. YYP

0508 [23]Ever since my dad went overseas, we have hung a special _____

2

Appendix J – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (After Study)

0509	flag in the front window to show that someone in our family is	_____
0510	in the military, away at war. [24]The flag has a blue star on a	23. YYN
0511	white background, with a red border. [25]There are other flags	24. YYN
0512	like ours up and down the street. [26]Two of the flags have gold	25. YYN
0513	stars. [27]A gold star means someone in the family was killed in	26. YYN
0514	the war.	27. YYN
0601	[28]Sometimes I sit alone at Mom's dressing table. [29]I run my	28. YYN
0602	fingers around the edge of the picture frame. [30]I want to talk to	29. YYN
0603	the man in the pictures, but I don't know what to say. [31]I can	30. YYN
0604	barely remember having fun with my dad—having picnics,	_____
0605	going to the zoo, and playing games in the yard. [32]I do	31. YYN
0606	remember that he had a deep laugh that made me laugh too.	32. YYN
0607	[33]But those memories don't fit with the letters he sends us.	33. YYN
0608	[34]Mom reads parts of them aloud. [35]He writes to me too.	34. YYN
0609	[36]*My dearest daughter Virginia,*	35. YYN
0610	[37]*I hope you are paying careful attention to your*	36. YYN

3

Appendix J – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (After Study)

0611	*schoolwork.* [38]*When I was your age, I studied a lot.* [39]*If I*	37. YYP
0612	*didn't like a teacher, I studied just the same.* [40]*I found*	38. YYN
0613	*out later that one of the teachers, whom I didn't like,*	39. YYN
0614	*admired me because I was a hard worker.*	40. YYN
0615	[41]The letters are definitely written by the father in the	_____
0616	serious picture. [42]Only adults who are angry with me call me	41. YYN
0617	Virginia. [43]Otherwise, everyone calls me Ginny.	42. YYN
0618	[44]Mom often sounds serious too. [45]When I get a good grade	43. YYN
0619	in math, she says, "Your father always got good grades in math	44. YYN
0620	and science." [46]I'm not sure why she tells me this. [47]Was he a	45. YYN
0621	bookworm who studied all the time? [48]If so, I don't want to be	46. YYN
0622	like him.	47. YYN
0701	[49]Even Dad's birthday letter to me was serious. [50]For	48. YYN
0702	months, Mom had been making arrangements for my party.	49. YYN
0703	[51]She saved up sugar rations to make a cake with my favorite	50. YYN
0704	frosting. [52]She saved up other coupons to buy me shiny new	51. YYN

4

Appendix J – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (After Study)

0705	shoes. [53]My friends and I played Pin the Tail on the Donkey,	52. YYN
0706	and Mom seemed relaxed and happy.	53. YYN
0707	[54]But after the party, Mom gave me Dad's letter.	54. YYN
0708	[55]*My dear daughter Virginia,*	55. YYN
0709	[56]*Now that you are nine, you are old enough to*	56. YYN
0710	*understand what we are fighting for over here.* [57]*This*	_____
0711	*war is long and hard.* [58]*But our goal is to make the*	57. YYN
0712	*world better and safer for your generation and for*	_____
0713	*generations to come.* [59]*It gives me satisfaction to*	58. YYN
0714	*know that you are pitching in and doing your part in*	_____
0715	*the war by being a good young lady and studying*	59. YYN
0716	*hard.*	60. YYN
0717	[60]After reading the letter, I felt sort of empty. [61]I didn't want	61. YYN
0718	to grow up so fast. [62]Mom looked sad. [63]I peeked into her	62. YYN
0719	bedroom later that night. [64]She was holding some letters in her	63. YYN
0720	hand and staring at the photos. [65]She might have been crying,	64. YYN

5

Appendix J – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Bella (After Study)

0721 so I just tiptoed back to bed. [66]She misses my dad a lot.

65. YYP

66. YYN

6

Appendix K – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (After Study)

APPENDIX C5: MISCUE ANALYSIS IN-DEPTH PROCEDURE
CODING FORM

READER Jessica DATE May 21
TEACHER Mrs. B AGE/GRADE 4th
SCHOOL Lincoln Elementary
SELECTION Coming Home

MISCUE NO./LINE NO.

	READER TEXT	1 SYNTACTIC ACCEPTIBILITY	2 SEMANTIC ACCEPTIBILITY	3 MEANING CHANGE	4 CORRECTION	MEANING CONSTRUCTION See 2, 3, 4: Loss / Partial Loss / No Loss	GRAMMATICAL RELATIONS See 1, 2, 4: Weakness / Overcorrection / Partial Strength / Strength	5 GRAPHIC SIMILARITY: H S N	6 SOUND SIMILARITY: H S N
1	vacation. May	Y	Y	Y	Y				
2	Swimming suit	Y	Y	Y	Y				
3	& bad	Y	Y	Y	Y				
4	& sended	Y	N	=	Y				
5	they	Y	Y	Y	Y				
6	quit	Y	Y	Y	Y				
7	his	Y	Y	Y	Y				
8	. But before	Y	Y	Y	Y				
9	June	Y	Y	Y	Y				
10	in front	Y	Y	Y	Y				
11	was	Y	Y	Y	Y				
12	stars	Y	Y	Y	Y				
13	pictures	Y	Y	Y	Y				
14	fold the	Y	Y	Y	Y				
15	fit with the	Y	Y	Y	Y				
16	part	Y	Y	Y	Y				
17	playing	Y	Y	Y	Y				
18	followed	Y	Y	Y	Y				
19	& admired	Y	Y	Y	Y				
20	All	Y	Y	Y	Y				
21	Gimmy (hard G)	Y	Y	Y	Y				
22	gave	Y	Y	Y	Y				
23	& rattens	Y	N	=	Y				
24	& COWBOYS	Y	Y	Y	Y				
25	Coming over	Y	N	=	Y				
	Coming over	Y	N	=	Y				
	Cowboys	Y	Y	Y	Y				

COLUMN TOTAL
PATTERN TOTAL
PERCENTAGE

a. TOTAL MISCUES ____
b. TOTAL WORDS ____
a ÷ b × 100 = MPHW ____

Goodman, Watson, Burke

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Appendix K – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (After Study)

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APPENDIX C5: MISCUE ANALYSIS IN-DEPTH PROCEDURE CODING FORM

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READER Jessica DATE May 21
TEACHER Mrs. B AGE/GRADE 4th
SCHOOL Lincoln Elementary
SELECTION Coming Home

MISCUE No./LINE No.	READER	TEXT	1 SYNTACTIC ACCEPTIBILITY	2 SEMANTIC ACCEPTIBILITY	3 MEANING CHANGE	4 CORRECTION	MEANING CONSTRUCTION (See 2, 3, 4) No Loss	Partial Loss	Loss	GRAMMATICAL RELATIONS (See 1, 2, 4) Strength	Partial Strength	Overcorrection	Weakness	5 GRAPHIC SIMILARITY H	S	N	6 SOUND SIMILARITY H	S	N
26	$ genet	generation	Y	N	–	N			✓		✓			✓				✓	
27	greatness	generations	Y	N	–	N			✓		✓			✓				✓	
28	up fast	up so fast	Y	Y	N	Y	✓			✓				—	—	—	—	—	—
29	late	later	Y	Y	N	Y	✓					✓		✓			✓		
COLUMN TOTAL							23	1	5	13	3	13	0	19	2	2	10	9	4
PATTERN TOTAL							29			29				23			23		
PERCENTAGE							79%	3%	17%	45%	10%	45%	0%	83%	9%	9%	43%	39%	17%
							82%			100%				92%			82%		

a. TOTAL MISCUES 29
b. TOTAL WORDS 979
a ÷ b × 100 = MPHW 2.96

Goodman, Watson, Burke

Self-Corrections 13/29 or 45%

Appendix K – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (After Study)

Name: Jessica Date: May 21

Coming Home by Barbara Brooks Simons [sentence level]

0301 [1]There are two pictures on Mom's dressing table, side by _____

0302 side in a single silver frame. [2]They don't look like pictures of _____

0303 the same person, but they are. [3]I think of one as the picture of _____

0304 my father and the other as the picture of my dad. _____

0305 [4]The photograph on the left is the most recent. [5]It shows _____

0306 my father with very short hair, in his army uniform. [6]The _____

0307 silver bars on his shoulders mean he's a lieutenant, someone _____

0308 who is the leader. [7]The man in the picture looks stern and _____

0309 serious, as if he would never laugh at anything. _____

0401 [8]I like the pictures on the right better. [9]It was taken on 8. YYN

0402 vacation when my parents were a lot younger—maybe ten or 9. YYP

0403 twelve years ago, before I was born. [10]Dad is wearing a funny, _____

0404 old-fashioned swimsuit. [11]He looks as if he has just heard a 10. YYN

0405 good joke. 11. YYN

0406 [12]Sometimes Mom sits with me and tells me stories about _____

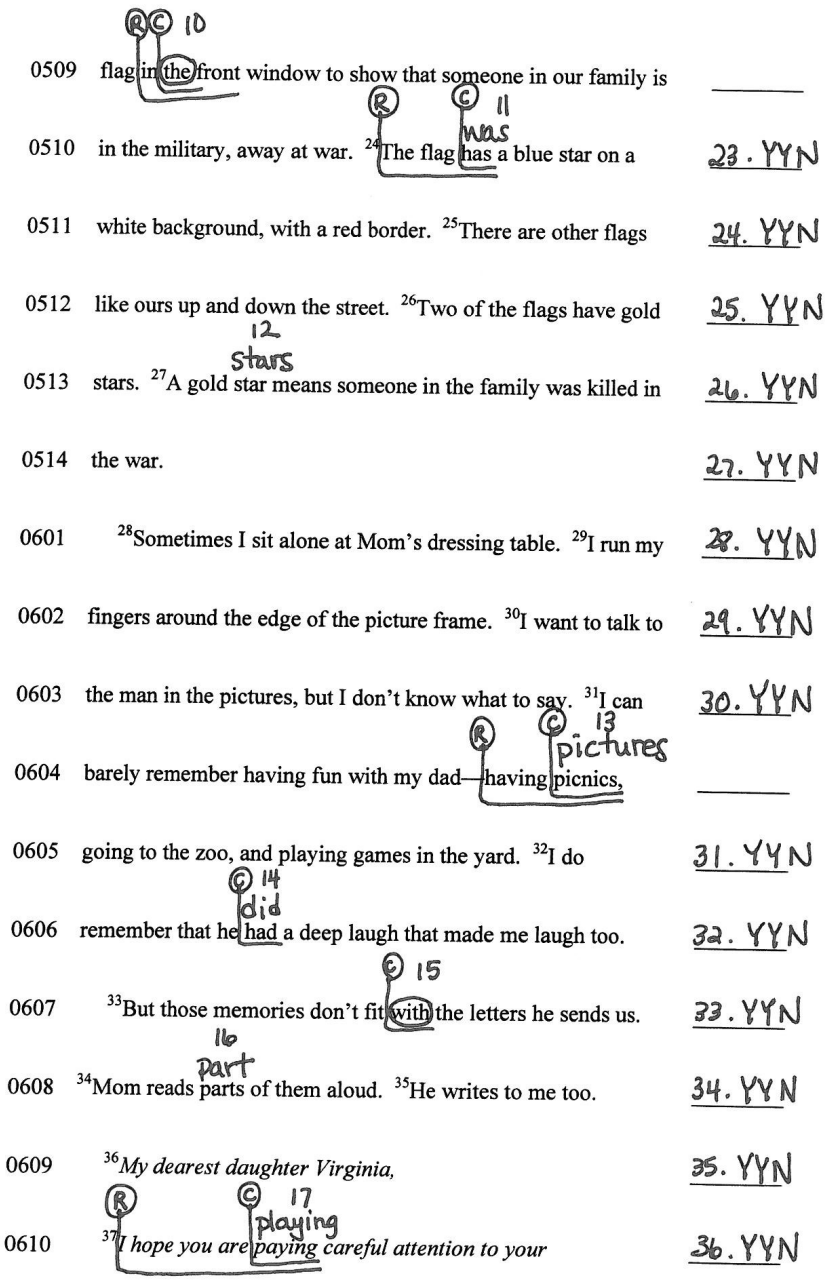
1

Appendix K – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (After Study)

0407	Dad. [13]One time she told me a story that happened before they	12. YYN
0408	were married. [14]Dad came over with his guitar and serenaded	13. YYN
0409	Mom as she sat on the porch. [15]Then they started changing the	14. YN–
0410	words in the songs to be silly and laughed so loudly that	_____
0411	Grandma came out and told them to be quiet. [16]I can	15. YYN
0412	remember Dad playing the guitar when I was very little, but	_____
0413	it's been tucked away in the closet since before he joined the	_____
0414	army.	16. YYN
0501	[17]My father has been gone for three years, since 1942. [18]I	17. YYN
0502	was six when he went away. [19]Even Mom has seen him only	18. YYN
0503	once in three whole years. [20]Before he went overseas, he got a	19. YYN
0504	weekend pass—permission to leave the army training camp.	20. YYN
0505	[21]Mom took a long train trip to New York to say goodbye, but I	_____
0506	was too little to go. [22]I stayed home with Grandma and my	21. YYN
0507	uncle Juan.	22. YYP
0508	[23]Ever since my dad went overseas, we have hung a special	_____

2

Appendix K – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (After Study)



0509 flag in the front window to show that someone in our family is _____

0510 in the military, away at war. [24]The flag has a blue star on a 23. YYN

0511 white background, with a red border. [25]There are other flags 24. YYN

0512 like ours up and down the street. [26]Two of the flags have gold 25. YYN

0513 stars. [27]A gold star means someone in the family was killed in 26. YYN

0514 the war. 27. YYN

0601 [28]Sometimes I sit alone at Mom's dressing table. [29]I run my 28. YYN

0602 fingers around the edge of the picture frame. [30]I want to talk to 29. YYN

0603 the man in the pictures, but I don't know what to say. [31]I can 30. YYN

0604 barely remember having fun with my dad—having picnics, _____

0605 going to the zoo, and playing games in the yard. [32]I do 31. YYN

0606 remember that he had a deep laugh that made me laugh too. 32. YYN

0607 [33]But those memories don't fit with the letters he sends us. 33. YYN

0608 [34]Mom reads parts of them aloud. [35]He writes to me too. 34. YYN

0609 [36]*My dearest daughter Virginia,* 35. YYN

0610 [37]*I hope you are paying careful attention to your* 36. YYN

3

Appendix K – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (After Study)

0611 *schoolwork.* [38]*When I was your age, I studied a lot.* [39]*If I* 37. YY N

0612 *didn't like a teacher, I studied just the same.* [40]*I found* 38. YY N

0613 *out later that one of the teachers, whom I didn't like,* 39. YY N

0614 *admired me because I was a hard worker.* 40. YY N

0615 [41]The letters are definitely written by the father in the _____

0616 serious picture. [42]Only adults who are angry with me call me 41. YY N

0617 Virginia. [43]Otherwise, everyone calls me Ginny. 42. YY N

0618 [44]Mom often sounds serious too. [45]When I get a good grade 43. YY N

0619 in math, she says, "Your father always got good grades in math 44. YY N

0620 and science." [46]I'm not sure why she tells me this. [47]Was he a 45. YY N

0621 bookworm who studied all the time? [48]If so, I don't want to be 46. YY N

0622 like him. 47. YY N

0701 [49]Even Dad's birthday letter to me was serious. [50]For 48. YY N

0702 months, Mom had been making arrangements for my party. 49. YY N

0703 [51]She saved up sugar rations to make a cake with my favorite 50. YY N

0704 frosting. [52]She saved up other coupons to buy me shiny new 51. YN —

4

Appendix K – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (After Study)

0705 shoes. [53]My friends and I played Pin the Tail on the Donkey, 52. YN–

0706 and Mom seemed relaxed and happy. 53. YYN

0707 [54]But after the party, Mom gave me Dad's letter. 54. YYN

0708 [55]*My dear daughter Virginia,* 55. YYN

0709 [56]*Now that you are nine, you are old enough to* 56. YYN

0710 *understand what we are fighting for over here.* [57]*This* ———

0711 *war is long and hard.* [58]*But our goal is to make the* 57. YYN

0712 *world better and safer for your generation and for* ———

0713 *generations to come.* [59]*It gives me satisfaction to* 58. YN–

0714 *know that you are pitching in and doing your part in* ———

0715 *the war by being a good young lady and studying* 59. YYN

0716 *hard.* 60. YYN

0717 [60]After reading the letter, I felt sort of empty. [61]I didn't want 61. YYN

0718 to grow up so fast. [62]Mom looked sad. [63]I peeked into her 62. YYN

0719 bedroom later that night. [64]She was holding some letters in her 63. YYN

0720 hand and staring at the photos. [65]She might have been crying, 64. YYN

5

Appendix K – Completed Miscue Analysis In-Depth Procedure Coding Forms and Typescripts for Jessica (After Study)

0721 so I just tiptoed back to bed. [66]She misses my dad a lot.

65. YYN

66. YYN

6

Appendix L – Explanation of Markings for Miscue Analysis

The Essential RMA: A Window into Readers' Thinking

Appendix E:
Explanation of Markings for Miscue Analysis

Substitutions
Substitutions are shown by writing the miscue directly above the word or phrase. Read as *He hated to get Marcel's white hairs on his beautiful new shirt.*

He hated to get Marcel's white hairs on his
shirt
beautiful new suit.

Omission
Omissions are marked by circling the omitted language structures. Read as *"I can do that," replied the husband.*

"I can do (all) that," replied the husband.

Insertions
Insertions are shown by marking a proofreader's caret at the point of insertion and writing the inserted word or phrase where it occurs in the text. Read as *"Now I've got some more work to do," said the man.*

some
"Now I've got more work to do," said the man.

Regressing and Abandoning a Correct Form
Abandonments are marked by drawing a line from right to left at the point at which the reader went back to repeat but abandoned the expected text. An (AC) is used to indicate this type of regression. In this example, the reader first reads *head against the wall*, then rejects this possibility and produces the more sensible *hand against the wall*. Read as *"How many times did I hit my head against the wall—hand against the wall?" she asked.*

(AC) hand
"How many times did I hit my head against the
wall?" she asked.

Regressions or Repetitions
Linguistic structures that are reread are underlined to explicitly show how much the reader chose to reread. Regressions are marked by drawing a line from right to left to the point at which the reader went back to repeat. An (R) designates simple repetitions. Multiple repetitions, words or phrases that are repeated more than once, are underlined each time they occur. Read as *Why don't you—Why don't you do my work some day?* and *All at—All at—All at once I was covered with red paint.*

(R)
Why don't you do my work some day?
(R)
All at once I was covered with red paint.

Regressing and Correcting the Miscue (self-corrections)
Self-corrections are marked by drawing a line from right to left to the point at which the reader went back to repeat in order to correct the miscue. A (C) indicates a correction.

The markings in this example show that the reader substitutes *flash* for the words *few minutes.* She then regresses and corrects the miscue: *I'll light a fire in the fireplace and the porridge will be ready in a flash—a few minutes.*

I'll light a fire in the fireplace and the porridge will
(C) flash
be ready in a few minutes.

Substitutions Often Called Reversals
An editor's transposition symbol shows which words have been reversed. Read as *I sat down looking at Andrew.* and *Something was wrong with Papa.*

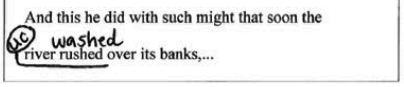
I sat looking down at Andrew.
Was something wrong with Papa?

Appendix L – Explanation of Markings for Miscue Analysis

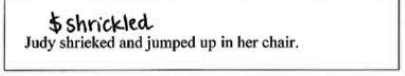
Appendix E: Explanation of Markings for Miscue Analysis

Regressing and Unsuccessfully Attempting to Correct
Unsuccessful attempts to correct are marked by drawing a line from right to left to the point at which the reader began to repeat in an attempt to correct. A (UC) is used to designate this type of regression.

In this example, the reader says *river washed* twice and this is marked as (UC), an unsuccessful attempt at correction. Read as *And this he did with such might that soon the river washed—river washed over its banks,...*

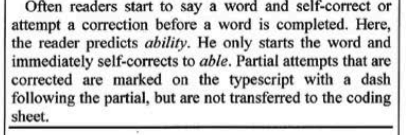


Nonword Substitutions
A dollar sign ($) indicates that a reader has produced a miscue that is not recognizable as a word in the reader's language. Retain as much of the original spelling of the text word as possible. Read as *Judy shrickled and jumped up in her chair.*

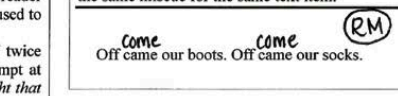


Partial Miscues
Partial miscues are marked by putting a dash after a partial word when a reader attempts but does not produce a complete word. Intonation is used to determine partial miscues.

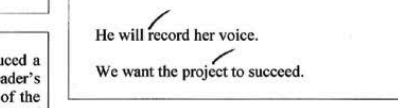
Often readers start to say a word and self-correct or attempt a correction before a word is completed. Here, the reader predicts *ability*. He only starts the word and immediately self-corrects to *able*. Partial attempts that are corrected are marked on the typescript with a dash following the partial, but are not transferred to the coding sheet.



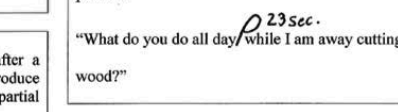
Repeated Miscues
Repeated miscues are marked with an (RM) to indicate the same miscue for the same text item.



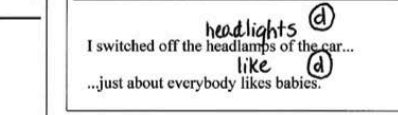
Intonation Shift
An accent mark indicates intonation shifts within a word. Intonation shifts are marked only if there is a change in meaning or grammatical structure of the original text.



Pauses
A P marks noticeable pauses in reading. It is useful to mark the length of unusually long pauses.



Dialect and Other Language Variations
Miscues that involve a sound, vocabulary item, or grammatical variation that is perceived as a dialect difference between the author and reader are marked with a (d). Read as *I switched off the headlights of the car...* and *...just about everybody like babies.*



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