

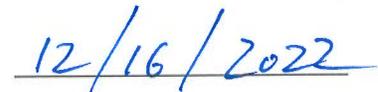
UNDERSTANDING THE EARLY LITERACY DEVELOPMENT OF PRIMARY RTI
STUDENTS THROUGH THE APPLICATION OF MISCUE ANALYSIS

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By

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2022

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Abstract

This is a qualitative, single case study of primary-grade students receiving reading intervention and primary-grade teachers who have Response to Intervention (RTI) students in their classrooms. This study examined how RTI students in Grades 1–3 developed and reflected on their literacy knowledge and strategies. This study also explored how the RTI students experienced and conceptualized reading through Retrospective Miscue Analysis (RMA). In addition, this study looked at how Miscue Analysis impacted primary-grade teachers' understanding of the literacy development of their RTI students. Using purposive sampling, seven RTI students and six primary-grade teachers participated in this study to explore the following research questions:

1. How do primary-grade students who are receiving Response to Intervention (RTI) services develop and reflect on their literacy knowledge and reading process?
 - (a) How do primary-grade RTI students experience and conceptualize reading through Retrospective Miscue Analysis?
 - (b) How does Miscue Analysis impact teachers' understanding of the literacy development of their students who are receiving RTI services?

I used multiple data sources to learn about my participants and examine their literacy learning, understandings related to the reading process, and literacy development. Miscue analysis allowed me to explore and observe the RTI students' conceptualizations of reading, literacy knowledge, and development, as well as teachers' understanding of their students and their literacy instruction. This study provided empirical evidence of how students and teachers experienced reading and developed literacy knowledge through miscue analysis and RMA. Miscue analysis and RMA helped bring focus to meaning for

both RTI students and teachers, while proving to be a powerful tool for learning, teaching, professional development, and literacy research.

Keywords: elementary reading, primary grade RTI students, Miscue Analysis, Retrospective Miscue Analysis, primary-grade teachers

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CHAPTER 1

INTRODUCTION

There are many approaches regarding early literacy instruction and pedagogy, especially when it comes to supporting Response to Intervention (RTI) students: the students who do not meet the academic growth expectations for their grade level, as specified by the education policies and guidelines. The teaching of reading in previous decades was dominated by different philosophies (Alexander & Fox, 2013). The “skill-based” approaches (Alexander & Fox, 2013) emphasized phonemic awareness and phonics instruction as prerequisites for teaching reading, and reading was viewed as the result of mastering a series of linear, sequential skills (such as decoding and fluency) to achieve comprehension. The “comprehensive approaches” (Smith, 2012) included a holistic approach to literacy, advocating for teaching all skills concomitantly, based on the individual needs of the readers, while keeping comprehension central to the purpose of reading. The ongoing metaphorical pendulum swing between the two approaches, along with accountability policies and requirements, continues to exist in public education, and all of these factors impact the literacy education practices of teachers (Alexander & Fox, 2013; Mraz & Vacca, 2001; Park & Datnow, 2017). In recent years, with the introduction of the Maryland Ready to Read Act (2019), the pendulum has swung yet again, moving away from the comprehensive approach, to one that uses phonics assessments in identifying and qualifying students for Response-to-Intervention (RTI) services. While it is not necessary to fully subscribe to one approach or the other, the understanding that reading is a dynamic, complex, and individual process of making sense of print (Y. Goodman et al., 2005) is essential. This understanding is important not

only for young readers and their teachers, but also for teacher educators, curriculum developers, literacy scholars, and education policy makers.

As a reading intervention teacher, I have experienced the pressure created by both education policies and the requirements to use certain assessment tools to over-emphasize the classroom practices that center more on code-focused than meaning-focused literacy skills (Jones et al., 2012; Lonigan & Shanahan, 2013). For example, in early elementary education, many of the “research-based” Tier 2 and Tier 3 intervention programs emphasize decontextualized skills such as decoding, (e.g., i-Ready, Wilson, Foundations), and fluency (e.g., Read Naturally), with less focus on language and literacy development, such as literature-based discussions and engaging in social interactions around text (Martens, 2017).

Problem of Practice

Literacy assessments, such as spelling tests or Dynamic Indicators of Basic Early Literacy Skills (DIBELS), measure decontextualized skills, and when used as accountability pieces for classroom instruction, these types of literacy assessment force teachers to focus on teaching to the test, rather than on reading comprehension (Alexander & Fox, 2013; Samuels, 2007). During the 2020–2021 school year, the Maryland county in which this study took place adopted a phonics curriculum from the 95 Percent Group (The Story Behind 95 Percent Group, 2022). This curriculum includes an assessment component that consists of a Phonological Awareness Screener for Intervention™ (PASI™) and a Phonics Screener for Intervention™ (PSI™) used as a county-based assessment for progress monitoring in reading, as well as a tool for targeting students for Tier 2 and Tier 3 RTI reading intervention services. Based on these

assessments, students are grouped into different levels of instructional groups and taught individual phonics skills either in the classroom or in reading intervention groups. This shift of focus to isolated skills within the reading pedagogy is taking away from student-centered instruction, and it teaches students to view reading as a sum of automatic skills rather than as a meaning-making process (K. Goodman, 2006; Samuels, 2007).

The skill-based view of reading is also reflected in the teaching strategies that classroom teachers use (Flippo, 2012), and it trickles down to their students' answers regarding what they do when getting to a word they do not know ("I sound it out"), enforcing strategies that do not prioritize meaning (Smith, 2012). In her study on the pervasiveness of "sounding out" as a "cultural model for reading," Compton-Lilly (2005) noted that this is a model that not only infiltrated policy and schools, but also homes, being reflected even in the parents' instructional interactions with their children. Teaching reading to RTI students in all three tiers for more than 9 years, I have yet to meet an elementary reader who did not name sounding out as one of the main strategies that characterized good readers. In the same way students' perception of reading affects their employment of strategies and understandings of reading, teachers' perceptions of the reading process can influence both reading pedagogy and practice.

Considering that our current education system promotes the implementation of research-supported strategies and instructional practices (Alexander & Fox, 2013), it is important to look at research that not only reveals the complexities of reading, but also counters the deficit views and discourses surrounding RTI students. We need to turn our attention to research that acknowledges and highlights the need to differentiate instruction, encourages educators to learn about their students, and values the learners'

funds of knowledge (Moll et al., 1992), while building upon what readers know and can do.

The PASI™ and PSI™ screeners used to identify students for RTI already place primary readers in a deficit position, as these students are regarded as lacking skills and knowledge to meet grade-level expectations based on the new assessment requirements. This population is labeled as deficient, and RTI students are often placed in Tier 2 and Tier 3 intervention, which means that they are targeted for additional services that “intervene” to “remediate” their “reading problems” (Alexander & Fox, 2013). The whole discourse around these students is rooted in deficit, as they are often regarded as being less able than their peers, and they are often described (in report card teacher reports) with focus on what they cannot do, or skills they have not mastered, with little emphasis on their strengths and things they do well (Y. Goodman et al., 2016). This study examined how elementary students in primary grades receiving RTI services developed literacy knowledge and strategies. Using a holistic and asset-based perspective, this study also sought to gain insights into how these students experience and conceptualize reading through Retrospective Miscue Analysis (RMA) sessions, and how the teachers of RTI students experience and contribute to RTI students’ literacy development. The following questions guided my inquiry:

1. How do primary grade-students who are receiving Response to Intervention (RTI) services develop and reflect on their literacy knowledge and reading process?
 - (a) How do primary-grade RTI students experience and conceptualize reading through Retrospective Miscue Analysis (RMA)?

- (b) How does Miscue Analysis impact teachers' understanding of the literacy development of their students who are receiving RTI services?

The Maryland Ready to Read Act

The Maryland Ready to Read Act (2019) shifted the focus of literacy assessment to isolated skills with the purpose of identifying students at risk for dyslexia. This required school districts to screen students beginning in kindergarten in early literacy skills such as phonological awareness, knowledge of letter-sound association, and rapid automatized naming of letters, as well as single-word recognition. This new deficit-centered paradigm (Alexander & Fox, 2013) is problematic because it brings into focus the assessment and evaluation of the students' mastery of isolated, sequential skills, and because it guides the placement of students in the three RTI tiers, which dictates the type of literacy instruction they receive. Early childhood educators use a variety of reading assessment tools, formal and informal, formative, and summative, to collect data and evaluate their students' performance. These data are also used to inform the design of classroom literacy instruction, teaching focus, and student feedback (Harp, 2006). Teachers' instructional decisions are co-constructed with the decisions made at the team, school, and district levels, and they are shaped by educational policies such as the Maryland Ready to Read Act (2019) that are strongly conditioning teachers' pedagogical and grouping choices (Park & Datnow, 2017).

In the county in which my student participants learn, the RTI students are placed in a reading intervention model based on a software program that claims to both assess and "personalize learning and accelerate growth" (Curriculum Associates, 2022). With the use of i-Ready as an instructional and assessment tool for accountability purposes as a

result of the new policies, i-Ready has become a mandatory program for every student to use. Part of the reading instruction is now provided by the i-Ready software. This digital interaction with text does not include discussion and language use opportunities for students, nor does it allow for sociocultural aspects of learning to take place (K. Goodman et al., 2016), as the intervention consists of interacting with a computer screen, thus limiting the development of literacy skills in all areas. The program encourages little focus on actual reading or reading comprehension, instead emphasizing isolated skills such as phonics and phonemic awareness. An approach that focuses on isolating skills not only frames the reading process as a sequence of mastering certain skills in a certain order but also focuses the direct instruction on those skills. The Maryland Ready to Read Act's (2019) focus on the assessment of phonemic awareness and phonics skills frames these skills as deficits if the students do not master them by a certain time. This allows for very little flexibility, and it causes educators to disregard the language and literacy developmental aspects of learning, which emerge at different times for different students (Owocki & Goodman, 2002; Smith, 2012).

The Maryland Ready to Read Act (2019) assessment requirements also shift the focus of instruction to these school/academic literacies, forcing teachers not only to emphasize the assessed skills (with more focus on basic skills rather than on comprehension) but it also directly affects the curriculum and assessment guidelines that teachers are requested to use in their teaching of reading. Additionally, the requirements disregard the sociocultural aspects of learning. With focusing instruction and RTI services on basic phonics skills, and using scripted programs intended to address the phonics gap, the opportunities for social interaction are limited. In the context of the

emergent literacy framework, for students in primary grades, this instructional focus does not allow for adequate opportunities for social interaction with teachers or peers (Harste et al., 1984). Reading pedagogy becomes clinical: students who do not meet expectations get screened for dyslexia, classroom and reading intervention teachers target the skills to be focused on, and instruction becomes narrowed to the skills and subskills that are framed as prerequisites for reading (Tracey & Morrow, 2012).

Significance of the Study

The problematic skill-based and deficit-centered view of reading is also enforced by the legislative mandates and policies that reduce reading to a simple and linear process that can be measured through tests that focus on superficial and performative behaviors, such as orally reproducing the text with speed and accuracy (Smith, 2012). Reading is thus regarded as a linear process in which readers follow the text from left to right, looking at every letter and reading every word by sounding out the letters in a perfect match with the text. These assumptions characterize reading as a static and uniform process that involves a linear sequence of steps and translates any nonconformity into a deficit (Y. Goodman et al., 2005; Kim et al., 2012). Such a construct implies that reading can be addressed by teaching isolated skills, or by using scripted and rigid methods provided by commercially designed curricula and programs that often reflect a particular narrow and unswerving instructional path from which teachers should not deviate (K. Goodman et al., 2016; Kim et al.; 2012; Smith, 2012).

Also, legislation and policy in elementary education rely on the interpretation of existing research, introduced under the new and broadly used term *science of reading*.

The science of reading draws from the simple view of reading, which views

comprehension as a result of decoding and language proficiency (Aukerman & Chambers, 2021). This simple view of reading primarily concerns the assessed reading proficiency, focusing narrowly on the decoding development, relegating other aspects of literacy instruction to the periphery (Aukerman & Chambers, 2021).

The science of reading's focus on decoding and phonics instruction (Goodwin & Jiménez, 2020) is cited in the implementation of so-called "research-based reading programs." The county in which my study took place has begun the implementation of such a program that focuses on teaching phonics and phonemic awareness to "remediate" the reading of RTI students. These programs not only fail to frame reading as a meaning-making process and emphasize comprehension as the purpose for reading, but they also regard reading as a mechanical process which can be remediated by behavioristic approaches that involve phonics drills, repetition, and choral reading, and they stress strategies and skills whose correlation to reading achievement lacks evidence (K. Goodman et al., 2016). Therefore, it is essential to support frameworks that view reading as a dynamic and complex language-centered meaning-making process (Kim et al., 2007; Smith, 2012). For this reason, I chose to utilize Miscue Analysis in my study, as it focuses on the meaning-making process, the funds of knowledge (Moll et al., 1992), and strengths of each individual reader. Miscue analysis highlights each reader's thought processes, language use, and sociocultural knowledge (Marek & Edelsky, 1999). In my exploration of the literacy development of RTI students, I used miscue analysis because it is an effective evaluative tool, as well as an effective research and instructional tool that provides both qualitative and quantitative information regarding one's reading. Miscue analysis allows teachers and researchers to examine the oral reading miscues of a reader,

within a reader's sociocultural context and linguistic knowledge and strategies, which is why it was a tool fitting for the purpose of and participants in my study: RTI students and primary-grade teachers. Miscue analysis information also allows for the identification of a reader's strengths and effective strategies that they bring to the text in their attempt to make meaning, allowing educators to reflect and plan their instruction, as well as helping them to reframe readers' behaviors as evidence of hard work and not deficits (Duckett, 2002; Goodman et al., 2005). Previous research studies have shown that miscue analysis can also act as a revaluing tool in viewing a reader's abilities and strengths in a more favorable light (Johnston & Costello, 2005), and it can contribute to a more positive literacy identity for a reader that has been identified as not proficient (MacDonald, 2021; Moore & Brantingham, 2003).

Learning about how young readers who are placed in RTI develop literacy knowledge and strategies to construct meaning during reading helps me to better individualize the reading intervention instruction, and also to find ways to focus on the developing strengths of these readers. Using miscue analysis to examine RTI students' oral reading of written text is an efficient way for both researchers and educators to get insights into the reading process. Using RMA enables RTI students and teachers to actively engage in a joint exploration of RTI students' reading process, allowing students to reflect upon their own actions and meaning-making, while engaging teachers to reflect upon and guide their reading instruction (Y. Goodman et al., 2014).

The RMA sessions show not only the readers but also their teachers what strategies readers use as they read (Laman & Whitmore, 2020), helping the young learners develop their metacognitive processes and revalue themselves as readers. Tier 2

and 3 RTI students have multiple strengths; they are aware of few (Gilles et al., 2020; Davenport & Lauritzen, 2002). Collaboration between children and teachers can generate understandings that not only broaden teachers' and students' experiences and conceptualizations of reading but can also facilitate an authentic participation in the learning process, and it can strengthen the connection between what students learn in reading intervention and the application of that knowledge and strategies in the classroom. This study examined how miscue analysis can be a powerful pedagogical tool for both students and teachers.

Researcher Background

In my work with elementary RTI students, I often observe and reflect upon the theoretical connections to my practice. Growing up in Romania, I experienced a very teacher-centered educational system, plagued by totalitarian philosophies in which individuality was undesirable. The omnipresent “everybody-gets-the-same-thing” mentality did not cater at all to student diversity. As a multilingual immigrant, I value the rich linguistic and cultural diversity of my students, and I often share this aspect of my identity with them, to build rapport and encourage them to share their cultural and linguistic heritage.

Working as a special education teacher for 4 years, I have used various assessment methods and data analysis, as well as driven my instruction in the light of the assessment data. I noticed the discrepancies between what a child can do and how a child can perform; these two factors are not always congruent. After becoming a reading intervention teacher, I continued to seek out and implement pedagogical approaches that broadened my conceptualization of reading, drawing from neurological, psychological,

social, and linguistic perspectives, and viewing reading as more than just a cognitive process. In my practice, I embrace the social aspect of literacy, and I value my students' personal experiences and sociocultural practices, as they are equally important in the learning process as the series of academic and linguistic skills that students must acquire. I value the culture of my learners, as well as the language and literacy knowledge they have already achieved. Following one of Dewey's (1938) key teachings, my goal is not to replace, but rather to embrace and expand on the existing knowledge of my students.

Definition of Key Terms

The following list includes the definitions of key terms used throughout this study:

Emergent Literacy: A theory that identifies and discusses the early processes of literacy development, while providing a framework for literacy pedagogy and instruction in early childhood education (Tracey & Morrow, 2012).

Eye Movement Miscue Analysis (EMMA): A variation of miscue analysis that integrates eye movement tracking during oral reading (Brown et al., 2012; Liwanag et al., 2017).

Funds of Knowledge: A term that represents the "historically accumulated and culturally developed bodies of knowledge and skills, essential for household or individual functioning and well-being" (Moll et al., 1992, p. 133).

Miscues: Unexpected responses that readers produce during oral reading, in relation to the text (Y. Goodman et al., 2005).

Miscue Analysis: An analytical procedure that involves a qualitative and quantitative analysis of the miscues a reader produces in order to gain an understanding of "how

readers read, understand the reading process and reveal readers' knowledge about reading, language, and concepts" (Y. Goodman et al., 2014, p.5).

Response to Intervention (RTI): A three-tier model used to prevent and identify learning disabilities (Fuchs et al., 2008). This model has a multi-tier structure in which Tier 1, or primary intervention, refers to classroom instruction provided by the classroom teacher. Tier 2 involves targeted, supplemented small-group instruction in a pull-out format, and Tier 3 denotes more intensive, specialized and daily supplemental instruction (Fuchs et al., 2008).

RTI Students: students targeted for supplemental instruction as part of the three tier RTI model.

Retrospective Miscue Analysis: A conversation between an experienced reader (a teacher or other students) and reader(s) about what people do and think as they read (Y. Goodman et al., 2014).

CHAPTER 2

REVIEW OF THE LITERATURE

Methodologies for Literature Review

To deepen my miscue analysis exploration of how primary elementary RTI students develop and reflect on their literacy knowledge, and how primary-grade teachers understand the development of their RTI students, I reviewed the literature to gain a better understanding of emergent literacy (Clay, 2006), and miscue analysis as an evaluation, research, and pedagogical tool. My review of the literature identified a variety of ways in which miscue analysis, RMA, and EMMA research have illustrated the transactional sociopsycholinguistic model (K. Goodman et al., 2016). The reviewed studies revealed the components and processes that describe and explain reading as a dynamic meaning-making process. The studies I reviewed identified aspects of reading pertaining to readers perceived as “struggling” (Gilles et al., 2020; Kabuto, 2016; Moore & Brantigham, 2003), as well as aspects that are universal for all readers. These studies highlighted processes that are invisible in direct observation, combatting several reading-related misconceptions (Goodman et al., 2012).

I reviewed additional literature in relation to the RTI model (Fuchs et al., 2008), with studies focusing on readers who were not considered proficient, and who were labeled by their schools as “struggling” or “at risk” (Grills et al., 2014, Rightmyer et al., 2006), as well as studies related to the use of miscue analysis with teachers and students receiving reading intervention services (Cambourne & Kilarr, 2020; Gilles et al., 2020), which were relevant to the focus of my study and the participants. I also reviewed

literature in relation to Literacy Policy and Curriculum (Curriculum Associates, 2022; National Association for the Education of Young Children, 2009; Simpson et al., 2004).

Early Literacy Development

Early or emergent literacy is a term used to describe young learners' literacy behaviors that precede reading and writing (Clay, 2006). Currently, in education, emergent literacy is a theoretical framework that is tightly connected to literacy development and directs literacy instruction for primary-grade students (Tracey & Morrow, 2012). Marie Clay (2006), a prominent researcher in the area of emergent literacy, posited that children are active participants in their literacy development, and in order to scaffold their literacy development, students need to be actively engaged through social activities that facilitate oral language skills along with other literacy skills concomitantly and concurrently with other academic and literacy skills and components.

While many literacy skills are viewed as sequential in education, the early literacy development paradigm supports the belief that skills such as listening, speaking, reading, and writing are interconnected and develop concurrently (Tracey & Morrow, 2012).

While the awareness of the concurrent development of these skills is important, so is the awareness that children develop literacy knowledge and skills in individual ways and at various rates depending on their individual development (Clay, 2006). This theory also views children as active participants in their literacy development (Clay, 2006).

Developing Early Literacy Knowledge

As to the development of literacy knowledge and strategies, another theory that frames this study is Vygotsky's (1978) sociocultural theory. Vygotsky's theory of learning describes learning and knowledge acquisition as a developmental process in

which learners are immersed and actively participate by interacting with a variety of settings, including school-based and organized interactions with peers and teachers, or by school-based extracurricular activities, and the family and home environment. Based on the sociocultural theory, the development of literacy skills takes place through social interaction and authentic literacy experiences in school and at home (Y. Goodman & K. Goodman, 2013; Tracey & Morrow, 2012). Examining the development of literacy knowledge and strategies, and trying to understand how teachers and children experience and conceptualize reading, requires the use of a sociocultural lens.

Davenport and Lauritzen's (2002) study centered social interaction as essential not only to literacy development but also to the development of knowledge and scholarship. In their study of the literacy learning of 10 readers in Grades K–3 over a period of four months, the two researchers used a miscue analysis framework to examine the young readers' reading process and identify a few critical early literacy aspects that can be addressed via a miscue analysis framework by utilizing Over-the-Shoulder miscue analysis (OTS). These aspects include (a) children embracing literacy learning in a positive and pleasurable manner and (b) keeping the reading instruction focused on meaning and enjoyment. OTS was used in reading conferences with the young primary-grade participants, and it provided the context for meaningful teacher-student discussions around students' strategies and processes during reading. The results of the study showed that OTS facilitated young developing readers' metacognitive development through acquiring the language to label and identify their own meaning-making strategies (Davenport & Lauritzen, 2002). Using OTS within a safe literacy learning environment,

the young readers learned to approach reading “as a meaningful process in which they have ownership of their own strategies” (Davenport & Lauritzen, 2002, p. 135).

In her study of the early literacy development of diverse children in a first-grade classroom, Dyson (2020) focused on the school literacy “basics.” These basics were identified by the curricular emphasis on certain skills, as a result of accountability policies and requirements and they encompassed the mastery of a designated set of skills, following strict rules for reading and writing. These skills included sound-letter correspondence, spelling, capitalization, and grammar with little regard to their role in the context of meaning, and without the students regarding them as valuable. While Dyson (2020) did not argue against the importance of teaching these skills, she noted how her observation of first-grade students showed that for the emergent readers these skills were stripped of meaning and value by not being properly situated in a meaningful context. Dyson (2020) concluded that in order to support children’s literacy learning, skills must be contextualized and made meaningful for the young learners, and they must be situated within the children’s sociocultural practices, honoring and making connections to the children’s knowledge and strengths (Dyson, 2020).

Primary Teachers’ Roles in the Development of Literacy Knowledge

While literacy scholars have acknowledged the diverse backgrounds of children, and the unique funds of knowledge they bring to their literacy learning and development (Compton-Lilly, 2010; Moll, 2013), educators also have an important role in the children’s development of literacy knowledge (Hindman & Wasik, 2008). It is essential for teachers to be familiar with current instructional theories and research-supported practices in order for them to provide support and guidance to their primary-grade

students. Participating in professional development and developing professional knowledge in both the literacy learning theories, as well as classroom practices and activities, help teachers develop the pedagogical knowledge that they need to be effective educators (Bradford, 2005). Laman and Whitmore's (2020) study including linguistically and culturally diverse students revealed how teachers can support the early literacy learning of their students. Teachers can support their students by incorporating activities that value children's funds of knowledge, and teachers' work to engage children to be active participants in their own learning process can have a positive impact on the children's early literacy development. Embracing a sociocultural pedagogy that values what children know and can do (Owocki & Goodman, 2002) is essential in supporting the literacy development of all readers (Laman & Whitmore, 2020).

The Sociopsycholinguistic Reading Model

Yetta Goodman and Ken Goodman (2013) defined two different processes in which the reader engages while reading: "comprehending – what the reader does to understand during the reading of a text, and comprehension – what the reader understands at the end of reading" (Goodman & Goodman, 2013, p. 529). These processes are investigated during the miscue analysis process, where miscues are documented and analyzed in the context of the sentence and of the whole story, and in relation to what readers recall about what they read in their oral retellings. Miscues are not seen as mistakes, but as insights into the reading process (Y. Goodman et al., 2014). While miscues illustrate the ongoing meaning-making process of the reader during reading, the open-ended retellings, that are subsequent to oral reading, allow researchers to examine

the readers' use of concepts and language knowledge as developed during oral reading (Goodman & Goodman, 2013).

The sociopsycholinguistic reading model “was developed by analyzing the degree to which miscues change, disrupt, or enhance the meaning of written text” (Y. Goodman et al., 2005, p. 5). Miscue research is aligned with Ken Goodman’s (Y. Goodman et al., 2005) theoretical framework of reading, as it utilizes a sociopsycholinguistic lens to investigate and explain the reading process. This reading model identifies three language levels as cuing systems which provide specific information that readers use in the meaning-making process: graphophonic, lexico-grammatical, and semantic (K. Goodman, 2016). Reading is viewed as a psycholinguistic process in which the reader uses multiple sociocognitive strategies while sampling the important information from the visual input, predicting, and inferring, confirming, and disconfirming (K. Goodman et al., 2016). Proficient readers construct their own meaning as they substitute, omit, insert, or self-correct when what they say does not make sense to them. Although reading is identified as an integral part of language, it is also tightly grounded in the context of culture, cognition, and social interaction (Gee, 2013). The readers’ individual and shared experiences, all situated in individual context, are strongly connected with meaning, which does not lie in the text, nor in the reader, but it is a result of the reader’s interaction with the text (K. Goodman et al., 2016). The reader is an active meaning-maker who brings forth personal experiential resources and transacts with the text and the environment (Rosenblatt, 2013). Old experiences are applied and integrated in the new experiences, a process that allows the reader to make sense of the words as well as the world (Gee, 2013).

Reading Miscue Inventory (RMI)

In analyzing a reader's miscues, the Reading Miscue Inventory (Y. Goodman et al., 2005) is a comprehensive way to get insights into a reader's awareness of the linguistic and grammatical structures, their schema, and their use of the three cueing systems (Y. Goodman & K. Goodman, 2013). RMI includes collecting oral reading samples and retellings for analysis of the oral reading miscues (Goodman et al., 2005). After the text is selected for the reader, a typescript is created which includes numbering for each sentence, line, and page numbers. The reader's omissions, substitutions, insertions, repetitions, pauses, non-words, and repeated miscues are marked on the typescript using specific codes for each type of miscue. Miscues are then coded and marked for syntactic and semantic acceptability, as well as meaning change. The miscue patterns, reading behaviors, repetitions, and self-corrections reveal a reader's meaning-making process, meta-cognitive processes, and language use and knowledge, as well as the reader's use of predicting, inferring, confirming, and disconfirming (Y. Goodman et al., 2005).

As part of RMI, Procedure III is used to analyze miscues at the sentence level in the context of the story, as well as the syntactic and semantic acceptability of miscues and their meaning change within the text (Y. Goodman et al., 2005). After reviewing the miscues at the sentence level for syntactic and semantic acceptability and meaning change, a word-level analysis is conducted to evaluate the miscues for graphic similarity. A statistical summary is compiled based on the total number of sentences coded, and a reader profile is created based on the analysis of the miscues. The sentence-analysis data provides insights into the comprehending process, while an analysis of the retelling

reveals the impact of miscues on comprehension and the way in which the reader makes sense (Y. Goodman et al., 2005).

While miscues are often regarded as a consequence of rushing or not paying enough attention, or reading too fast, miscue analysis explorations of primary readers show that this is not true. Brown et al. (2012) showed how a second-grade reader's consecutive substitutions reflected a complex individual search for what made sense, as the reader made six failed attempts to read the word "evening." Miscue analysis and the eye movement data of the reader showed how the reader's multiple fixations indicated that she was looking ahead, fixating up to 13 seconds as she was making unsuccessful voice attempts (Brown et al., 2012). Not only was this reader looking ahead, trying to use context clues as she recognized that her prediction was inaccurate, but her oral pauses also showed that she was actively scanning the text, and contrary to a common belief, the pauses did not indicate a lack of activity. This study showed that during pauses, the reader used more than her letter-sound recognition, as her attempt to use phonics failed. The analysis of this emergent reader's miscues showed that readers do not merely sound out words, but they use their language knowledge to predict words that are semantically and syntactically acceptable, creating sentences that makes sense, although they don't always match the expected response. Liwanag et al. (2017) also showed how effectively and efficiently a second-grade reader focused on meaning as he read, as revealed by the reader's self-corrected miscues. The uncorrected substitutions, and the miscues lacking semantic and syntactic acceptability, indicated the reader's use of strategies such as an overreliance on graphophonic cues (Liwanag et al., 2017). In a similar study, Kim et al. (2007) also showed through an analysis of miscues and eye movements that readers look

ahead as they read to gather information from the three language cueing systems (syntactic, semantic, and graphophonic) that they subsequently use to self-correct (Kim et al., 2007).

The Role of Miscues in Reading Development

In order to foster readers' literacy development, it is important for reading teachers to understand that miscues are not mistakes; they are sources of information that indicate how language users integrate various sociocognitive strategies such as predicting, confirming, inferring, and making choices in the process of meaning-making (Liwanag et al., 2017; Brown et al., 2012; Kim et al., 2007). This knowledge-based meaning making process supports the construction of new understandings for both teachers and students (Ruddell et al., 2019).

It is essential that reading professionals understand and utilize miscues as a way to get insight into readers' awareness of linguistic and grammatical structures, their schema, and their use of the cueing systems during the meaning-making process (Y. Goodman & K. Goodman, 2013), and regard the oral output (during oral reading) as a reflection of the psycholinguistic processes that take place in the brain as readers attempt to make sense of the text, rather than as a way to measure superficial surface features of reading, such as speed and accuracy. Especially when working with readers who are still developing, it is crucial to consider research that reveals these less visible processes in reading, and to understand the perceived "imperfections" of oral reading, and their role in the process. Understanding the context of the underlying structures that cause the "imperfections" may impact the way in which they are addressed in reading pedagogy and practice. Shifting to an understanding of miscues as an acceptable part of reading

development helps change the deficit view of miscues as flaws in the process and normalize them as a natural part of the meaning-making process (Gilles et al., 2020). Using and valuing miscues as reflections of the meaning-making process has the potential to shift the deficit perspective that surrounds developing readers who are often labeled as “struggling.”

Miscue Research in the Pre-K–3 Literacy Context

This section examines additional relevant studies that utilized miscue analysis and discusses its implementation in pre-K–3 early literacy contexts. These studies have dispelled some of the common misconceptions about reading and readers, and they have highlighted the value of attending to young readers’ miscues, drawing implications for research, pre-service and in-service teacher education, and classroom practices and pedagogy (Crowell, 2020; Gilles et al., 2020; Laman & Whitmore, 2020).

One of the most commonly recurring themes in the findings of miscue analysis studies is the fact that miscues constitute a valuable source of information that indicate how language users fill knowledge gaps in order to predict, confirm, infer, and make choices in the process of meaning-making (Kabuto, 2016; Moore & Brantingham, 2003; Wang & Seale Grieve, 2019). The studies revealed how readers integrate the linguistic cues as they sample text and attempt to make meaning, while the types and quality of miscues, depending of their syntactic, semantic, and graphic acceptability, provide insights into how readers (regardless of their native languages or languages in which they read) utilize and integrate the information as they construct meaning (Almazroui, 2015; Kabuto, 2016).

Flurkey and Schultz (2016) used miscue analysis to document the strategies that students in a kindergarten class utilized as they read authentic text with their teacher, David Schultz. This study illustrated how, despite the fact that one of the participants only read half of the sentences in the text without making any miscues, all of the sentences in the other half included miscues that were both syntactically and semantically appropriate, preserving meaning, although they differed from the printed text. Looking at this reader simply through the number of miscues, one may frown upon the apparent “low accuracy” score; however, this reader produced an oral reading that was parallel to the original text, yet it was comprehensible. Although this oral reading may be perceived as imperfect, it was representative of developing readers in this study, and the complex miscues the young participants made show that their focus was beyond word level as they made meaning from the text (Flurkey & Schultz, 2016). Even though the text the children were constructing as they read was parallel to the original text, they used their prior linguistic and conceptual knowledge to make their own meaning without being confined by using learned strategies such as “sounding out” (Flurkey & Schultz, 2016). Like the miscues of older readers, these emerging readers’ miscues did not indicate a deficit; quite the contrary, their miscues revealed their flexible use of strategies in creating meaning and using their “knowledge about oral and written language as they continue to construct schemas about their world” (Flurkey & Schultz, 2016, p. 44).

In her study of a second-grade reader, Vaccaro (2016) noted that using miscue analysis had a great impact on her teaching as it not only influenced her second-grade participant’s motivation and reading achievement, but it also taught her that by attending to child’s miscues, she could learn about the strategies her students use, as well as their

comprehension and monitoring. While supplementing the typical strategy instruction with miscue analysis and RMA, Vaccaro (2016) improved the quality and effectiveness of her intervention sessions, by swapping from teaching word-focused strategies to comprehension-focused ones.

In one of his inquiries into classroom practices, Cambourne and Kilarr (2020) introduced miscue analysis to two primary grades teachers. As a consequence of using miscue analysis to learn about their students, the two teacher participants began to change their literacy teaching classroom practices. The researchers also reported that they observed “shifts in the use of meaning making frames” (Cambourne & Kilarr, 2020, p. 124) that the two classroom teachers used, and concluded that miscue analysis has great potential to support teachers’ understandings of the literacy learning of the children in their classrooms.

Miscue studies underline the importance of understanding and utilizing miscues to get insight into a reader’s awareness of linguistic and grammatical structures, their schema, and their use of the cueing systems during the meaning-making process, especially when most of the school-based assessments often fail to provide an accurate reflection of readers’ abilities and strengths (Kabuto, 2016; Moore & Brantingham, 2003). Valuing miscues as reflections of the meaning-making process is the only way to shift the deficit perspective that surrounds readers and reading, as they allow teachers to learn about the reading process and readers’ use of strategies (K. Goodman, 2016), while often explaining why readers do what they do.

Miscue Analysis and Retrospective Miscue Analysis (RMA) as a Culturally Responsive Assessment Tool

Educators use a variety of reading assessment tools, formal and informal, formative and summative, along with observations of their students' behaviors, to collect data and evaluate their students' performance. These data are also used to inform the design of classroom literacy instruction, teaching focus, and student feedback (Harp, 2006). As this study investigated how the teachers of RTI students in primary grades experience and contribute to their students' literacy development, it is important to discuss literacy assessment, as it plays a critical role in how teachers plan and adjust their literacy instruction.

Defined as an ongoing collection of data regarding a student's performance, *literacy assessment* is tightly connected to developing student learning goals and shaping instruction (Harp, 2006). Park and Datnow's (2017) study revealed that teachers' instructional decisions were co-constructed with the decisions made at the team, school, and district levels, with school policies strongly conditioning teachers' instructional and grouping decisions. Specific curriculum options at each of the four schools in their study also shaped the instruction differentiation and design in each school, constraining and enabling teachers' instructional decisions and strategies for individualizing instruction. This study showed that instructional decisions are ongoing, and teachers co-constructed their understanding of the assessment data and assessment tools relative to the curriculum requirements, school and county policies, and their individual practices. The findings of Park and Datnow's (2017) study show that classroom instruction is not purely data-based,

and they identified multiple spheres of influence that contribute to the decision-making process.

While the teachers of primary-grade RTI students are conditioned in their instructional decision making by a series of external factors such as the demands of the curriculum, school leaders, and educational policies that prioritize certain instructional approaches, this study sought to investigate how teachers experience and contribute to their students' reading development.

In the context of the assessment of RTI students, miscue analysis and RMA can also serve as evaluative tools, as they focus on what a reader does and the quality of one's miscues, as well as on the quantity and frequency of the miscues. Integrating the sociopsycholinguistic model of reading in investigating the literacy of two bilingual second-grade students, Kabuto's (2016) study revealed the use of miscue analysis in the context of elementary reading as a culturally responsive assessment tool. In Kabuto's study, the two readers' miscues from oral readings in both English and their native languages (Spanish for one participant, and Japanese for the other) revealed strengths that were not as visible when reading in English (the dominant language in their school). Kabuto also contrasted the findings resulting from the miscue data with a school-based reading inventory which assessed the students' performance to be below their grade level when reading in English, contrasting the RMI data that revealed the students' ability to understand the text and highlight their knowledge in a manner that was not solely relying on surface features such as accuracy and control over sound-letter relationships. Both readers were able to provide accurate and complete retellings of the texts they read, demonstrating comprehension despite producing many miscues. This study shows that

miscue analysis has the potential to be used as an assessment of the oral reading and comprehension of diverse multilingual students, although there are some challenges when using it in a classroom setting, such as teacher knowledge of students' languages when they are other than English (Kabuto, 2016).

Another miscue analysis study that compared school-based assessment measures with miscue analysis data is Moore and Brantingham's (2003) case study of a third-grade reader to whom the authors referred as a "troubled reader," labeled as such by his school due to his performance at a pre-primer level on Caldwell's (1988) Qualitative Reading Inventory (as cited in Moore & Brantingham, 2003). Using miscue analysis to assess and learn about this reader, the two researchers (a classroom teacher and a university professor) explored their participant's meaning-making process of a nine-year-old student, as well as his reading attitude and confidence in reading. The findings of this study revealed miscue analysis to be a "powerful tool in crafting and guiding reading instruction" (Moore & Brantingham, 2003, p. 473), as it provided information about the reader's strengths and needs, and it allowed the teacher to guide effective instruction.

Miscue Analysis Research Supporting Developing Readers

Emerging readers use graphic, syntactic, and semantic cues in the same way proficient readers do, but they "are less proficient with coordinating them to support each other" (K. Goodman & Burke, 1973, p. 215) and they get stuck on decoding words with extra focus on word-level text, omitting words they're not sure about and demonstrating less control and flexibility with strategy use (Martens, 1998; Wang & Seale Grieve, 2019). Miscue research often focused on describing how emerging readers use language cues and reading strategies, highlighting how in environments in which their strengths

and knowledge are encouraged, they become not only more motivated, but also more proficient in their learning (Flurkey & Schultz, 2016; Martens, 1996).

Reframing the Reading Processes of Developing Readers

Some studies (Grills et al., 2014; Rightmeyer et al., 2006) show that readers receiving intervention services are not only perceived as deficient due to their positioning in the RTI model, but they also have low self-esteem and anxiety regarding their “inadequacy” and learning difficulties (Grills et.al., 2014). The deficit-centered perspective that is created by the discourse around readers (Grills et al., 2014) who may not be developmentally ready to perform as “the norm,” and thus are referred to Tier 2 and 3 intervention, needs to be reconsidered and replaced with a focus on what the readers do, in order to design asset-based, more effective instructional models that shift from the deficit view and revalue the learners. Relying on research that reveals less visible processes in reading, such as EMMA studies, is necessary (Duckett, 2002; Paulson & Freeman, 2003), as it draws attention to how listeners perceive oral reading versus what happens during a young reader’s oral reading. This distinction is essential, especially when looking at readers who are not considered proficient. Being aware of the less superficial aspects of the reading process plays an important role in developing deeper understandings of the underlying structures that cause the readers to make miscues, long pauses, or repetitions. These understandings can help teachers gain a more complex understanding of readers and reading.

Retrospective Miscue Analysis

The understanding that miscues are a valuable resource that provides insights into the meaning-making process is essential for both students and teachers, and their mutual

interactions. The value of understanding miscues is especially relevant to teachers in their work with Tier 2 and Tier 3 reading intervention students, as they facilitate reading-related discussions. In miscue analysis studies that use RMA (Gilles et al., 2020), elementary teachers and students identified for reading intervention engage in a joint exploration of miscues. Defined as “a conversation between an experienced reader (a teacher or other students) and another reader(s) about what people do and think as they read” (Y. Goodman et al., 2014, p. 7), RMA frames reading as a product of the thinking process which can be explored during the RMA sessions, a process that can reveal reading strategies that the readers used, as well as the readers’ linguistic knowledge and utilization of the cueing systems (Y. Goodman et al., 2014). The RMA sessions are developed subsequently from an oral reading session, using the RMI data, from which miscues are selected to be discussed in the RMA sessions. The miscues are examined for syntactic acceptability, semantic acceptability, meaning change, and graphic similarity, in a conversation with the reader who produced them (Y. Goodman et al., 2014).

Elementary Classroom Applications of Retrospective Miscue Analysis

Miscue analysis studies conducted in the classrooms as action-research projects reveal and evaluate the clear and practical ways in which miscue analysis data can inform practice. Both a research and instructional method that continues to build on the information generated by the analysis of oral reading miscues is RMA (Y. Goodman et al., 2014). In a study of six readers in Grade 3, targeted for reading intervention by their school, Born and Curtis (2013) explored how miscue-based instructional approaches showed that actively engaging students in discussing their own miscues and reflecting upon how they impact their comprehension not only empowered students by giving them

some sense of control on their own learning, but also boosted their confidence and the way in which they view themselves as readers (Born & Curtis, 2013).

Similarly, in a case study of a nine-year-old reader identified as “struggling” by his classroom teacher due to difficulties with phonics, accuracy and sounding out showed a transformation that occurred over 14 RMA sessions over a period of five months (Y. Goodman et al., 2016). Using RMA to highlight successful reading strategies and using carefully selected miscues as evidence to reassure the participant that he also employed strategies that are characteristics of good readers, the researchers’ experience demonstrated that RMA proved to be an effective tool to help this reader re-gain his self-confidence and trust his problem-solving abilities. He became more motivated to read and he read more, which gave him more experience with a variety of texts and language use, and he became more successful at integrating the syntactic, semantic, and graphophonic cueing systems in his strategies and becoming a more proficient and confident reader (Y. Goodman et al., 2016).

In another miscue study of a third-grade student identified as having a learning disability, P. Martens (1998) used RMA for a year in bi-weekly sessions. The student in her inquiry has been labeled by his school as a child with “reading difficulties . . . since Kindergarten” (P. Martens, 1998, p. 177). Not only did the classroom teacher describe this child as “having difficulty with focusing on sounds and letters” (P. Martens, 1998, p. 177) and lacking necessary skills, but the participant himself had a low self-perception, as he repeated Kindergarten and had attention difficulties. By using the participant’s miscues to create RMA strategy lessons, the researcher managed to help this reader refine his understandings of what reading is and increase his use of effective comprehension

and comprehending strategies, while emphasizing his strengths and building on them (P. Martens, 1998). Shifting the focus to what this reader could do not only enhanced his comprehension, strategy use, motivation, and confidence, but it also revalued him as a reader. RMA proved to be a transformative experience for both the researcher and participant, fostering a joint inquiry and learning process for both the student and the teacher-researcher. RMA was not only a research tool, but also a pedagogical tool used to create a learning environment in which the learner is equally active and engaged, and in which deficit labels are shed on the path to becoming a more proficient reader. Children's participation in the RMA conferences, designed as safe and comfortable social spaces to host conversations about children's reading, proved to be beneficial for the participants by addressing beliefs and misconceptions students had about themselves and their reading (Born & Curtis, 2013; Y. Goodman et al., 2016). The RMA sessions facilitated the young learners' understandings that it is acceptable to make miscues and helped them become more reflective upon the quality of their own miscues (Born & Curtis, 2013). The engagement in RMA also helped students develop an understanding that not all miscues are meaning changing (Moore & Brantingham, 2003; Wang & Seale Grieve, 2019). The RMA sessions encouraged readers who were labeled as "less proficient" to adopt and utilize a wider array of meaning-making and word-solving strategies that hold meaning-making as the central goal (Almazroui, 2015; Y. Goodman et al., 2016; Moore & Brantingham, 2003; Wang & Seale Grieve, 2019).

Revaluing Processes Through Retrospective Miscue Analysis

RMA not only engages young primary-grade readers to reflect upon their miscues during conferences with their reading teachers, but also helps revalue readers (Goodman & Marek, 1996).

In Wang and Seale Grieve's (2019) qualitative case study, the researchers used RMA with 11 elementary readers. The researchers also explored how RMA impacted the teachers (in-service and pre-service) working with these children at a tutoring center. As a consequence of deeply analyzing and reflecting upon students' miscues and discussion around the miscues, the 11 teachers in this study developed their understanding of reading as a meaning-making process rather than a rapid and accurate reproduction of text. Teachers learned how to better scaffold their readers, value their reading, and help these insecure readers become more confident. Miscue analysis and RMA allowed these teachers to learn more about their students, and it prompted them to become more reflective regarding their assumptions and misconceptions in their work with struggling and diverse learners (Wang & Seale Grieve, 2019).

In a similar case study of a 9-year-old (third grader) reading below grade level, Almazroui (2015), a researcher and a reading teacher, used RMA to identify how the reader is making sense of the text, and utilized that information to design reading and writing lessons for the student. The researcher learned by using the Burke Reading Interview (BRI) and an Elementary Reading Attitude Survey that her student's understanding of reading was very word focused, as he was able to name very few strategies, none of which were meaning-focused. Almazroui used miscue analysis to identify the strengths of the participant, as well as areas of need in reading and writing,

based on the miscue patterns of the young reader. She used that information to develop RMA sessions that helped her child participant become more flexible with strategy use and focus on meaning-making, designing an effective instructional plan that tightly fit the strengths and needs of the child, revaluing her student in the process, and observing how her student revalued himself through RMA.

Another miscue study conducted in a Title 1 third-grade classroom used RMA to support teachers in documenting and scaffolding their students' growth (Bradshaw & Vaughn, 2016). This study focused on four students identified in the study as reading "significantly below grade level" (Bradshaw & Vaughn, 2016, p. 60), based on a school-based measurement. As a result of using a modified version of RMA in the classroom, the students began to self-assess and self-monitor their reading and become more empowered. While this study used school-based assessments to measure growth, the fact that teachers employed RMA with their students helped them individualize and design effective instructional practices that contributed to their students' progress in reading, as shown by the findings of this study: a significant increase in number of self-corrections, comprehension, and efficiency of their reading rate, and accuracy (Bradshaw & Vaughn, 2016).

While teachers are often constrained by the rigidity of assessment tools mandated by school districts, they have a bit more liberty to find ways in which to individualize instruction and develop reading strategy lessons. RMA is providing learners with opportunities to think, discuss and apply their developing understandings in their learning, while increasing the teachers' awareness about students' complex processes that take place during reading, as well as their strategy use (Goodman, 1973).

Eye Movement Miscue Analysis

Confirming that miscues are not mistakes, and that they are not consequences of inattention or visual perception deficits of readers (Duckett, 2003; Goodman & Goodman, 2013; Kim et al., 2012; Paulson, 2002), eye movement research shows readers' eye movements in relation to the miscues they make during their oral reading. The eye movement data show how readers fixate on miscues, while miscue analysis reveals how readers gather information as they read, strategically omitting and scanning back and forth throughout the text (Kim et al., 2007). EMMA shows us that "readers' voices follow the text sequentially while their eyes are moving sporadically across lines and from line to line" (Kim et al., 2007). Eye movement data makes visible to us the information that readers look at, reflecting strategies such as predicting, inferring, confirming, and disconfirming (Y. Goodman et al., 2005; Paulson, 2002), and corroborating these data with insights from the readers' substitutions, omissions, repetitions, and self-corrections.

Reading Is Dynamic and Not Linear

Eye movement research shows that reading in English and other alphabetic languages is not a left-to-right, sequential process of looking at every word in order. Readers move across lines of print in different progressive and regressive movements, scanning text and illustrations, and processing the perceptual information dynamically and actively to integrate it and construct meaning (Duckett, 2003; Liwanag et al., 2017; Paulson, 2002), supporting K. Goodman's (2016) transactional sociopsycholinguistic model of reading that accounts for and explains readers' choices, use of cueing systems, and miscues.

Pauses and Repetitions

Aside from showing that readers employ various strategies for meaning-making, EMMA research also reveals that pauses or regressions, which are commonly believed to indicate deficits with automaticity and fluency, reflect the hard work of the readers while their eyes move across the text, as they are actively engaged in meaning-making (Duckett, 2002; Freeman, 2001; Kim et al., 2012). Understanding these reading strategies and patterns is essential, as we need to devise instructional strategies that align with them and allow them to unfold as a natural part of the process. For example, teachers can make allowances for students to use these strategies, such as by giving students time when they pause during reading, and not interrupting their thinking process by assuming that they are not effective readers (Duckett, 2002).

Readers' Use of Pictures and Print

By revealing how readers use print and pictures as they navigate text, EMMA studies have highlighted the readers' decision-making process, revealing that both adult and young readers tend to focus on print more than on pictures (Duckett, 2003; Liwanag et al., 2017; Paulson, 2002). By documenting the participants' use of pictures and print, along with retelling and miscue data, EMMA research has revealed which strategies readers use and what information they find valuable during the construction of meaning, as they integrate their background knowledge and schema with the information provided by the text to support meaning construction (Duckett, 2002; Liwanag et al., 2017). This confirms that reading is a systematic and purposeful process in which readers sample the information as they make sense of text. As this study focused on struggling readers, this aspect was also investigated and explored.

Literacy Policy and Curriculum

With the 2001 educational reform act No Child Left Behind that deemed education as a priority, student learning and teachers' pedagogy was brought into focus (Simpson et al., 2004). Not only did the focus on teaching and learning change with NCLB, but also the emphasis on assessment was pushed forward, along with expectations of student achievement in relation to national standards that stood as the core of instruction. This legislation was followed by the Every Student Succeeds Act of 2015, signed by President Obama; it included literacy development and early childhood education in the standards-based curriculum (National Association for the Education of Young Children, 2009). As a continued attempt to further the efforts of providing a framework for young learners to thrive, and to provide early intervention supports to students identified "at risk," in 2019 in Maryland, the State passed the Ready to Read Act that requires students in kindergarten and Grade 1 to be assessed for identification of "reading difficulties" in order to provide the students who do not meet the achievement expectations with specialized instruction to accelerate their academic growth. This policy places students in various programs of reading intervention, of various frequency and intensity, in order to facilitate student achievement.

Response to Intervention

The participants in this study, the RTI students, are often labeled (following the aforementioned intervention model) using the term "struggling readers." This term has been defined by researchers as readers who do not meet grade-level expectations on school-based assessments (Bradshaw & Vaughn, 2016; Kabuto, 2016; Moore & Brantingham, 2003), as readers who "experience difficulty with accurate and fluent word

recognition” (Blick et al., 2017), as readers with a learning disability (P. Martens, 1998) and whose self-perception was defined as lacking confidence or motivation (Moore & Brantingham, 2003). Although there is a common deficit-based way of “defining” struggling readers, miscue research has consistently shown that deficit-based assumptions are not beneficial, especially when teachers engage in instructional grouping based on perceived “proficiency” (Blick et al., 2017).

To address the needs of the students labeled by their schools as “struggling readers,” public schools in the United States use RTI, which is a model used to prevent and identify learning disabilities (Fuchs et al., 2008). This model has a multi-tier structure in which Tier 1, or primary intervention, refers to classroom instruction provided by the classroom teacher; Tier 2 involves targeted, supplemented small-group instruction in a pull-out format; and Tier 3 denotes more intensive, specialized and daily supplemental instruction (Fuchs et al., 2008). Although there is no consensus across states and school districts as to what RTI methods are the most useful (Fuchs et al., 2008), and often the outcome of intervention depends on what a particular district defines as “non-responsive,” or what assessment methods are used, this is a deficit-focused model which is used with the purpose of preventing and identifying reading disabilities by providing additional supports to “struggling readers” in the form of supplemental instructional services mainly in the area of reading.

Owocki’s RTI Daily Planning Book (2010) notes that the RTI model follows the National Reading Panel’s review (1990), which revealed that teaching phonemic awareness, phonics, fluency, vocabulary, and comprehension (as cited in NICHD, 2000) are essential components of effective reading instruction. According to this model, the

students participating in Tier 2 and Tier 3 intervention are viewed as lacking skills in one or more of the aforementioned areas. As there are many commercial programs used to “remediate” and “fix” the reading of the students targeted for RTI, most of the models “address typical developmental levels in terms of sequencing lessons that developmentally build on each other” (Rightmyer, 2006, p. 231) without accounting for the individual rate of development of diverse readers or linguistic diversity.

For example, in early elementary education, many of the “research-based” reading intervention programs focus on decontextualized skills such as decoding (95% Group, Wilson, and Foundations) or fluency (Read Naturally), with little to no focus on language development. The assessments that are used as part of these intervention and curriculum programs, which are used as student growth measurements, both at the county level (for funding accountability) and as teacher accountability measures, create pressure for classroom teachers to focus their teaching on the assessed skills, taking away from meaning-focused instruction.

Blick et al. (2017) conducted a study of 36 students between 8–12 years old labeled as “struggling” due to difficulties with decoding as identified by school-based measures. Their findings showed that the use of standardized reading assessments in the classroom that rely on cut-off scores is inequitable and exclusionary, as it denies children access to resources such as authentic texts (as many of the students placed in intervention programs have to read texts that are fabricated with focus on skills rather than meaning) or restrict their access to books from a certain “level,” when there is no evidence that these children wouldn’t benefit from the same instruction as their more proficient peers (Blick et al., 2017). This study identified one common characteristic of struggling

readers: their tendency to focus their efforts on word-level decoding to the detriment of meaning-making, a finding consistent and supported by other miscue studies reviewed in this literature review. Some studies have shown that not only are readers receiving intervention services perceived as deficient due to their positioning in the RTI model, but they also have low self-esteem and anxiety regarding their “inadequacy” and learning difficulties (Grills et al., 2014). The deficit perspective that is created around readers who may not be developmentally ready to perform as their same-age peers, and thus are referred to Tier 2 and 3 Intervention, needs to be reconsidered and replaced with a focus on what these readers do, in order to design and implement more effective literacy instruction and revalue them.

CHAPTER 3

METHODOLOGY

Research Design

This is a qualitative, single case study of primary-grade students (Grades 1–3) receiving reading intervention, and primary grade teachers who had RTI readers in their classrooms. The reading intervention program in which these students participated represents the case (Duke & Malette, 2011), and, in a single case study, the case can be defined as a small group (Yin, 2018). In this study, the case is bounded by the RTI reading intervention program in which the students in Tier 2 and Tier 3 students participating in reading intervention at Dolphin Elementary (pseudonym) during the 2020–2021 school year, and primary grades teachers who have RTI students in their classroom are included. In case study methodology, it is important to distinguish the persons included in this group from those who are outside, which constitutes bounding the case (Yin, 2018).

Creswell and Poth (2018) defined qualitative research as a systematic process that promotes the researchers' ability to know more about something than they did when the study began. A case study design allows an in-depth investigation of a current, real-life case. This study also sought to gain insights into the experiences of primary-grade students and primary-grade teachers through multiple sources of data (Creswell & Poth, 2018). I employed a case study design to investigate the research questions, and to gain a better understanding of the literacy experiences and reading conceptualizations of students targeted for reading intervention. In this study, I explored how elementary students in primary grades who received RTI services developed and reflected on their

literacy learning and reading process, as well as how miscue analysis research and practice impacted primary teachers' understanding of their students' development and primary teachers' literacy instructions. Through miscue analysis and RMA Sessions, I worked with RTI students and classroom teachers of primary-grade RTI students to examine the RTI students' literacy learning, their understandings related to the reading process, and their literacy development. Miscue analysis allowed me to explore and observe the RTI students' conceptualizations of reading, literacy knowledge, and development, as well as teachers' understanding of their students and teachers' literacy instructions.

Theoretical Framework

Sociopsycholinguistic Reading Model

This study draws upon K. Goodman's (2016) sociopsycholinguistic model of reading. Following this model, I view reading as a psycholinguistic process in which the reader samples the important information from the visual input, predicts and infers, confirms and disconfirms (K. Goodman et al., 2016). This model is grounded in the idea that readers use a combination of linguistic and cognitive strategies along with three language cueing systems as they construct their own meaning during reading (K. Goodman et al., 2016). In this reading model, reading is viewed as a complex, non-linear process, in which meaning is regarded as not entirely dependent on an accurate reproduction of text, but an interpretation of what we think we see, filtered through our culturally embedded views of the world (K. Goodman et al., 2016; Rosenblatt, 2013). This model facilitates the exploration of the literacy development of RTI readers through miscue analysis, but also allows for expanding the understandings and conceptualizations

of reading as a process for both RTI students and teachers who have RTI students in their classroom.

Goodman's sociopsycholinguistic model falls under the sociocultural framework, as it views meaning-making as a process situated in what Vygotsky (1978) calls the *zone of proximal development*, a zone in which readers not only engage in a dynamic transaction with the text as they make sense of it, but the text becomes a mediator for knowledge formation by teaching the reader and contributing to the development of the reader's literacy knowledge (Goodman & Goodman, 2013). Viewing reading as a language-based process, Goodman's reading model regards language as a contributor to the development of literacy, as children become meaning-makers by using language to interact with text, engage in dialogue about what they read, and exchange interactions with both the text and the world in order to negotiate and construct meaning. The sociocultural framework, which views language and social interaction as essential to communication and learning, also includes the sociocognitive model. The sociocognitive theory has also influenced my study, as it situates reading in the social environment where elements such as values, language, motivation, and culture interact during the construction of knowledge (Ruddell et al., 2019). This is relevant to my investigation and work with both the RTI students and the teachers of RTI students. For the students, this model considers not only the linguistic knowledge but also knowledge of metacognitive and text processing strategies, and classroom and social interactions, as well as students' funds of knowledge (Moll et al., 1992) in the meaning construction process. Similarly, for the teachers, their own learning and meaning construction is conditioned by their beliefs and prior knowledge, and these components play a role in their assessment of their

student, their instructional decisions, and pedagogy (Ruddell et al., 2019). This model is relevant to investigating the early literacy development of RTI students. While it considers linguistic processes such as phonics, phonemic awareness, decoding, and sound-letter relationship knowledge as essential in learning how to read, it views reading as “situated in complex sociocultural systems that shape and support reading and its emergence in children” (Ruddell et al., 2019, p. 23).

Emergent Literacy

Lastly, in my investigation of the literacy development of RTI students, the emergent literacy theory was relevant because of its focus on the functional levels of performance rather than the chronological age (Clay, 1966, as cited in Doyle, 2013).

Currently, in education, emergent literacy is a theoretical framework that is tightly connected to literacy development, and it directs literacy instruction for primary grade students (Tracey & Morrow, 2012). As coined by Marie Clay (1966, as cited in Doyle, 2013), the term emergent literacy describes young children’s behaviors during their interactions with print. Further developed, the Emergent Literacy Theory provides a description of early literacy development along with guidance for instruction and fostering of literacy growth. This term refers to a functional level of performance, and not to a chronological age, as each child develops individually, increasing their awareness of both spoken and written language, and of the connection between the two. Children develop this awareness at their own pace, in the context of their environment and ability (Teale & Sulzby, 1991).

This theory is especially important in the case of RTI students, as schools use age and grade-level norms for assessing student proficiency. This framework not only views

reading, writing and listening as interrelated, but it views reading as more than just the recognition of words, seeing it as an individual process, ongoing from birth, in which each child moves through the stages of development at their own pace, as they develop proficiency in the areas of speaking, listening, reading, and writing (Morrow, 1997).

Researcher Positionality

As a researcher in this study, I am positioned as an insider, with an emic focus (Check & Schutt, 2012), in which the setting is represented through participants' terms, and in which I hold the position of reading intervention teacher. My role in this context facilitated my access to the participants, and the rapport I have with my participants allowed me to collect the data in a manner and setting that is natural and familiar as part of the students' educational routines and services. Although during the period when this study was conducted, due to COVID-19, learning took place partially in an online format, my work with students in small groups still allowed me to develop a positive rapport with my participants (students and teachers), which enabled them to be comfortable communicating and interacting with me during the data-gathering sessions.

As a practitioner, I strive to learn about the RTI students' strengths and make them visible to the young readers in an attempt to change the way in which they see themselves. As a reading intervention teacher, in my communication to the teachers of RTI students, I make sure to highlight my students' strengths, to ensure that I avoid focusing only on the perceived deficits in relation to their learning. As a researcher who was working with her own students, my positionality did place me in a position of authority regarding my participants. As an educator, and a teacher-researcher, I am motivated by research-supported pedagogical approaches that not only help learners

revalue themselves, but also show that even readers perceived as deficient have strengths and knowledge that must be acknowledged in order to help them thrive. My work with students receiving RTI services, who are labeled “at risk” or “struggling,” along with my experiences as a teacher are the catalysts to my inquiry. I embrace asset-based pedagogies, and I constantly look for ways to re-value readers, rejecting the deficit-based perspectives that surround students who do not meet their school’s achievement expectations.

Research Setting and Context

This research took place at Dolphin Elementary (pseudonym), which is a public school on the East Coast of the United States. The school has 900 students in grades pre-K to 4 and 70 staff members. The school was a Title I school until 2016, and 70% of its students receive free and reduced meals due to socioeconomic status.

In the 2020–2021 school year, due to the COVID-19 pandemic, student assessment took place using a digital assessment tool called i-Ready, which produced grade-equivalent scores in the following areas: phonological awareness, phonics, high-frequency words, vocabulary, and comprehension. At that time, the RTI students were targeted for intervention based on their performance scores on the phonics and phonemic awareness sections of this digital assessment.

Under normal circumstances, the students of Dolphin Elementary attend instruction in person, and the students receiving Tier 2 and Tier 3 reading intervention services work with their assigned reading interventionists outside of the classroom setting, in small groups, in 30-minute sessions, 2–4 times a week. As I conducted my study during the 2020–2021 school year, during the COVID-19 pandemic, the schools

moved to teaching in an online format. The online format for intervention was like the general classroom instruction, using the same audio-video platform. The RTI students worked remotely with the reading interventionist in groups of 3 or 4 students, in a virtual room, using the audio-video platform assigned by the school. During the virtual learning, the students had synchronous learning via the online platform only four days a week. The new digital medium of instruction brought us all into the same virtual space, without the limitations of the physical settings.

Dolphin Elementary and the Response to Intervention Model

Dolphin Elementary School uses the RTI three-tiered intervention model, in which each student is labeled and placed in a tier, according to the level of academic support needed, based on academic achievement and performance data. The students in Tier 1 receive individualized support from the classroom teacher, while the students in Tier 2 and 3 receive out-of-class intervention services (2–3 times a week in Tier 2 and 4–5 times a week in Tier 3). Dolphin Elementary School uses Fountas and Pinnell’s Benchmark Assessment System (BAS) to assess students and determine their reading levels based on the results of this assessment. This assessment generates data related to comprehension (within, about, and beyond the text), accuracy, rate, and fluency data. The students who are labeled as performing more than a year below grade level expectations based on the BAS assessment, are targeted for Tier 2 and Tier 3 intervention.

Participants

The participants in my study were seven students in Grades 1–3, who received Tier 2 and Tier 3 reading intervention services during the 2020–2021 school year, and six teachers of the primary grades (Grades 1–3), who had students receiving RTI services in

their classrooms. I utilized purposive sampling (Check & Schutt, 2012; Duke & Malette, 2011) to select participants in this study. A purposive sampling “may involve a subset of a population” (Check & Schutt, 2012, p. 104). Through multiple participants, I was able to examine the connections and patterns within and across participant data.

Student Participants

The target population of students consisted of my caseload as a reading intervention teacher. My caseload represented the students in Grades 1–3 assigned to work with me in reading intervention during the 2020–2021 school year at Dolphin Elementary. The inclusion criterion for this study was that student participants meet eligibility for Tier 2 and Tier 3 intervention, as defined by their public-school criteria.

The qualifying criterion for reading intervention at Dolphin Elementary was that students perform a year or more below grade level expectations in reading, as indicated by the school assessment data. Table 1 presents detailed descriptions of each student participant.

Table 1

Student Participant Demographics

Student	Age	Gender	Race	Languages		Intervention
				Spoken	Grade Level	Tier
Jack	6	Male	White	English	1	2
Brad	7	Male	White	English	2	2
Bobby	7	Male	Black	English	2	2
Joe	7	Male	White	English	2	2
Cole	7	Male	White	English	2	2
Amy	9	Female	Black	English	3	3
Shy	8	Female	Latina	Spanish, English	3	2

Jack

Jack was a 6-year-old White male in first grade. He was a Tier 2 intervention student since the beginning of the school year, and his reading level was estimated to be at an ending kindergarten level based on the school assessment data. Being identified as performing a year below-grade level expectations, Jack was determined eligible for Tier 2 reading intervention services, twice a week for 30 minutes. Jack is a very motivated student, always eager to participate, and he answers and asks questions enthusiastically. Jack's reading includes pauses and is laborious, and he often appeals to the teacher for help when he gets to a word he does not recognize. He enjoys receiving teacher attention and is more engaged in small group learning rather than in whole group, as he sometimes gets distracted and needs reminders to stay on task. Jack is a motivated reader, and he is always excited to read and discuss new books. He enjoys reading out loud and he is excited to share the new books he reads at home with his peers during the RTI group sessions. Jack shared that he does read often at home with his father, and he reported that he is looking forward to reading chapter books all by himself.

Brad

Brad was a 7-year-old Black male in second grade. He was a Tier 2 student, and his performance in reading was estimated to be around mid-first-grade level based on the school assessment data. Brad is an enthusiastic reader who is always willing to participate during our RTI group sessions. He enjoys talking about the texts he read, and he is effective in bringing forth much experiential and background knowledge about the subjects discussed. Brad reads with expression, and he has fun making different voices for the characters in the stories. He shares relevant connections to the text during our

work together in RTI, and he has broad knowledge of scientific facts about animals. Brad noted that he enjoys reading about animals, and he is an eager participant in our reading discussions. He shared that he reads at home daily, but mostly on his own. He is comfortable reading out loud, and he frequently volunteers to read first in our RTI group sessions. Brad quickly acquires and incorporates the new vocabulary from the informational texts he reads, and he often uses it in his answers. He is a hardworking student both in class and at home, and he shared that he loves going to the library to get new books.

Bobby

Bobby was a 7-year-old White male in second grade. During the 2020–2021 school year, he was identified as a Tier 2 student, and his performance in reading was estimated to be around beginning first grade in the beginning of the school year. He was in intervention since the beginning of the school year, and he was described by his teacher and his mother as a “reluctant reader.” Bobby sometimes has difficulty articulating certain sounds, and his mother shared that upon having his speech evaluated, his articulation difficulties were deemed age appropriate. When compared to his same-age peers, Bobby took a long time to become comfortable in our reading intervention sessions. He did not enjoy reading out loud, and he did not like reading in front of peers. After I worked with him for two months, he began volunteering more often, but he most often chose to read silently. Bobby has much background knowledge about many topics, yet he only shares his answers if he is called on, although his thoughts and knowledge are always relevant and insightful.

Bobby enjoys reading one-on-one with me (when his peers are absent), and he is more likely to share in a smaller group. In class he appears quiet and shy, but he is likely to engage in conversations and post-reading discussions in small groups.

Joe

Joe was a 7-year-old White male in second grade. Joe was a Tier 2 student, and his reading level was estimated to be around beginning first grade in the beginning of the school year. Joe was working in intervention with me since the beginning of the school year. He always puts forth his best effort in reading, and he frequently participates in reading discussions. Joe shared that he enjoys reading about cars and machines, and he favors reading informational text the most. Joe loves animals and he is knowledgeable about many of them, as his father has a farm. He often volunteers to read out loud in reading group, and he likes sharing information he knows about the topics discussed. Joe shared that he does most of his reading in school, and that he does not like to read by himself at home. Joe is an insecure reader who is more comfortable, and chatty in small group instruction than in front of his peers, as he himself shared. Joe is a quiet child but greets his peers and teachers with a warm smile, and he is well-liked by his peers.

Cole

Cole was a 7-year-old White male in second grade. Cole was a Tier 2 student, and his reading level was estimated to be around beginning first grade at the start of the school year. Cole was working in intervention with me since December 2020, and I met with his group twice a week for 30 minutes. Cole is an eager learner, and he is energetic and interested in sharing his thoughts and participating when working in small group. He is animated and playful, and he often needs redirection to stay on task in the classroom.

Cole noted that he enjoys reading, and he frequently volunteers to read out loud in front of his peers during our work in intervention. He shared that he prefers reading non-fiction texts, but he couldn't think of any specific topics or examples of books that he liked. He has broad knowledge about animals, and he is always engaged and enthusiastic during the reading intervention sessions. Cole enjoyed sharing his knowledge about the topics we read, and he often shared his connections and memories related to the subject in the texts we read.

Amy

Amy was a 9-year-old Black female in third grade. Amy was targeted for Tier 3 intervention based on her reading level, estimated at beginning first grade, by the school-based assessments administered in the beginning of the school year. Amy has changed schools often, and she shared that she has received reading intervention services before at some of her other schools. Amy was shy in the beginning of the year when we started, and she became more and more confident as she began to be aware of her progress. At the time of the study, she was reading at a mid-first grade level, as her school-based diagnostic assessment showed. Amy enjoys keeping track of how many books she reads every time we meet during the RTI sessions. She is a very insecure reader, hesitant to move past a word she doesn't know, and she needs much encouragement to share her thinking and elaborate on her answers. Amy enjoys reading about animals, and she often shares personal experiences related to the animals in the stories she reads. Amy noted that she mostly reads at school, and that she doesn't have many books at home.

Shy

Shy was a 7-year-old Hispanic female, and her primary language is Spanish. Shy was considered a student with Limited English Proficiency in first grade, but since exited the English as a Second or Other Language (ESOL) program, as her language proficiency level was deemed appropriate. She was working with me in intervention for the third consecutive year, as a third grader. In first grade, Shy was identified as a Tier 3 student, and we met daily for 30 minutes. In second grade, she was in an 8-week Tier 2 intervention group before exiting intervention. At the time of the study (when she was in third grade), she was identified again as a Tier 2 student in February 2021. Shy is a motivated reader, and she is comfortable and outgoing during her group RTI reading sessions. Shy began third grade reading at an ending Grade 1 level, according to the school-based assessment. Shy shared that she did not like reading at home very much, because she preferred helping her mother watch her baby brother.

Teacher Participants

There were six teacher participants in this study. All of them taught primary grades (Grades 1–3) at Dolphin Elementary (see Table 2) during the 2020–2021 school year. All six teachers had Tier 2 and Tier 3 RTI students in their classrooms, and they worked with these students as general education teachers, providing grade-level, Tier 1 instruction to all. Teacher demographic information is included in Table 2, followed by more detailed information about each participant in the subsequent paragraphs

Table 2*Teacher Participant Demographics*

Teacher	Grade Level	Gender	Race	Years of Teaching
Cora	1	Female	White	33
Julian	2	Male	White	4
Cat	2	Female	White	6
Mary	2	Female	White	17
Holly	2	Female	White	5
Violet	3	Female	White	12

Cora

A teacher with over 33 years of experience, 65-year-old Cora has worked at Dolphin Elementary since she began her teaching career. Cora has been teaching first grade over the last 10 years, and she shared that she wished she had some experience teaching pre-kindergarten and kindergarten, but her certificate did not include those levels. Cora shared that over the years, she has witnessed many changes in curriculum, materials, and assessment practices, but that she finds listening to her students read as the most valuable way of assessment. Cora is very energetic and enthusiastic about sharing her teaching experiences and observations of her students.

Julian

At the time of the study, Julian was in his fourth year of teaching. A 25-year-old White male, Julian grew up in the same district as Dolphin Elementary and attended this school as an elementary student. Julian had Cora as his first-grade teacher. He was hired at Dolphin Elementary as soon as he finished college, and he worked as a substitute

teacher for 4 years prior to becoming a certified teacher. Julian is currently enrolled in a Master of Education program with a focus on reading at a local university.

Cat

Cat was in her third year of teaching at Dolphin Elementary at the time of the study. Prior to that, she worked as a substitute teacher in a neighboring county for two years. She was a White female, age 27, and she has taught second grade ever since she began teaching at Dolphin Elementary. Cat is a dedicated teacher, and she often stays after work hours, working on reading with students in her class who need extra support and reading practice.

Mary

A 43-year-old White female, Mary was a teacher with 17 years of teaching experience. She started her teaching career as a middle school as a science teacher at an alternative school. Next, she taught fifth grade math at a public middle school, and within her last 8 years at Dolphin Elementary, she has been teaching third grade ELA for her first 6 years and second grade—all subjects—for the last two. Mary noted that she preferred informal assessments when getting to know her students, and that she often started with sight words screeners and phonics inventories to assess and evaluate her students for reading instruction.

Holly

Holly was a 28-year-old White female. Holly has been teaching second grade for 5 years, ever since she started working at Dolphin Elementary, where she interned and worked as a long-term substitute for half a year. She was also working on obtaining her Master of Education degree in literacy as a Reading Specialist at a Maryland university.

Holly shared that she found teaching reading challenging, especially to the English Language Learners, due to the complicated English language phonics and the many exceptions to the rules.

Violet

A 37-year-old White female, Violet was a teacher for 12 years at the time of the study. She taught first grade for her first 3 years, second grade for 1 year, and then third grade. At Dolphin Elementary, third and fourth grade are compartmentalized, which means that two homeroom teachers and their respective classrooms rotate, as one of the teachers teaches ELA, and the other math to both homerooms. Violet has been teaching ELA, and she has a Master of Education degree as a Reading Specialist from a Maryland university. She shared that she always wanted to teach upper elementary students, and she enjoys teaching writing to her students.

Data Collection

This section describes the multiple data sources I gathered for this study. As mentioned earlier, the data collection took place in various settings and formats, depending on the safety guidelines that were in place at the time due to the COVID 19 pandemic. Two plans for data collection were made, to suit both the online and face-to-face learning formats. The student and teacher interviews, observations, student oral reading samples, and RMA sessions took place in the reading intervention room, outside of the students' instructional time.

Data Sources

Check and Schutt (2012) stated that qualitative case study design must include multiple sources of data and multiple methods of data collection to ensure validity.

Multiple data sources are necessary to identify the participants' lived experiences (Merriam & Tisdell, 2016; Seidman, 2006). For this study, I collected data from multiple sources (see Table 3).

Table 3

Data Sources

Participants	Data Sources
7 Primary RTI Students	<p>1 pre and 1 post BRI from each RTI student (Y. Goodman et al., 2005), (14 total)</p> <p>1 pre and 1 post Reading Attitude Assessment (Harp, 2006) for each RTI student, (14 total)</p> <p>1 Developmental Reading Checklist (Harp, 2006), (7 total)</p> <p>Reading Miscue Inventory, 5 oral reading samples from each RTI student (33 total-I collected 4 samples from 2 students)</p> <p>5 aided and unaided retellings from each RTI student (33 total)</p> <p>5 individual RMA sessions with each RTI student (33 total)</p> <p>Artifacts: Student work samples from reading intervention sessions and comprehension-related student work</p>
6 Teachers	<p>1 pre and 1 post semi-structured individual interview for each teacher (12 total)</p> <p>5 teacher group sessions with all teachers</p> <p>1 teacher observation from each teacher (6 total)</p> <p>1 teacher lesson plan from each teacher (6 total)</p> <p>5 teacher reflection memos (one from each teacher for each group session they attended, 27 reflections total-1 teacher missed a session and one teacher missed two)</p>
Researcher	<p>Field notes</p> <p>Research journal</p> <p>Artifacts (EMMA videoclip)</p>

Interviews

The semi-structured interviews facilitated discourse and generated information regarding the participants' lived experiences, attitudes, understandings, and beliefs (Seidman, 2006) in relation to the literacy development of RTI students. The initial student and teacher interviews were conducted via Zoom. When face-to-face schooling resumed, the interviews were conducted face-to-face with students and teachers. I conducted interviews with all student and teacher participants. As a primary source of data for this study, the individual interviews provided insights into the lived experiences of the participants (Seidman, 2006). In this case, they revealed the literacy experiences and knowledge of the RTI students and their conceptualizations of reading, as well as the teachers' experiences with teaching students who received RTI services, the impact of miscue analysis research and practice, and the teachers' understanding of their students' literacy development.

Student Interviews. I conducted four interviews with all student participants, which were used as a primary source of data for this study. The interviews allowed me to gain insights into the students' reflections and literacy knowledge, as well as into their conceptualizations of reading before and after the RMA sessions. The student interviews were around 10–15 minutes each, and I elaborate on their content in the following sections.

Pre and Post Burke Reading Interviews (Y. Goodman et al., 2005). The BRI is a 10-question interview with open-ended questions (see Appendix A) regarding students' perceptions and beliefs about reading and reading instruction, and how these beliefs impact their strategy use (Y. Goodman et al., 2005).

This questionnaire took about 10–15 minutes to complete, and I administered it before and after the RMA sessions. Because the BRI has several questions that focus on the same topics and information, the data from the two interviews allowed for identifying rote responses and possible differences in responses over time. In this study, this had the purpose of reflecting variations in the students' conceptualizations of reading and literacy knowledge before and after the RMA sessions (Harp, 2006). Following the format of the BRI for young readers, I added follow-up questions to prompt my participants to elaborate or clarify their answers, and I included questions regarding picture use.

Pre and Post Reading Attitude Assessment (Harp, 2006). The Reading Attitude Assessment (see Appendix B) is a questionnaire with ten open-ended questions regarding students' feelings about reading, books, reading habits, self-reported strengths and needs, as well as student interests (Harp, 2006). This questionnaire took about 10–15 minutes to complete and it was administered before and after the RMA sessions, as students' choices and preferences change in time as they mature (Harp, 2006). As Tier 2 and 3 RTI students are not regarded as being successful in learning based on school measurements and standards, the attitude assessment can be used not only to evaluate the students' self-reported feelings regarding literacy and reading but also to monitor potential changes. The purpose of administering a pre and post reading attitude assessment was to identify and understand potential changes in students' self-reported attitudes towards reading after the RMA sessions.

Teacher Interviews. I administered pre and post semi-structured individual teacher interviews, each interview lasting around 60 minutes. The two individual

interviews were administered in the following order: one before the five teacher group sessions, and one after.

Semi-Structured Individual Interviews. I conducted pre and post semi-structured individual interviews with each of the teacher participants (see Appendix C), adapted from Owocki and Goodman (2002), to discuss the notion of miscues and miscue analysis. The individual semi-structured teacher interviews contained 13 open-ended questions regarding the teachers' experiences with teaching reading to RTI students, and their contribution to their students' reading development. Each interview took around 60 minutes, and I followed up with questions for clarification or elaboration purposes.

The pre and post semi-structured individual interviews (see Appendix C) were administered following Seidman's (2006) guidelines for in-depth phenomenological interviewing: focusing on the teachers' experiences as they contribute to their RTI students' literacy development and seeking details about their lived experiences, including insights and reflections into the meaning they draw from their teaching experiences and work with RTI students. The interviews included open-ended questions (see Appendix C), and the post-interview included additional questions that emerged in the light of the data and experiences shared in the first interview and the group sessions.

The purpose of the post interviews was to enhance validity, by allowing for a deeper exploration of the participants' experiences, and also to account for the internal consistency of what the participants shared over time (Seidman, 2006). The post interviews allowed for the identification of potential variations and shifts in teacher perceptions and understandings, following the group sessions.

Teacher Group Sessions

I organized and facilitated five teacher group sessions. The five teacher group sessions involved discussions, activities, and reflections regarding the concept of miscues in the context of working with Tier 2 and 3 students. The purpose of the group sessions was to investigate the teachers' understandings of the literacy development of their students who receive RTI services as they were encouraged to reflect upon it in the light of the miscue analysis discussions and activities in the group sessions. Each session was centered on a different discussion topic (see Table 4). Honoring teacher preference, the teacher group sessions took place via Zoom, while the individual teacher interviews took place face-to-face. Each teacher group discussion session lasted an hour.

Table 4*Teacher Group Sessions*

Teacher	Group Session 1	Group Session 2	Group Session 3	Group Session 4	Group Session 5
	Introduction to Miscue Analysis	Review of the three reading models, miscue types, miscues and comprehension, connections to practice	Discussion of EMMA video of RTI reader, reading process, and miscues	Teachers share and analyze miscues from their students	Teacher RMA session
Holly	✓	✓	✓	✓	✓
Julian	✓	✓	✓	✓	✓
Violet	✓	✓	✓	✓	✓
Cora	✓	✓	✓	✓	✓
Cat	✓	✓	✓	X	✓
Mary	X	✓	✓	✓	X

Note. The X marks a missed session, the ✓ marks an attended session.

Teacher Group Session 1. The first group session began with teacher introductions, including them sharing about their teaching experience and their experience with teaching reading to RTI students, as well as an introductory discussion about miscues and miscue analysis. The teachers were invited to share their experiences related to the reading and literacy development of their students receiving RTI services. During this session I used a handout with different types of miscues, and examples of miscues were given to the teachers for reference (see Appendix D). A discussion of different types of miscues followed, and at the end of the session, the teachers were asked to reflect and share their observations of RTI readers in the context of the miscues they observed their students making.

Teacher Group Session 2. The second group session began with a discussion of three reading models from the National Council of Teachers of English (NCTE, 2001) Reading Initiative, including the phonics/subskills model, the skills model, and the holistic model. We explored teachers' familiarity with various views of reading, and I encouraged them to elaborate on their own. We had a discussion of different types of miscues, including high- and low-quality miscues, graphic similarity, fluency, and accuracy, as well as the difference between comprehension and comprehending.

Teacher Group Session 3. The third session focused on an EMMA video of an RTI reader. This video was part of my IRB approved pilot study (Schultz, 2020), and it was not of a student included in this study, nor part of the data I analyzed for this study. After viewing the EMMA video, I led a discussion centered on their observations regarding the reader in the video, using the EMMA-focused questions (Kim et al., 2012) to generate and guide the discussion, including extensions regarding the students in RTI,

their reading and meaning-making process. I shared eye movement data of an RTI reader and guided the discussion about the reader's various miscues and actions throughout oral reading. I invited teachers to share their observations, as well as their reflections upon the EMMA data in relation to their experiences with RTI readers, their reading, and their instruction.

Teacher Group Session 4. For the fourth group session, the teachers brought and discussed miscue samples from their RTI students. I asked them to select a miscue and discuss it with the group. I used questions from the Single Miscue Analysis Form (see Appendix E) to guide the teacher discussions and examinations of the selected miscues. The teachers shared observations about the readers in the light of those data and explained how they used the miscue information.

Teacher Group Session 5. The fifth group session included a teacher RMA session, in which teachers recorded themselves while completing an oral reading of a text, "The Purple Dress" (Henry, 1907/2019). The idea for using this text came from Fahrenbruck and Liwanag (2021) who used this text in their miscue analysis study with preservice teacher candidates. This text contains a complete scene from the beginning of the short story, with a central character named Maida who has ordered a tailor-made dress. This scene depicts Maida describing the dress to her friend. I selected this text to meet the criteria for miscue analysis. The selected text must be challenging enough for the readers, to allow them to use their cueing systems when getting to something they don't know, but also includes familiar concepts and language that allows for comprehension to happen (Y. Goodman et al., 2005).

I gave each teacher a copy of the text, and after they used their phones to record their own reading, they were asked to mark their own miscues on the typescript. I asked the teachers to select three of their miscues and examine them using the three RMA guiding questions (Y. Goodman et al., 2014, p. 31):

1. Does the miscue make sense?
- 2a. Was the miscue corrected?
- 2b. Should it have been?

I invited the teachers to discuss and share some of their miscues and analyze them in depth for graphic and sound similarity. I used the Single Miscue Analysis Form (see Appendix E). The teachers used the RMA guiding questions (Y. Goodman et al., 2014) on the form and applied them to their own reading. At the end of this session, the teachers had the opportunity to reflect upon their own miscues in the context of teaching students who receive RTI services, the impact of miscue analysis research and practice, and their understanding of their students' literacy development

Teacher Reflection Memos

At the end of each of the five group sessions, I asked the teachers to “reflect on the meaning of the experiences that we explored” (Seidman, 2006, p. 23) in the session, to ponder how they connect to their practice and their understandings of the reading and literacy development of their students receiving RTI services. I emailed the teachers a reflection prompt after each group session, asking them to reflect upon the literacy development of RTI students as well as their own practices in the light of our discussions. Each teacher submitted a reflection to me after each session that they attended.

Cat, one of the second-grade teachers missed the fourth teacher group session and the corresponding reflection, while Mary missed the first and the fifth teacher group sessions and the corresponding reflections.

Reading Miscue Inventory

Researchers have used RMI in reading research to assist in exploring a reader's meaning-making process (Y. Goodman et al., 2005; Y. Goodman et al., 2014) as well as in evaluating the impact of a reader's miscues on the overall context of the text they read. I used the RMI data to understand how the RTI students experience reading as they make sense of text during oral reading.

Text Selection. For the oral reading samples, I selected both fiction and non-fiction complete texts—five for each participant—that were unfamiliar to the readers (Y. Goodman et al., 2005). The reading materials included concepts familiar to the reader, using language that “supports readers in their understanding of new information” (Y. Goodman et al., 2005, p. 46). I selected the texts to meet the RTI students' interests, but also to be difficult enough to challenge the readers and allow for miscues to happen (Y. Goodman et al., 2005). The texts contained both text and illustrations. The fiction texts had a storyline, characters, plot, and theme, and the non-fiction texts were selected to be centered on a concept which they thoroughly describe or develop (Y. Goodman et al., 2005). The length of the materials was 100–500 words, depending on the reading level of the participants, and since most texts for lower primary grades are shorter, I collected multiple reading samples (4 to 5) from each RTI student. I had a selection of books for each participant, to allow them to self-select based on their interests. See Table 5 for a

listing of the reading materials used for each oral reading sample. Jack, Bobby, Brad, Cole, and Joe each read 5 texts, and participated in 5 RMA sessions. Shy and Amy each read 4 texts and participated in 4 RMA sessions.

Table 5*Reading Materials for Reading Miscue Inventory*

Participant	Text 1	Text 2	Text 3	Text 4	Text 5
Jack	<i>The Surprise</i> by Fay Robinson (2009), Fiction	<i>Goat's New Hat</i> by Maryann Dobeck (2018), Fiction	<i>A Muddy Mess</i> by Marcie Aboff (2018), Fiction	<i>Berries for Pie</i> by Casey Mao (2019), Fiction	<i>At the Beach</i> by Heather Hammonds (2007), Non- Fiction
Bobby	<i>The Coyote and the Rabbit</i> by Linda B. Ross (2009), Fiction	<i>The Big Jump</i> by Catherine Nichols (2007), Fiction	<i>Horses</i> by Elsie Nellie (2011), Non- Fiction	<i>Dogs</i> by Clive Harper (1996), Non- Fiction	<i>Looking at the Moon</i> by Julie Haydon (2007), Non- Fiction
Brad	<i>The Big Jump</i> by Catherine Nichols (2007), Fiction	<i>Monkey, A Trickster Tale from India</i> by Gerald McDermott (2011), Fiction	<i>Dogs</i> by Clive Harper (1996), Non- Fiction	<i>Horses</i> by Elsie Nellie (2011), Non- Fiction	<i>Goat's New Hat</i> By Maryann Dobeck (2018), Fiction
Cole	<i>The Messy Room</i> by Kate Springer (2019), Fiction	<i>The Big Jump</i> by Catherine Nichols (2007), Fiction	<i>Horses</i> by Elsie Nellie (2011), Non- Fiction	<i>Dogs</i> by Clive Harper (1996), Non- Fiction	<i>Looking at the Moon</i> by Julie Haydon (2007), Non- Fiction
Joe	<i>The Messy Room</i> by Kate Springer (2019), Fiction	<i>The Watch</i> by Kate Dopirak (2016), Fiction	<i>Horses</i> by Elsie Nellie (2011), Non- Fiction	<i>Dogs</i> by Clive Harper (1996), Non- Fiction	<i>Looking at the Moon</i> by Julie Haydon (2007), Non- Fiction
Amy	<i>The Little Kitten</i> by Max Rossiter (2018), Fiction	<i>Berries for Pie</i> by Casey Mao (2019), Fiction	<i>My Zoo Album</i> by Julie Haydon (2006), Non- Fiction	<i>At The Beach</i> by Heather Hammonds (2006), Non- Fiction	X
Shy	<i>Dirt Cake</i> by Joanna Cruz (2019), Fiction	<i>The Big Jump</i> by Catherine Nichols, Fiction (2007)	<i>Dogs</i> by Clive Harper (1996), Non- Fiction	<i>Horses</i> by Elsie Nellie (2011), Non- Fiction	X

Oral Reading Samples. After selecting a variety of texts for the RTI students to read aloud, I audio-recorded and collected 5 reading samples from each RTI student. Table 5 shows the text each child read. Amy and Shy read only 4 texts each due to them being absent from school at the time. Each participant read the complete text, without interruption or assistance. I instructed them to try their best if they came to something they did not know, and to do what they usually did in that situation when they read independently.

Retellings. The retellings reveal readers' recollection of what they read about as well as the impact of miscues on their comprehension (Y. Goodman et al., 2005). Retellings also provided me with information related to what each RTI student recalled about the information in the text, characters, and action, but they also reveal participants' memories, reactions, and understandings of the texts they read (Harp, 2006). I audio-recorded and transcribed the retellings. A retelling session lasted about 10–15 minutes.

Unaided Retellings. After reading selected text, I asked the RTI students to talk about what they comprehended about what they read, by instructing them to tell me everything they remembered about the text that they read, without providing them with any prompts or comments. The unaided retelling showed how much my RTI students could share verbally about what they recalled from the story, giving them ample opportunity to provide the information in the order and manner relevant to them (Y. Goodman et al., 2005).

Aided Retellings. The aided retelling, which consisted of questions relative to the text the RTI students read, verified their understanding, probing deeper into various

aspects of comprehension such as making inferences, identifying main ideas, using background knowledge, and transacting. I used follow-up questions and requests to elaborate following the aided retelling. In the aided retelling, I invited my seven RTI students to elaborate on some of their previous answers or answer questions regarding text details, or things they shared in the unaided retelling. I also asked open-ended questions to encourage the RTI students to continue their retelling (Y. Goodman et al., 2005).

For both the aided and unaided retellings, I used the Miscue Analysis Retelling Summary Form (Y. Goodman et al., 2005; see Appendix G) to examine the RTI students' meaning-making process and their transactions with the text, and to understand how they were developing their literacy knowledge and concepts.

Retrospective Miscue Analysis Sessions

Since “there is no prescription that dictates the number of RMA sessions that are needed” (Y. Goodman et al., 2014, p. 36), for the timeline and purpose of this study, I conducted five 30-minute RMA sessions (Y. Goodman et al., 2014), individually, with the student participants, to examine how they experienced and conceptualized reading, and how they constructed meaning. I planned the RMA sessions using Goodman and Marek's (1996) session organizer (see Appendix H).

The sessions took place in the reading intervention room when schools were in a face-to-face format, or online using the audio-video platform the school used when the schools followed the online format at the time of data collection. Except for Bobby's first RMA session via Zoom, all RMA data were gathered face-to-face in the Reading Intervention room.

Using the RMA session organizers (Y. Goodman et al., 2014) to structure and conduct discussions around readers' miscues, I selected up to five miscues for each RMA session, including various types of miscues. The RMA questions generated reflection and consideration of the RTI students' own thinking and various reading strategies during reading and meaning-making. In designing the content of the RMA sessions with the students, I followed the RMA guidelines for initial and follow-up sessions (Y. Goodman et al., 2014). I audio-recorded the RMA sessions using a digital recorder, and I transcribed them for analysis.

Retrospective Miscue Analysis Session 1. I began the first RMA session by sharing my rationale for involving the students in the RMA process and explained to them the RMA procedures. The first RMA session discussion was centered on high-quality miscues that the participants produced during their oral reading sessions from the RMI. High-quality miscues are miscues with semantic and syntactic acceptability and no meaning change (Y. Goodman et al., 2014). In the first session, I focused the discussion on the high-quality miscues of the RTI readers. Questions such as "Does the miscue make sense? Was the miscue corrected? Should it have been?" (Y. Goodman et al., 2014, p. 30) guided our discussions around miscues.

Retrospective Miscue Analysis Session 2. In the second RMA session, I selected two high-quality miscues and three partial and low-quality miscues (miscues that resulted in meaning change). Using the RMA guiding questions, I directed the discussion around the partial and low-quality miscues, engaging the participants in analyzing how and why they made specific miscues, why the miscues were produced, as well as discussing their impact on the meaning.

Retrospective Miscue Analysis Session 3. In the third RMA session, I included both high- and low-quality miscues. A low-quality miscue is a meaning-changing miscue. The first two RMA sessions were the basis of planning for the subsequent sessions. I explained different types of partial (miscues that partially change the meaning) and low-quality miscues, making sure to also include the most frequent types of miscues that each reader produced, to prepare the RTI students for the succeeding discussions around miscue patterns in the upcoming sessions.

Retrospective Miscue Analysis Session 4. For this session, I focused on partial and low-quality miscues. By the fourth session, the RTI students were already familiar with the format of the RMA sessions. During this session, I invited the RTI students to attend to and discuss their meaning-changing and semantically not acceptable miscues, using the questioning and format from the prior sessions.

Retrospective Miscue Analysis Session 5. The fifth RMA session was a reflective session focused on encouraging students to listen to themselves read and select their own miscues for discussion. I played the audio recording of their own reading, while giving them the original text, post-its and a pencil. I asked the students to read along with their recording and let me know when they'd like me to stop the audio for discussion. I asked them to share what they noticed about their own reading that they wished to discuss.

Classroom Observations of Teachers

I conducted one 50-minute observation of each teacher participant, during reading instruction, as a participant observer (Hesse-Bieber, 2017), as I was already in multiple

classrooms daily, instructing students during small group reading sessions due to the online teaching format at the time. I used the audio-video platform Zoom to attend and observe in the virtual format. I used an observation form (see Appendix I).

For the observation, I joined the teachers via Zoom during individualized group instruction, when teachers worked with students in small instructional groups during the Guided Reading instruction block. During Guided Reading, teachers usually assess students and provide individualized reading instruction in small groups of 5–6 students, based on the students' instructional levels and needs. The teacher observation is a primary source of data, illustrating how teachers of primary RTI students experience and contribute to the children's reading development, as well as how their self-reported literacy understandings were reflected in their pedagogy and classroom instructional activities, lesson planning, and teaching practices when working with RTI students.

Field Notes of Teacher Observations

I utilized field notes (Hesse-Bieber, 2017) to record observations, including those of teacher behaviors, during the individualized small-group instruction of the RTI students. The field notes included the pseudonym of the teacher observed, date and time of the observation, type of instruction (whole group or individualized instruction-small group) and notes about the behaviors and activities I observed.

Observations of Students: Reading Development Checklist for Emergent Readers

The Reading Development Checklist (Harp, 2006) is an observation guide (see Appendix J) that provided some structure to my observation of the student participants during the data collection, supplementing the oral reading and retelling data. This

checklist helped guide my observation of children's reading behaviors, literacy development, and reading process, as well as the way in which readers use their literacy knowledge to make meaning, predict, follow the plot, and understand various literacy concepts such as book and print conventions, strategies for meaning-making, motivation, making predictions, interest in reading, etc. (Harp, 2006).

In my daily 30-minute sessions with the RTI students, I used kidwatching (Owocki & Goodman, 2002). The concept of *kidwatching* was developed through the work of Yetta Goodman, and it pertains to obtaining information through documented observation, allowing both teachers and researchers to document how students learn in school settings (Owocki & Goodman, 2002). The observation data can generate valuable information about children's literacy development, and these data can be used to develop pedagogies that are effective and tightly tailored to the individual students' needs. Kidwatching can also be used in curriculum development or learning about the way in which children construct meaning and express knowledge (Owocki & Goodman, 2002), which aligns with the purpose of this inquiry.

Artifacts

Another source of data in this study is artifacts. Artifacts are defined as objects in the environment that represent a form of communication that are meaningful to the inquiry (Creswell & Poth, 2018). In this study, I collected teacher lesson plans, photos of the materials, and literacy activities I observed in the classroom.

Teacher Lesson Plans. I collected a lesson plan of a typical ELA lesson from each of the teacher participants to explore how teachers of primary RTI students

experience and contribute to the children's literacy development by investigating the lesson objectives and activities that contribute to their students' literacy development.

Literacy-Related Work Samples From the Classroom and Reading

Intervention Sessions. I collected artifacts in the form of comprehension-related work samples (from the reading intervention session, or from student work from school or homework assignments) to examine the students' thinking and writing in response to the texts they read.

Eye Movement Miscue Analysis Video. I shared an EMMA video clip with the teachers during one of the teacher meetings. The video was one I had previously gathered for my IRB-approved pilot study. The purpose of using the EMMA video clip was to demonstrate the real-time relationship between the reader's eye (represented as a cursor dot moving over the text and image the reader scans) and the voice of the reader. Another purpose of using this video clip was to generate discussions with teachers regarding the reading process, reading strategies, and miscues, as well as some of the less visible aspects of reading.

Research Journal

I kept a research journal for the purpose of documenting the process of data collection and analysis, and to organize and document the research process. Qualitative studies are a mix of literal, reflexive, and interpretive exploration of raw data, combining both inductive and deductive processes in the organization and categorization of data into concepts (Check & Schutt, 2012). In qualitative studies, researchers also observe the relationships between concepts, engaging in a reflexive and evaluative process of

confirming or disconfirming evidence, seeking alternative explanations, and thoroughly documenting the analysis process. Research memos are a source of information regarding observations during and after the data collection, and the field notes are the compiled jottings during the interactions and observations of the participants (Yin, 2018).

Data Analysis

In this miscue analysis, RMI, and RMA exploration, I engaged in both qualitative and quantitative analysis after the data collection. The interview, RMA sessions, teacher group sessions, and observation data were recorded and transcribed for analysis. The miscue analysis provided information not only about the individual miscues of the readers, but also about how these miscues related to the sentence and text as a whole (Y. Goodman et al., 2005). In addition to the qualitative analysis, the quantity (percentage and numbers) of miscues, as part of Procedure III in the RMI, was examined. I triangulated the data by analyzing and identifying patterns within and across multiple data sources, and within and across participant data.

Reading Miscue Inventory

I used Miscue Analysis Procedure III to analyze and interpret the oral output (during oral reading) as a reflection of the psycholinguistic process that takes place in the brain, as the readers attempt to make sense of the text. In my analysis of the miscues, I examined the RTI readers' awareness and use of the linguistic and grammatical structures, their schema, and their use of the three cueing systems (Y. Goodman & K. Goodman, 2013). I used the quantitative data in the form of a statistical summary, as part of Procedure III (Y. Goodman et al., 2005) to identify patterns within and across the data.

In the statistical summary I examined the following: semantic and syntactic acceptability, meaning change, and graphic and sound similarity (Y. Goodman et al., 2005). I counted the total number of sentences coded with Y (semantically acceptable), and the number of sentences coded with N (no meaning change), P for partial meaning change, and Y for total meaning change to determine the percentages for each. This generated percentages of semantic and syntactic acceptability and meaning change (Y. Goodman et al., 2005). I computed statistical summaries (see Appendix F) for both sentence-level analysis and word-level analysis regarding graphic similarity, and I examined and coded miscues based on meaning change, partial meaning change, and no meaning change (Davenport, 2002; Y. Goodman et al., 2005).

The qualitative analysis of the miscues included an examination of the miscues for graphic similarity. I marked and categorized the miscues based on their graphic similarity by identifying them as miscues with high, some, and low similarity. I examined the miscues for patterns and prevalence of different types of miscues, while analyzing the RTI students' use of syntactic, semantic, and graphophonic cues. I used the RMI Procedure III to create reader profiles (see Appendix F) and learn about each reader's individual strategy use. These analyses provided insights into the students' integration of the language cueing systems, as well as revealed individual miscue patterns and strategies (Y. Goodman et al., 2005).

Interviews, Retellings, Retrospective Miscue Analysis Sessions, and Teacher Group Sessions

Student and teacher interviews, aided and unaided retellings, RMA sessions, and teacher group sessions were audio-recorded and transcribed for analysis. I uploaded the

interview transcripts, retelling sessions, RMA transcripts, teacher group sessions, teacher reflection memos, classroom observations, field notes, and lesson plans to NVivo, a qualitative data analysis software program. Using NVivo, I coded the data for analysis, using an inductive approach to coding. I analyzed the data for common themes, patterns, and vocabulary that the participants used during interviews, looking for common themes and patterns in the data. I employed multiple cycles of coding using the NVivo software.

For the first cycle of coding, I used open coding. As an initial form of coding, open coding “breaks down qualitative data into discrete parts, closely examines them, and compares them for similarities and differences” (Saldaña, 2016, p. 115). As I went through the data, I began to label phrases and sentences relevant to my inquiry with codes such as “sounding out,” “oral reading,” “teaching phonics,” etc. During the first cycle, I generated a large number of such codes that I organized and refined in the subsequent cycles.

For the second cycle of coding, I reviewed the patterns and similarities in the initial codes, and used pattern coding, which Saldaña (2016) described as a way of coding similarly coded data. Pattern coding develops the *meta-code*, which is the category label that identifies the similarly coded data. This type of coding was relevant for my data analysis in that pulled out categories and more meaningful themes that emerged. I used code mapping (Saldaña, 2016) to condense the initial coding and categories into themes and concepts. During the second cycle, I organized the initial codes and began grouping them in categories such as “sociocognitive strategies,” “comprehension,” “phonics instruction,” “meaning making process,” etc. and organized them or merged them in larger categories that they pertained to. The second cycle of coding helped organize the

data in categories according to similarity (Saldaña, 2016). During the second cycle of coding, some codes were merged or became more refined, and they were grouped in categories and sub-categories based on the patterns observed in the data. I reviewed the codes and categories and used code-meshing to merge some codes with others, as more similarities and connections emerged.

For the third and final cycle of coding, I used code weaving, which is “the actual integration of key codes and phrases into narrative form” (Saldaña, 2016, p. 276), as I explored the connections and interactions between the major codes. During this cycle, I examined the major codes that emerged from the previous cycles of coding and how they are related. The third cycle of coding helped reduce the number of initial codes and organize the data by pulling together the numerous codes into more meaningful groups (Saldaña, 2016). Next, I further organized these data and reviewed the categories, as I began to look for the major themes. I continued to explore and use code weaving to review the relationships in the data from each participant, as themes and patterns developed within and across participant data.

Timeline of All Research Activity

I conducted the research study over a period of several months, from February 2021 through June 2021. I began the data collection after Institutional Review Board (IRB) approval, on February 2, 2021. Data collection and analysis were ongoing from the moment of obtaining IRB approval and research proposal approval. The data analysis was ongoing as I wrote up my study from February 2021 through November 2022.

Validity and Trustworthiness

To check for the accuracy of this study's findings, I employed a variety of procedures meant to validate and ensure the credibility of this study's results (Creswell & Poth, 2018). To achieve trustworthiness and validity, a researcher must not only use multiple sources of data and evidence but also make sure to provide clear definitions of the specific concepts investigated, relating them to the study's objective (Yin, 2018). In analyzing and interpreting my research findings, I used multiple data sources to strengthen the internal validity through triangulation, to corroborate the coding, and to increase the trustworthiness of the findings (Creswell & Poth, 2018; Merriam & Tisdell, 2016). Dialogic engagement throughout data analysis, including advisor debriefings and member checking, along with multiple participants, also supported the triangulation of data and trustworthiness of the study. The inter-rater reliability and member check (Creswell & Poth, 2018; Merriam & Tisdell, 2016) was ensured by working with my dissertation advisor as I collected and analyzed the data, as well as by sharing my results with my participants and by following up with my participants if clarification was needed for accuracy during the transcription. I used data from multiple sources and from multiple participants, analyzing it and using it to investigate the connections and patterns that the participants shared, furthering the validity of this research.

As I collected data from the RTI students and teachers with whom I was already familiar (and since I collected the data in a setting that was natural and familiar for the tasks the participants were asked to complete), I demonstrated adequate engagement in data collection, which added to the credibility and internal validity of the study. Being a teacher at Dolphin Elementary, I spend eight hours a day in the research setting and I

have daily engagement with the RTI students and teacher participants, before and after the period in which I collected the data. Lastly, I “looked for data to support alternative explanations” (Patton, 2015, as cited in Merriam & Tisdell, 2016, p. 248) in order to enhance confidence in the findings and evaluate the evidence with integrity.

Ethical Considerations

In order to ensure the protection of the participants, I obtained IRB approval for this study. Participation in this study was voluntary and I obtained children assent and parent consent for the RTI students’ participation. Pseudonyms were used to protect the anonymity of the participants. As I analyzed the data, I reflected upon my biases and how my positionality affected my interpretation (Merriam & Tisdell, 2016). My doctoral advisor provided support in maintaining objectivity and guarding against my biases. The fact that the participants were my students and colleagues, and they were comfortable having conversations with me, reading to me, or sharing about what they read, added to the internal validity, matching the reality of the participants (Merriam & Tisdell, 2016).

CHAPTER 4

FINDINGS

This chapter presents the findings regarding the literacy development of seven primary-grade students who were receiving RTI services. I describe how RTI students reflected on reading, literacy knowledge and experiences, and detailed the RTI students' meaning-making process, as well as their evolving reading conceptualizations through RMA. This chapter also includes findings about six elementary teachers' understandings of and reflections on the literacy development of their students who were receiving RTI services.

Following multiple cycles of coding, as well as after triangulating multiple data sources including analysis of miscue data, I identified four themes: (a) RTI students reflecting on reading, literacy learning, and experiences; (b) RTI students developing awareness of their reading conceptualizations through RMA; (c) Teachers of RTI students reflecting on the reading process as they engaged in miscue analysis; and (d) Revaluing themselves as teachers and RTI students through miscue analysis and RMA.

Response to Intervention Students Reflecting on Their Self-Perceptions and Reading Experiences

To explore the RTI students' literacy knowledge and development, the RTI students engaged in discussing their reading process and reading experiences in individual BRI interviews and individual RMA discussions. During the RMA sessions and interviews, they also shared insights into their reading-related understandings and shared their observations and reflections related to the strategies they used when reading.

The individual discussions reflected their conceptualizations of reading, their self-perceptions in relation to reading and learning, and their literacy experiences in school.

Reading-Related Self-Perspectives

During the Burke Reading Interview (Y. Goodman et al., 2005), I asked all seven student participants to describe themselves as readers. Joe, Bobby, and Amy were hesitant to identify themselves as good readers and indicated that they did not consider themselves proficient. The three RTI students named peers and family members as good readers they know. The other four participants, Shy, Brad, Cole, and Jack, answered “yes” when I asked if they thought they were good readers.

Joe, a timid second grader noted: “At first when I tried to read, I couldn’t . . . I didn’t know the words.” This statement revealed his view and understanding that reading is connected to his ability to read individual words rather than making sense of them. Bobby, another second grader in Tier 2 intervention, shared that his mother is a good reader because she reads chapter books. He was also hesitant to call himself a good reader, stating that he didn’t know if he was a good reader. He paused for almost a minute upon me asking him the question, and answered with a head nod, shaking his head “no” while hesitating to identify himself as a good reader:

SCHULTZ: Do you consider yourself a good reader?

BOBBY: [shaking his head “no”]

SCHULTZ: You don’t think you’re a good reader? Why?

BOBBY: I don’t know.

Bobby’s few words in the excerpt reflected his view of himself as a reader, his hesitant answer mirroring his lack of confidence. He avoided elaborating on his answer when I

asked him to explain his answer, avoiding calling himself a good reader, similarly to Joe and Amy.

Brad, an enthusiastic second grader, shared that he saw himself as a good reader, stating proudly, “I’m a good reader because I know a lot of words.” Brad elaborated, explaining that he usually didn’t “get words wrong,” and he named his sister as a good reader because she always knew words that he didn’t “my sister always knows all the words that I don’t.” Brad’s observation reflected his understanding that good reading equated to being able to be proficient with word identification and word knowledge.

Shy, a third-grade bilingual speaker of English and Spanish, who named her sister as a good reader because she read chapter books, answered enthusiastically that she thought she was a good reader:

SCHULTZ: Are you a good reader?

SHY: Yes.

SCHULTZ: I agree! Why do you think you’re a good reader?

SHY: Because I try to sound out the words and just keep trying.

Shy’s statement reflected her understanding that reading is dependent on the ability to use phonics for word identification, but it also indicated her view of reading as a process that required relentless effort and perseverance. Cole, a confident and outgoing second grader, stated proudly that he was a good reader because “You’re always good at something. If you try hard enough, you can be as good as everybody else.” Like Shy’s, Cole’s statement reflected the fact that he also associated good reading with “trying hard,” and he equated the ability to be persistent in reading with being a good reader, although he did not identify the specific actions that defined a good reader. These initial views about

themselves as readers may reflect the way in which Shy and Cole were responding to reading feedback and praise for their efforts. In the classroom observations I conducted, all six teacher participants praised the efforts of their RTI students during the small, guided reading groups. Violet said, “good job trying hard,” “good try,” while Julian told his students to “keep trying and don’t give up” when getting to a word they didn’t know.

Additionally, in the initial BRI interview, Cole mentioned that a good reader is one who can self-correct, noting that “When he messes up a word, just like me, he fixed it.” Cole’s statement showed that he had the awareness that it was important to self-correct, and he was the only one of the participants in the beginning of the study who articulated this strategy. Like Shy and Cole, Jack also identified himself as a good reader because he did his best. When I asked him to describe what made him a good reader, he said “I try my best.” Jack shared that he thought his friend was a good reader because she could read all her birthday cards by herself at her birthday party. Jack’s statement echoed his understanding that a good reader is one that can engage in the reading process in authentic, real-life situations.

Reading Was Viewed as “Sounding Out” and “Knowing Words”

When I first asked my seven RTI students to specifically provide examples and elaborate on what actions make someone a good reader, their answers were similar. Bobby, Brad, Joe, and Jack noted that a good reader is someone who never gets to a word they don’t know. While Amy, Shy, and Cole thought that even a good reader may get to words they don’t know. It is important to note that Shy had been working with me for over three years, and some of the things we often discussed were learning from miscues in reading as a natural part of the process. Amy, a third-grade student in Tier 3

intervention with whom I met daily during the study, was a very insecure emergent reader who often stopped and did not attempt reading an unfamiliar word. Amy was very self-conscious about making miscues, and every time she got to a word she didn't know, she would pause and look up at me, asking me to tell her the word. When I asked her to say what she thought the word was, she would stop and not attempt to continue reading. I worked in intervention with Amy on encouraging her to read the word and say what she thought the word was, without being afraid of making miscues.

When I asked all seven RTI students what they would like to do better in reading, their answers were similar, indicating a focus on reading accuracy. Their responses included statements such as “not mess up” (Cole), “pronounce more words” (Brad), and “get good at words I don't know” (Amy). Their statements showed that they perceived good reading as the accurate reading of words, without mentioning meaning-making. Shy, Joe, Jack, and Bobby all shared that they would like to get better at reading books (Shy), reading library books (Joe), or reading chapter books (Jack). The fact that they all noted that they would like to be able to read books indicated their perception that good readers can read any text without any constraints. This view may be influenced by the way in which RTI students are often instructed to pick books of a certain level and complexity, or from a certain section of their class library, according to their reading level. Figure 1 is a photo of the color-coding system for leveling books in Cole's second-grade classroom, a system and a practice that has been used at Dolphin Elementary in all the participants' classrooms. The book label indicates “Level L,” and it is marked with a purple dot. Children are often guided to select a certain color dotted book based on their estimated reading level generated by teacher assessments such as running records.

Figure 1

Color-Coded Book Leveling System in Cole's Classroom

**Response to Intervention Students Had Limited Awareness of Their Strategies**

The initial BRI (Y. Goodman et al., 2005) revealed the self-reported reading strategies that the RTI students used when getting to something they didn't know while reading. Their answers reflected a repetitive pattern. All seven RTI students identified the same strategies they enumerated when answering the question about what good readers do when getting to something they didn't know in reading.

One of the primary strategies each RTI student mentioned was a variation of "sounding out." Brad explained "I stretch the word like a slinky," while Joe said, "I spell it out." Amy noted that she usually looks at the word and tries it, while the rest of the participants simply stated, "I sound it out." To inquire even deeper into their reading strategies, using the BRI questioning, I also asked the seven RTI students to share what they would do to help a peer in this situation. Joe noted that he would "help them spell it out," while Amy answered "I would help them if they're stuck on a word, every book, or the book they are reading. I would sound out the word." Brad and Jack both identified sounding out as a strategy for helping a peer, indicating that they would provide the verbal prompt to sound out the unknown word. Bobby simply said, "I would tell them the

word,” while Cole and Amy shared that they would sound out the word for the person who got to something they didn’t know in reading. Although the BRI question asked specifically “What do you do when you get to something you don’t know?” all participants automatically assumed that this question referred to words, rather than concepts or information from the text, reflecting the young RTI students’ perception of reading as a word-centered process, and indicating a prevalent awareness of phonics-based strategies.

The pervasiveness of decoding as a primary strategy may reflect the way in which the RTI students were instructed throughout their learning (Compton-Lilly, 2005). When I asked the RTI students what their teachers would do in this situation, all seven children mentioned sounding out, which was again congruent with their own first reported strategy. When I prompted them to elaborate and identify other strategies if sounding out didn’t work, only two participants, Shy and Brad, named one additional strategy. Shy shared that she looked at the pictures. Brad said “I just skip over the word. Then after I finish the book, I just go back.” Their responses revealed how they recognized that they could gather information as they navigated text by scanning back and forth through the text (Kim et al., 2017), using both linguistic and semiotic cues in reading. The RTI students’ self-reported strategies focused primarily on the use of phonics, reflecting the students’ perception of reading as a word-centered process, dependent on a reader’s ability to accurately decode and identify words.

School Literacy Experiences

In their responses to the BRI (Y. Goodman et al., 2005) questioning, all seven RTI students reported that they enjoyed being read to in school and at home. Jack noted

that he even enjoyed reading out loud because he was “a confident reader.” He always volunteered to read out loud during the reading intervention sessions, and he was motivated and positive in relation to his oral reading and reading-related activities, both in the classroom and during reading interventions sessions. His excitement and enthusiasm were evident during my collection of oral reading data from him, as he always asked me if he could read another book to me.

Shy also shared that she was happy when it was time to read in school, but that she felt timid reading in front of the class. She noted that she was comfortable reading in the small reading intervention group, and she often volunteered to read out loud during our reading intervention sessions. Like Shy and Jack, another reader with a positive attitude towards reading in his classroom was Brad, who said “I like listening, but I really, I really like to read though.” Brad said he felt good when it was time to read in class, stating, “I like answering the questions and if she asks us to read, I always raise my hand.” Brad’s report was accurate, as I have observed him volunteering to read out loud in class during my time in Brad’s classroom. Brad not only enjoyed reading, but he also articulated his enjoyment of discussing the text both in his classroom and during his reading intervention sessions. This was also evident in his post-reading discussions in the intervention sessions and during this study. Brad’s retelling sessions were elaborate and showed his eagerness to share his thoughts and knowledge about what he read. Bobby was another one of the participants who shared that he liked talking about the books he read, noting that his favorite thing was telling if a book was fiction or non-fiction. Bobby shared that he did not like speaking in front of the classroom, but he was more comfortable in my room in the small reading intervention group. During my classroom

observations, Bobby was indeed quiet and answered only when his teacher called on him. Brad and Bobby's answers indicated awareness that reading is thinking, and that they enjoy not only the act of reading, but also discussing and reflecting upon the text. This is something we often did in our intervention sessions, and both Bobby and Brad were always eager participants in the post-reading discussions.

When I asked my seven RTI students about their reading experiences outside of the mandatory school readings, such as going to the library and selecting books of their choice, they all noted that they didn't have much access to the school library. During the time when some of them were learning virtually from home due to the COVID-19 pandemic, and also due to the safety precautions, access to the school library was restricted, and the students used their classroom libraries instead. None of the seven RTI students reported using the public library.

Response to Intervention Students Developing Awareness of Their Reading Conceptualizations Through Retrospective Miscue Analysis

During the individual RMA sessions with each of the readers, the RTI students responded to the three guiding questions to prompt discussions around miscues: "Does your miscue make sense? Was the miscue corrected? Should it have been?" (Y. Goodman et al., 2014, p. 31). When answering these questions, the seven RTI students were engaged to think about their own reading and meaning-making processes during reading, and they reflected on their miscues in the context of meaning. Depending on how they answered the first two questions, I initiated discussions that prompted them to reflect about self-correcting and about the importance of self-correction when meaning is lost. Additionally, using the RMA guiding questions about the graphic and sound similarity of

the miscues, the RTI students explored and reflected on their understanding of the relationship between the sound and print systems (Y. Goodman et al., 2014).

Additionally, the RTI students thought and talked about the strategies they used for comprehension, reflecting on why they thought they made the miscue, and whether the miscue affected their understanding of the text. The RMA conversations allowed for the exploration of how primary-grade students were becoming aware of their reading, as well as of their comprehending and comprehension processes.

Response to Intervention Readers' Initial Response to Miscues During the Retrospective Miscue Analysis Sessions

During the first RMA session, I played the audio-recording of the selected high-quality miscues for each RTI student, so that I could focus on their strengths and potential as readers. Each student read along with the recording, using a copy of the text. Each reader marked their miscues on the copy of the text with a sticky note and used a white board and a marker to write their expected response and their miscue to discuss their graphic similarity. As the readers are younger, it was difficult for them to examine the graphic similarity on the copy of text, so they copied their expected response and their miscue on a white board.

All seven RTI students had difficulty noticing their miscues at first, when I played them the recording of their first miscue. For Joe, Amy, and Jack, this task was particularly challenging, even after re-playing the audio several times. While the miscues the readers listened to and discussed for the first RMA session were high-quality substitutions with semantic and syntactic acceptability, and no meaning change (Y. Goodman et al., 2014), it was difficult for them to identify their own miscues. It is typical

that in the case of uncorrected high-quality miscues, it is more challenging for young readers to notice their miscues (Y. Goodman et al., 2014). To scaffold them, I then read them the sentence as it was in the original text, and I asked them to listen to how they read it in the recording, and repeat that out loud, until they noticed their miscue.

During their first RMA session, each of the seven RTI students viewed their miscues as mistakes. When I asked them what they noticed about their reading, each of them echoed Bobby's statement "I messed up and read the word wrong." Their reference to their high-quality miscues as "mistakes" indicated a negative perception in relation to their own unexpected responses (miscues). For example, in the first RMA session with Cole, when I played him the audio of his miscue, and asked him what he noticed he did, Cole stated that he "messed up the word." Similarly, while listening to one of his miscues, Joe noted "I didn't know that word," while Shy perceived one of her miscues as "the word was wrong."

Upon noticing his high-quality miscue, reading "look" for "looked" in the sentence "The flowers looked pretty," Jack immediately explained that he "didn't know that word yet," which is why he thought he made the miscue. Shy also perceived one of her self-corrected miscues she discussed in her second RMA session as "the word was wrong," as she read "chicken" instead of "children" in the sentence "The children were playing games." In the recording, Shy went back and self-corrected her miscue as soon as she got to the end of the sentence. When I invited her to listen to herself read, I told Shy that I noticed her doing something awesome, something smart readers do. Although she noticed her self-correction and I highlighted her attention to meaning, Shy's negative perception of her miscue resulted in her focus being on what she didn't do well, instead

of her self-correction. As I pointed out that “smart readers go back and self-correct when what they’re reading doesn’t make sense,” I prompted Shy to think of her own miscue differently, as a strength, and characteristic of good reader instead of a mistake, by focusing the attention on her self-correction.

Moving Away From Word-Centric Perspectives

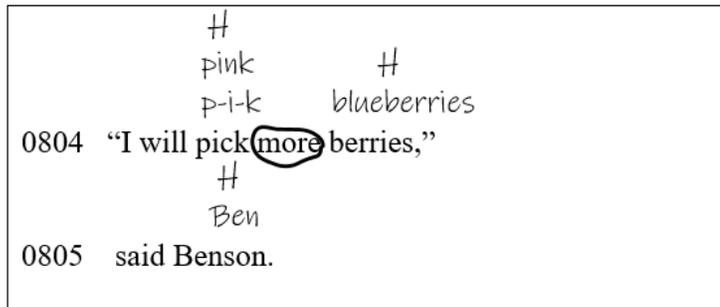
As we progressed past the initial RMA session, the seven RTI students began reflecting on the syntactic and semantic acceptability of their miscues, as well as their reading strategies and the impact of their miscues on comprehension. During the RMA sessions, the emphasis on phonics and accuracy in the RTI students’ instruction strongly permeated the way in which each of them perceived and understood reading. Aligning with their BRI responses, the RMI data showed that sounding out was employed by all seven RTI students as a primary strategy. The information from the Miscue Tally Form revealed that the majority of the miscues the RTI students made had high or some graphic similarity to the expected response. As Amy (Figure 2) and Joe’s (Figure 3) examples show, the RTI students were less likely to self-correct words that they sounded out, as their efforts to employ phonics strategies disrupted their attention to meaning and the flow of reading.

As part of the RMA discussions, I made sure to also include some low-quality miscues which the students made when over-relying on their phonics strategies to sound out unfamiliar words. The over-relying on sounding out unfamiliar words resulted in sentences that often did not make sense. For example, Amy’s miscues in the story “Berries for Pie” resulted in only 50% of her sentences having semantic acceptability (see Appendix L for complete statistical information of each reader). While Amy worked hard

at constructing meaning, the semantic acceptability percentage indicated that Amy was not consistently monitoring for meaning. However, the fact that her accuracy was not high did not mean she did not understand the story. After reading the story, Amy provided a brief retelling, but she was able to elaborate as I asked her additional questions, demonstrating effective inferencing and transacting. The fact that Amy and the other six RTI students were able to demonstrate more elaborate understandings of the story through questioning shows how meaning is co-constructed through dialogue and social interaction (Gee, 2013). The aided retelling allowed Amy to elaborate and demonstrate her understanding and connections to what she read, showing that a brief or incomplete retelling does not necessarily equal a lack of comprehension. I included some of Amy's miscues examples in her reading of the sentence shown in Figure 2.

Figure 2

Amy's Miscues



Amy sounded out the word "pick" by saying each individual sound /p/, /i/, /k/. However, upon blending the individual sounds she read it as "pink." This miscue had a high graphic similarity (H) with the word in the text, which indicated her over-reliance on graphophonic cues. Because of her focus on decoding this word, Amy did not realize that her miscue did not make sense in the context of the sentence as she read it. Amy's

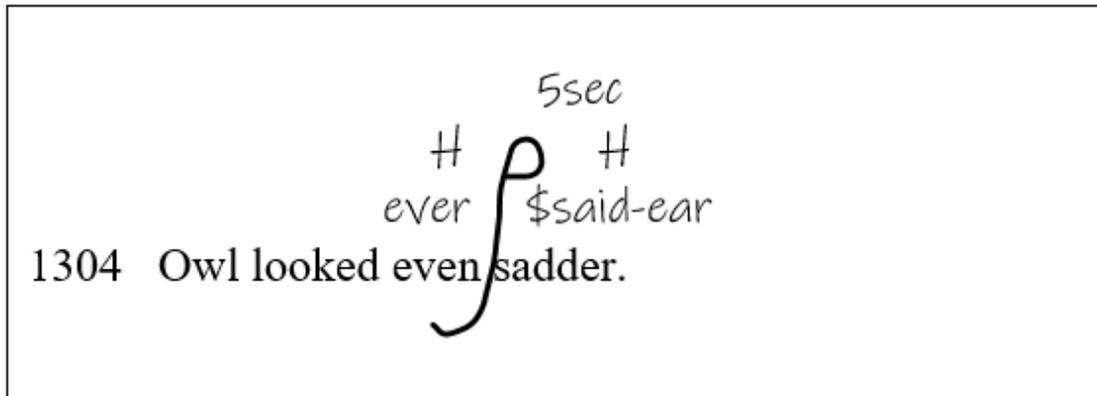
sentence was not syntactically or semantically acceptable. The high graphic similarity of all three of her miscues in this sentence showed that Amy was over-relying on the graphophonic cueing system. Her miscue “pink” showed that she was more focused on decoding the word rather than attending to meaning. At the same time, it is important to note that high graphic similarity does not equate to a high-quality miscue (Y. Goodman et al., 2005). As to her high-quality miscue in which she read “Ben” for Benson, Amy made a syntactically and semantically acceptable miscue that showed she was reading for meaning, which represented a strength. Amy’s miscue did not change the meaning of the sentence, nor did it impact her overall understanding of the story. The same with her miscue “blueberries” for “berries.” When discussing it in the RMA session, Amy answered “yes” when I asked her if her miscue looked like the word on the page, noticing the graphic similarity of her miscue, and she also answered “yes” when I asked her if “berries” made sense in the sentence. When I asked her if she should have corrected it, she nodded “yes,” stating “it is not the same.” This shows that Amy reflected and acknowledged the syntactic and semantic acceptability of her miscue, while identifying the partial change of meaning of her miscue “blueberries.” While her miscue also had a high graphic similarity to the expected response, revealing a pattern in the graphic similarity of her miscues, Amy’s miscues revealed both her strengths and the areas she could work on.

Similarly, Joe also over-relied on sounding out when getting to a word with which he was unfamiliar (see Figure 3). While he attempted to chunk the word “sadder,” reading the first part as “said” he tried to sound out the other part “er” by using the long

vowel sound for the /e/ and adding the /r/ sound, which resulted in Joe reading the second part of the word as “ear.”

Figure 3

Joe’s Miscues



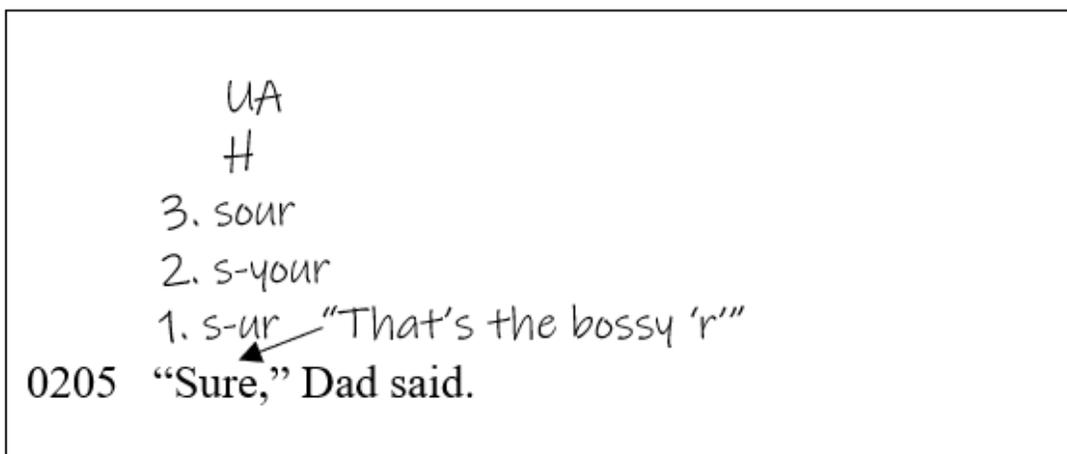
Putting a lot of effort into trying to read the word, Joe did not realize that his miscue did not make sense in the sentence. In his attempt to decode the word, Joe produced two words, “said” and “ear,” which showed that Joe had the awareness that what he was reading should sound like words; however, he produced a non-word substitution by combining the two words. When I asked Joe if this miscue made sense in the sentence, I had to play the recording of his oral reading several times and rephrase my questions, asking him: “Does that sound right to you? Is this how we would say this?” Joe had difficulty at first in identifying his low-quality miscue, but after I read the sentence to him a few times and asked him the rephrased questions, he was able to note that his sentence did not make sense. When I asked him why he thought he made the miscue, he shared that he thought “that’s what it said,” and he agreed that he should have corrected his miscues because “it wasn’t right.” Joe’s reflection indicated an emerging awareness of the low-quality miscues affecting meaning.

His reading of the word “even” as “ever” also shows his over-reliance on the graphophonic cueing system, as both of his miscues had a high graphic similarity with the words in the text. In the RMA session, Joe did notice the graphic similarity of both of his miscues after he wrote down his miscues next to the words in the text. Joe’s miscues indicated that he wasn’t attending to the meaning of what he was reading, as he was working so hard to decode the word, yet it revealed his awareness that reading is language, and that the words must have meaning.

While reading a text about picking berries, Jack, a relentless first grader, attempted to sound out the word “sure.” (See Figure 4.)

Figure 4

Jack’s Miscue



Jack made three unsuccessful attempts (marked as UA in Figure 4) to sound out the word before moving on. Jack abandoned his unsuccessful attempt to self-correct, even though his miscue did not fully make sense in the context of the story (the father was answering his son’s question about if they could pick berries). Jack worked hard and was persistent in applying phonics skills to read unfamiliar words, as his high graphic

similarity miscue (H) showed. This also showed how he was over-relying on the graphophonic cueing system. When we discussed this miscue in an RMA session, Jack noted how he used his knowledge of the “bossy r” as he called it, to decode the word and read it as /s/-/ur/. In the audio, Jack listened to his self-talk about the “bossy r” which showed how he was attempting to use his knowledge of the phonics rules he learned in the classroom and name a learned strategy, using the name that his teacher used for the reading of R-controlled vowels.

During the second RMA session, when I asked Jack to explain to me what he noticed himself doing there, he told me he “tried the other sound.” This phonics-based strategy involves prompting the students to use the short vowel in a word when the long sound doesn’t work, and the other way around. Jack’s reflection on this strategy showed that Jack was aware of and utilized multiple learned phonics rules and strategies. Jack’s third attempt resulted in him reading the word “sure” as “sour.” After his first two attempts in which he produced two non-words, Jack stopped at his third attempt, after reading the word “sure” as “sour.” While his miscue made sense in the context of the one-word sentence, it did not make sense in the context of the story, where the main character, the boy, had asked his father if they could go pick berries. Jack stopped after he produced a real word, showing that he was aware that his reading should sound like language, and syntactically, the word he read made sense in the context of sentence. During our RMA discussion, Jack noted that he should have corrected his miscue, even though it made sense in the sentence, “because that’s not what dad said.” When I asked him, Jack observed that his miscue did not impact his understanding of the story, and as his complete retelling showed, this miscue did not affect his overall comprehension of the

text. Jack reflected on his miscue and the need to self-correct when the meaning is changed, but he also began reflecting on his miscue in the context of his own comprehension.

As illustrated in the examples above, as well as in the data from their oral reading recording, Amy, Jack, and Joe used the sounding out strategy as a primary strategy, focusing primarily on examining the print. All three of them were reading at a beginning first-grade level according to the school-based assessments, such as i-Ready. This finding is consistent with Duckett's (2003) eye movement study of primary readers, which identified that first-grade beginning readers tend to be more focused on print than older and more proficient readers. However, their discussions during RMA sessions in response to the RMA questioning prompted them to reflect and make references to meaning, as well as think of their miscues in the context of the sentence and the whole story.

Reflecting on the Quality and Role of Miscues

As we moved on past the first RMA session, where the seven RTI students were hesitant to talk and provided short “yes” or “no” answers to the RMA guiding questions, by the second and following sessions, the students began to feel more comfortable. I introduced the students to the concept of *smart miscues*, or *high-quality miscues*, making sure to highlight the quality of their non-meaning-changing miscues, and praising their efficient and effective reading strategies (Y. Goodman et al., 2005). For example, when Brad read “Let’s take *a* shortcut to school” instead of “Let’s take *the* shortcut to school” (Nichols, 2017), he noticed that his high-quality miscue was syntactically and semantically acceptable, and it did not change the meaning. As Brad discussed his miscue

in the first RMA session, after asking him if his miscue made sense, I made sure to reiterate this as a strength, while reinforcing the concept that miscues are a normal part of reading by telling him that if the miscue makes sense and it doesn't change the meaning, then it's not really a mistake, and that a lot of the times when our miscues make sense, we say we made a very smart miscue. I also made sure to let him know that miscues can be good, and that teachers, parents, and everybody makes miscues, because they are a result of our brains thinking and making sense of the story.

At the end of his first RMA session, 6-year-old Jack, the youngest of the seven participants, enthusiastically identified his miscue from the audio recording without having to re-play it. Before I even had the chance to ask him the questions, he immediately began discussing his miscue. While he read along with the recording, Jack noticed that he read "I love *this* hat so much" instead of "I love *that* hat so much" (Dobeck, 2018). After discussing two of his miscues, both with high graphic similarity, Jack took the initiative to talk about his own miscue, sharing his initial observations regarding the graphic similarity of his miscue. Jack also remarked that his miscue "still sounds good" which showed his awareness of the syntactic and semantic acceptability of his miscue:

JACK: *This!* It was actually *a-t* [referring to **that**] instead of *i-s* [referring to **this**]!

SCHULTZ: So, what do you think about that?

JACK: It still sounds good!

SCHULTZ: Yes! Your miscue made sense, right? That was another smart miscue, because it didn't change the meaning, it didn't change the sentence!

Through the RMA discussions, Jack showed a developing understanding that his reading must make sense, demonstrating an increasing awareness of the importance of preserving meaning. Jack also reflected on the need for self-correcting his miscue, and he answered that he didn't think he should have corrected his high-quality miscue. His proud exclamation that his miscue "still sounds good" also showed that Jack became comfortable discussing his miscues, moving away from viewing them as mistakes, like he did in the initial RMA sessions.

Like Cole and Jack, during her second RMA session, Shy also began noticing the necessity of self-correcting miscues. When she read "*then* Maxie opened the door, she was wearing her best dress" for "*when* Max opened the door, she was wearing her best dress" without self-correcting, she noted that she should have self-corrected "because it's not the same." Later in the session, Shy reflected on the meaning-change of another one of her miscues, when she read "children" as "chicken," observing that she should have corrected it because "it doesn't rhyme." In a different instance, when I asked her to listen to one of her self-corrections, she said that she did self-correct because it "didn't rhyme." As an English language learner, Shy repeatedly said that she self-corrected her miscues because "it didn't rhyme." While Shy did not use the correct terminology for meaning making, Shy self-corrected many of her low-quality miscues. Shy's information from the Miscue Tally Form (see Appendix K) shows that Shy's percentages of self-corrections increased in comparison with the first two. With a percentage of 7% and 19% for her

first two readings, the percentage of self-corrections after the first two sessions went up to 25% and 17% (see Appendix K), showing that she was increasingly attending to meaning and was beginning to understand the importance of self-correcting when something doesn't make sense. As a third grader, and as one of the students that is more proficient and more intentional with her use of reading strategies, Shy was more effective in applying multiple strategies when getting to something she didn't know. In her second RMA session Shy was very reflective on her comprehending process, immediately observing when her miscues disrupted meaning, and commenting on the necessity of self-correction when the meaning was changed.

Conceptualizing and Discussing Miscues

In the third and fourth RMA sessions, the seven RTI students became more and more aware of their miscues, and they slowly developed the language to discuss them. While in the first session they responded with "yes" or "no" answers, they gradually became comfortable examining and sharing observations about their miscues. All the readers noticed the graphic similarities of their miscues without waiting for the question prompt. When Joe read "staples" for "stables" in one of the texts, he noticed the graphic similarity even before I got the chance to ask him:

JOE: I thought it really said staples, but it wasn't.

SCHULTZ: And why do you think that happened?

JOE: Well, they start with it the same way.

SCHULTZ: Tell me more about that. Yes.

JOE: No "b" here.

In this example, during Joe's third RMA session, his awareness of the graphic similarity of his miscue was evident. While in the first two sessions Joe was very brief with his answers, mostly answering with "yes" or "no," and relying mostly on my questioning, by the third session, the conversation became more fluid. Joe observed and verbalized the graphic similarity of his miscue to the expected response. Similarly, in his second RMA session in which I selected a mix of high- and low-quality miscues, Cole noticed that one of his miscues (he read "Ella" for "Ellie") was a high-quality miscue with high graphic similarity. He said: "This one doesn't count because it doesn't change the meaning." When I asked him why he thought he made the miscue, he said that his mother's friend was named Ella and he thought that it was that name because it looks similar. Cole began reflecting about his miscue as soon as he noticed it in the audio-recording, and although I only used the word miscue as a noun, he turned it into a verb, and noted that he already "miscued on it." Cole integrated not only the concept of miscues, but also the verbiage that I used in the first RMA session. He also demonstrated his understanding of the concept of high-quality miscues and his awareness of the role of miscues in comprehension:

COLE: I already know I miscued on this!

SCHULTZ: Should you have corrected it?

COLE: Yes.

SCHULTZ: Why? Well, why do we correct our miscues?

COLE: Because so we can understand the story.

SCHULTZ: Exactly. Yes. And right. And we have to make sure that what we say not only makes sense and it sounds right, but it also doesn't change the meaning.

As the RTI students became comfortable talking about their own miscues, they started noticing when their miscues didn't make sense. During the fourth and fifth RMA sessions, when I asked the seven RTI students to listen to their reading and select what they wanted to discuss, each of them chose to comment on one of their self-corrections. Self-correction is a strategy that I acknowledged in the RMA sessions and helped them realize how they were attending to meaning. An example of this was when I asked Bobby to listen to his reading and choose what he wanted to discuss, so he chose to stop the recording after reading "*These* dog wants to catch a rabbit" instead of "*This* dog wants to catch a rabbit" (Harper, 1996). When I asked him what he noticed about his reading, he answered that he self-corrected his miscue because it didn't make sense. This RMA conversation revealed that he used his syntactic knowledge to realize that his miscue did not make sense in the sentence and proceeded to self-correct it. This example also showed that Bobby was self-monitoring for meaning, and even though his miscue did have high graphic similarity to the expected response, he realized that it did not make sense. Previous miscue studies have shown that low-quality miscues contain high graphic similarities, and high graphic similarities don't indicate high-quality miscues; often, high-quality miscues do not have high graphic similarity (Y. Goodman et al., 2014).

Retrospective Miscue Analysis Engaged Response to Intervention Students in Meta-Cognition and Brought Their Focus to Meaning

During the RMA sessions, the seven primary RTI students were excited to discuss their own reading and miscues. When I asked Cole what he thought about listening to himself read and talking about his miscues, he noted, "...we don't ever get to talk about that." While in the first session they seemed a bit tense, looking at me inquisitively as to gauge if their answers were correct, they began to feel more comfortable talking about their miscues, with some of them even stating "I like saying it this way better." While relying less and less on my guiding questions, the seven RTI students began to notice their miscues with fewer replays, and they took the lead on discussing the graphic similarity or explaining why they thought they made their miscues. Jack was the most enthusiastic every time he identified a high-quality miscue, stating "Hey, that was a smart miscue!" while Cole proudly began pointing out his self-corrections.

As we progressed in our discussions, the seven students stopped referring to miscues as "bad" and embraced the idea that all readers make miscues. Inviting them to examine their own reading and introducing them to a discourse that does not frame miscues as deficits prompted the seven RTI readers toward a reframing of miscues from undesirable mistakes to a natural part of the meaning-making process (Y. Goodman et al., 2005), and they began to see their miscues as evidence of their hard work as thinkers and readers.

Participating in RMA not only encouraged the seven RTI students to take ownership of their own reading and have agency in discussing their own thinking processes, but it also allowed them to develop an awareness of the effective and efficient

strategies that they could consciously recognize and employ. While they all rapidly accepted the idea that miscues are not mistakes, the exploration of their own meaning-making process and thinking resulted in a shift from a limited word-centric perspective and sounding out strategies to a broadened awareness of their reading process and conceptualizations. This shift included not only the awareness of their own reading strategies such as re-reading, self-correcting, and using pictures, but it also included a more frequent consideration of meaning-making and comprehension as the primary goal of reading. Developing an understanding of their own processes as well as of new reading conceptualizations, they began to focus on and celebrate their successful strategies, reframing the way in which they regarded miscues. From “mistakes” and “messing up,” miscues became proof of diligent work to make meaning while reading. Participating in the RMA discussions encouraged students to see their own strengths and to see themselves as more like the good readers they identified in the initial interviews. For example, when I asked Jack what a good reader would do when they got to a word they didn’t know, he stated, “The same things I do!”

While exploring the question that guided my exploration into how RTI readers develop and reflect on their literacy knowledge and reading process through RMA, I was able to learn more about seven RTI readers in primary grades.

Teachers of Response to Intervention Readers Reflecting on Response to Intervention Readers and the Reading Process as They Engaged in Miscue Analysis

While looking into how miscue analysis can impact teachers’ understanding of the literacy development of their primary-grade RTI students, I worked with six teachers who had RTI students in their classrooms. I met with the teachers for two individual

interviews and five teacher groups sessions. During these teacher discussion sessions, I facilitated five group sessions and activities around miscues, the miscue analysis process, and the development of RTI readers. In the first group session, the teachers shared their initial understanding and utilization of miscue analysis in their work with RTI students and voiced their reflections on the reading process of the young readers. As our group meetings progressed, we discussed the insights that a teacher can gain from examining a reader's miscues, and how this information can be used to inform the literacy instruction of developing readers.

Teachers' Initial Perceptions of Response to Intervention Students

The data from the initial individual teacher interviews reflected the teachers' perspectives and their initial understandings of the literacy development of their RTI students. The six primary grades teachers initially perceived the RTI students' needs primarily through the lens of word-centric reading approaches.

One of the questions I asked each teacher in the initial interview prompted them to elaborate on the needs of RTI students and the focus of their reading and literacy instructions with RTI students. Cat, a second-grade teacher, noted, "They need help with phonics and phonemic awareness skills. They need help with really understanding the different reading strategies to be able to work independently or read independently or fluently." Cat's instructional focus echoed the emphasis on phonics and phonemic awareness that has been implemented in the county as a consequence of the new policies outlined in Maryland's Ready to Read Act (2019). This policy shifted the focus of teacher professional development topics to phonics and phonemic awareness, both at the county and school level during the 2020–2021 school year. Like her colleagues, Cat

believed that phonics was one of the most important skills that the RTI students needed to acquire. She noted that she tried to incorporate phonics into all her guided reading lessons. Cat also mentioned that her RTI readers don't self-correct, and that they need more work with self-monitoring for meaning. Cat also mentioned understanding vocabulary and word identification as areas of need for her RTI students. Cat's observations indicate that she believed that RTI readers need instruction in a variety of areas aside from just phonics. Holly, a second-grade teacher, believed that RTI readers needed more work on decoding. She noted:

I feel like we spend a lot more time focusing on individual words, and blends and digraphs, and how letters sound. And if there's this letter in the beginning with this other letter, what does that make? And the changes . . . which I feel like English is very hard to teach them because you know, when you have like the double "e" it's going to make a different sound. And so just really focusing on sounds.

The observations of Holly, Mary, and Violet showed that they also regarded RTI students as needing more instruction with phonics. Mary's comments on the readers' need to focus on words reflected the emphasis on accuracy that has been used as a measure for growth in many of the school-based reading assessments. Holly's observations regarding the students' need to master basic phonics skills echoed the new focus on phonics instruction at the school and county level, following the implementation of a new phonics screening assessment. Mary, a second-grade teacher, also shared that she focused on phonics and mediating word identification with her RTI readers, as well as using context clues and monitoring meaning:

I find myself breaking apart words for like helping them break apart something and then put it back together. Something that makes sense, making their sounds, putting the correct sound to the vowel, depending on where it is in a word. Um, and using all of their clues, all their context clues, being able to like pass up a word and then go back to it, like reread that, read over a word, complete that sentence and go back and see if they can figure that out. Um, with all of those, with the sounds and the letters, and then what the sentences mean. So, like trying to find the meaning of the sentence to go back and find difficult words in texts.

Like Holly, Mary also believed that her RTI students needed more work with basic decoding skills, and phonics, as she indicated in her description of how she scaffolded them when they got to a word they didn't know. She named chunking and blending as the primary strategies that she modeled for her readers, reflecting the belief that accurate decoding is essential to comprehension. Mary also mentioned meaning-focused strategies, sharing her belief that RTI students need to be taught multiple strategies for meaning-making.

Similarly, Violet, a third-grade teacher, described RTI students as students who "don't have word attack strategies and skills." Violet noted that RTI students lack comprehension and that she believed that RTI students needed decoding instruction first, before being taught other skills and strategies. Violet elaborated on her perception of the needs of RTI students, stating her belief that the literacy development of RTI students needs to be scaffolded by sequencing the sets of skills to be taught. Violet's perception aligned with the philosophy of the newly adopted curriculum from the 95% Group, and the most recent teacher professional development trainings which advocated for teaching

a sequence of core phonics components to “close skill gaps for all students” (*95 Percent Group*). Violet stated,

Some of those basics have to come first so that they can read. And then after that, we would be kind of focusing on the comprehension piece, but I feel like for a lot of the RTI readers, that they need more basic strategies of actually reading the words and understanding the word parts and you know, how they all work together first.

This teaching approach reflects the simple view of reading, which has been emphasized in teacher professional development since the implementation of the Ready to Read Act (2019) in Maryland.

Julian, a young second-grade teacher, who noted that good readers are the ones who read fluently, shared that one of the things he mostly works on with RTI students is word attack skills, such as sounding out unknown words. This is how he described his approach to scaffolding his RTI students:

I try to encourage them to sound it out, segment the word down, look for a word that they might know in there. Like the other day we were reading, um, a word and it had the word “be” in it. I’m trying to think what it was, what the word was, but it had B E. And so, you know, I, I tell him, when two vowels go walking, the first one normally does the talking, you got to ease, it’s going to make the sound, but you also have the word “be.” And so, I tried to show him that the word was there and most of the kids, um, that were, that are in my lower group could figure out that was the word. And then they knew that the word.

Like Violet's view, Julian's view of skill sequencing in his reading pedagogy reflected his understanding of the RTI students' development as a process that is based on the mastery of decoding skills.

Cora, a first-grade teacher with over 30 years of teaching experience, noted that RTI students lack basic skills, and that she focused her instruction on three main skills: picture clues, decoding, and vocabulary. When I asked her what RTI students needed the most work with, she enumerated the following:

Picture clues are number one, I do the decoding and then I try to go over the key vocabulary related to the book. Like if it's hatched, because that's about a duck, or if it's short vowel words that we've been working on, I like for them to not even read the words on the page, but scan the page, take your finger, track along and see if you can find a word, you know, with RTI, kids might even have to start with seeing, find a word that has "a" in it.

Cora believed that RTI students were intimidated by reading text, and she thought that going over challenging words before reading may ease her students' anxiety related to reading. From her many years of teaching experience, Cora described her RTI students as being scared when put in front of a book. She thoroughly described her perception of her students' feelings when having to apply their literacy skills and knowledge to navigate text. Cora noted that "It's like a scary pit in your stomach feeling when you have no idea what that says, you know, decode, look at your picture clues. What do you think that word might be?" Cora also found basic reading skills such as knowledge of letters and sounds essential in the literacy development of RTI students, remarking that it is one of the areas she focuses on teaching first:

Well, first I have to make sure they know all the letter sounds and the vowel sounds are key. And um, with my young, with the RTI kids, I really do. I honestly focused on the short vowels more because, um, they're just so crucial to a lot of their, you know, level of vocabulary at that point. And so that like they got to know those sounds going to help them do the decoding part. Because if I know, if they don't have the sounds, I got to go backwards and work on that again, which I usually do with those kids usually do have going back to those vowel sounds because they can't remember. And you know, they're hard—the short vowels are hard. Yeah. So similar, but just getting those sounds down so that they can do the decoding.

Cora, Mary, Violet, Julian, and Cat acknowledged that their RTI students have instructional needs in different areas of literacy skills and strategies, and they all reported similar pedagogical approaches to the instruction of RTI students. This approach involved teaching a sequence of skills focused on decoding first. However, Cora noted a variety of other skills that she taught in conjunction with basic decoding, acknowledging the complexity of reading, and the vast array of skills that are essential to the literacy development of RTI readers.

Violet, a third-grade teacher, shared that she focused on word attack strategies with her RTI students, as she believed that “for a lot of the RTI readers, some of those basic strategies have to come first,” reiterating her understanding that phonics instruction and decoding-based strategies are central to reading instruction for developing readers. Like Violet, Holly noted that her first action in scaffolding a student who gets stuck on an

unknown word was to prompt the student to look at the word and beginning letter, using the following prompt:

What's it start with? What sound does that letter make? Is there anything you see at the end? Do you know any words that might look like, and then we'll skip it if they're not, if they just insert it, I'll skip it, but go through the rest of the sentence, just say "hmmm," then we'll come back to it to see what would make sense.

If sounding out didn't work, Holly shared that she usually encouraged her students to keep going and try to use context clues and then go back to the word. Her response reflected her belief that decoding strategies are central with her RTI readers, but acknowledged that she also taught her RTI students the use of context clues and re-reading.

Response to Intervention Students' Picture Use

Aside from decoding strategies, Cora and Julien noted that they stressed the use of picture clues with their students. Both noted that their students don't often notice the connection between text and illustrations, and that they must explicitly teach picture use in order to help their students with word identification. Julian mentioned his observation related to RTI readers' picture use:

I noticed that they usually, they don't make the connection of using the picture clues. A lot of times I think it comes from the parents probably saying, you know, look at word, don't look at the picture, and not realizing that that's not really great for them.

Mary also noted that she thought RTI students weren't proficient with using picture clues, as they tend to be more focused on words. She said "Unfortunately it

doesn't connect with the illustration as the clues there because they're not proficient with their words. A struggling reader really has to focus on his illustration." This showed that Mary believed that a lack of proficiency with decoding hindered the RTI students from making the connection between text and illustrations. Like Cora and Julian, Mary also acknowledged the importance of teaching about the role of pictures and illustrations in scaffolding the literacy development of RTI readers.

Response to Intervention Students' Self-Monitoring and Comprehension

Another strategy that Cat and Holly reported focusing on in their teaching of RTI students was self-monitoring. Cat shared that she prompted her students to attend to meaning by asking them "Does that make sense?" Holly also noted that her RTI students were not self-monitoring, and that their reading was often robotic. Holly reported that she worked on prompting her RTI students to monitor their meaning and making sure that what they read made sense. Holly shared the following observation about her RTI readers: "They just kind of say a word that they think it could be, and it might not even make sense and they just go with it," which she addressed in the same manner as Cat, by asking her students if what they read made sense. Holly also expressed her wish that her RTI readers would do better with self-monitoring their reading and self-correcting. She reported that she usually complimented her students when they were able to self-correct, but that she noticed the use of self-correcting strategies more with her proficient readers. Holly mentioned that she was trying to let her RTI students know that it's acceptable to go back, attempting to normalize and reinforce self-correcting with her students. Mary also noted the need to emphasize self-monitoring strategies with her RTI students, because "If they read a sentence, and if it has an error in it, they just bypass that error."

Holly, Mary, and Cat acknowledged the importance of prioritizing meaning with RTI readers, and the need to emphasize reading strategies that support meaning-making and comprehension.

As to comprehension strategies, Julian noted that he focused on retellings and teaching his students to look back in the book for essential information. Julian expressed that he used questioning to prompt his RTI students to think about the text and focus on the main idea. He used sticky notes on which his students could write or draw pictures to help them remember what they were reading. Julian noted that his RTI students provided brief retellings, and he had to use more questioning to check for comprehension. Julian acknowledged the importance of facilitating dialogue and employing questioning to emphasize comprehension and retelling strategies in order to get better insight into the RTI readers' understanding of text.

Regarding the RTI students' comprehension, Mary shared that she noticed that RTI students were getting stuck on things that are insignificant to the story, and she expressed her belief that readers can comprehend "if they get past the words." Mary elaborated that as long as they can read the words, her RTI students' comprehension is "pretty good." This statement reflected Mary's understanding that comprehension is dependent on accurate word reading.

Violet observed that some of her RTI students "were fluent in reading, but they lack comprehension." Due to the assessment tools that Violet used at the time, such as Fountas and Pinnell's BAS, aspects such as fluency and comprehension were often scored and interpreted separately. *Fluency* refers to how many words per minute a reader reads correctly, while *comprehension* refers to the readers' ability to answer questions

within, about, and beyond the text. Like Mary, Violet attributed this occurrence to the challenges that RTI students have with word attack and lack of self-monitoring their own comprehension. Violet's observation of high speed and accuracy in reading (to which she referred as *fluency*) is a consequence of reading instruction that involves reading of flashcards, random, or nonsense words that conditions students to read words in isolation, with no context for comprehension (Goodman et al., 2005). While all six teachers reported that good readers are the ones who can think about the text and are able to retell and discuss what they read, most of the strategies that they reported as employed with their RTI students were focused mainly on basic skills and word attack strategies.

Teachers Initially Perceived Response to Intervention Readers as Lacking Motivation

Another aspect that emerged in the initial interview with the six teacher participants was their perception of the motivation of RTI students. Violet, a third-grade teacher, described her RTI students' motivation. She mentioned the following about her experience:

The less proficient readers have a negative attitude that's kind of stuck with them. I think early on if they were not as successful reader, then they have this, you know, storm cloud over reading. And I think once they see reading as being difficult, or they're not able to attain, you know, goals within reading, I think a lot of these less proficient readers just kind of don't like it. And I think it takes a lot for them to change their mind about reading. It takes, you know, a special teacher or a special something special for them to gain that confidence. Um, but I think it starts with some of these readers just don't like it, they don't, they don't think they can do it, um, confidence issue, or maybe they don't believe in themselves.

Violet's perspective was similar to Cora's, who also remarked that her RTI students were uninterested and unmotivated. Cora stated, "I think one of the big ones is lack of interest and motivation. Like, you know, I certainly don't have a book on Minecraft, which is what some of them are into, whatever that is." Cora highlighted the challenge of finding reading materials that match students' interests, indicating that the curriculum materials were not always engaging. Cora attributed the lack of motivation to the limitation of reading materials that don't match her students' interests. Cora's vast experience acknowledges the importance of reading materials in the reading instruction and motivation of RTI students. Julian attributed the lack of motivation of his RTI students to the challenges of decoding unknown words, and to the difficulty of the text that RTI students were asked to read, especially when they were expected to read grade-level text during whole group instruction in class. He responded,

I think motivation is a big part because I think they don't really have a good one. Everybody always says, just get them reading a book. Well, if they can't read most of the times, they don't want to read. So, it's really important to figure out what you can do to motivate them, to want to read a book.

Julian's observation was corroborated by what four of the RTI student participants shared regarding their reluctance to read out loud in class, and their preference for small group reading. In small groups, the RTI students read books at their instructional level, either during guided reading in class, or during the reading intervention sessions.

While only three of the teacher participants, Cora, Violet, and Julian, directly discussed motivation in relation to RTI students, all seven teachers expressed their

frustration with finding materials to match the interests of their RTI students, as well as finding texts of interest that are at a level that the RTI students can read successfully.

Miscue Analysis Provided Opportunities for Teachers to Develop Deeper Understandings of the Reading Process

During the individual interviews and the first teacher group session, I asked the teachers to define miscues. All teachers described *miscues* as “errors” in reading, with some of them providing examples of “errors.” For instance, Cora defined the miscue as “when a student substitutes a short vowel for a long vowel,” and she attributed it to the fact that the students “don’t look at what they’ve been taught, they don’t look at the clue to know this is a long vowel.” Similarly, Holly also described a miscue as students making predictions by using the first letter in a word, while Julian provided an example from his guided reading group lesson, when one of his students didn’t remember the silent “e” rule. All teachers attributed miscues to the perceived weakness of the readers in phonics, and “guessing” using the first letter in the word. These beliefs reflected their understanding that reading depends on the ability to accurately decode, and therefore miscues are produced as a result of “inaccurate” decoding.

Reading Models and Miscue Discussions

In the second group session, I asked teachers to share what reading models they were familiar with, followed by a discussion about miscues. As to the teachers’ familiarity with the three reading models, Holly, who was also a graduate student in a literacy program, stated that she remembered being introduced to a couple, but that she did not remember anything about them. Violet noted that she was familiar with the simple view of reading that she was introduced to in one of the recent literacy

professional development sessions for teachers. Next, I shared a handout from the 2001 NCTE Reading Initiative which presented the three reading models: the phonics or subskills model, the skills model of reading instruction, and the holistic model. I summarized each model, to provide an opportunity for the teachers to explore and discuss how different theoretical frameworks view reading. I used the three reading models (NCTE, 2001) to introduce the teachers to the holistic model for them to become familiar with the reading models that stand at the basis of miscue analysis (Y. Goodman et al., 2005). As Y. Goodman et al. (2005) explained, “To understand this reading theory . . . it is necessary to explore the interrelation of the language cueing systems and the reading strategies that occur as reading takes place” (p. 29).

During the miscue discussion, I asked the teachers to share their experience and knowledge of miscues. All teachers had to use miscue information in some of their school-based assessments, such as Fountas and Pinnell’s BAS (Benchmark Assessment System [BAS], 2022), or running records, that used the Meaning, Structure, Visual (MSV) markings to analyze them. The teachers used miscue information in the running records that they were required to collect. The running records refer to miscues as “errors” and they provide an accuracy score as well as an analysis of the readers’ errors. The MSV marking is part of the running records error analysis that allows the teachers to identify patterns in the errors, and the sources of information that contributed to the error. The semantic cues are marked with an M for meaning, the syntactic cues are marked with an S for structure, and the graphophonic cues are marked with a V for visual (Clay, 2017).

The way in which the six teachers used this information didn't go beyond identifying patterns in order to target certain skills in their instruction. For example, Violet, a third-grade teacher who also has a degree as a Reading Specialist, noted that she observed that in RTI readers' reading: "most of the miscues are visual and they're not reading for meaning." Holly and Julian echoed that perspective as well. Julian shared how his RTI readers were "just looking at the word and calling it from the beginning, missing the end of the word." In agreement with Violet and Julian, Holly also provided an example from her guided reading group, sharing that her students "automatically assumed that the word was *rolled* when it actually said *rubbed*. They see the R at the beginning, and they just roll with it." These teachers noted how their RTI students use the graphophonic cueing system to make predictions, but they noted that their readers' predictions don't always make sense in the text as they are not always monitoring for meaning. This shows that the teachers recognized the importance of reading for meaning, even though they acknowledged that they mostly focus on basic skills and strategies in their instruction of RTI readers.

Teachers Discussing Miscue Samples from Their Response to Intervention Students

During the fourth teacher group session, I invited the teachers to bring some miscue samples from their students. I had several questions prepared to guide our discussion. First, I asked the teachers to share their observations about their reader, as well as the types of miscues they observed. Next, I asked the teachers to pick a single miscue and use the Single Miscue Analysis Form that I handed them (see Appendix E). I asked each teacher to share the selected miscue with the group and walk us through the analysis. I used the RMA questioning to ask the teachers if the miscue made sense, if it

impacted the meaning, and if there was a need for the student to self-correct. Lastly, I asked about how the analysis of those miscues informed their understanding of how their readers in RTI read.

As the six teachers brought miscue examples from their own students, and we talked about their quality and impact on meaning, they began sharing their thoughts and observations. Mary noted that her student made miscues with high graphic similarity, and the example she shared was “Kate brushed her *tooth*” instead of “Kate brushed her *teeth*.” Mary noticed that all her student’s substitutions were real words, but that her miscues don’t make sense in the context of the sentence. Mary also observed that her student had no self-corrections and that “all of her miscues had the same beginning and ending sounds.” Based on this information, Mary concluded that her student “is not blending in the middle,” so she would need more work on blending middle sounds. Mary used the miscue information to make an instructional decision on the area of need of her student.

When Cora shared her student’s miscue, she chose to focus on the fact that her student omitted reading all the title headings in the text. Cora believed that her student omitted reading the heading because she did not know how to read the word “therapy” in the title “Therapy dogs.” Cora noted that her student omitted reading the word “therapy” throughout the story, and that impacted her student’s comprehension. Cora noted that her student made some non-meaning-changing miscues as well, and that not all her student’s miscues were concerning. Her reflection indicated that she acknowledged the difference between high- and low-quality miscues. Cora noted:

I just think the miscues take a variety of faces, you know, and we can see that in our own reading and with the kids, it’s just, just, it’s a lot of different ways to

interpret them and to see the mistakes. And it's because us as educators can look at miscues to help guide instruction and help us figure out what that kid needs.

Julian, Violet, and Holly also noted that they use miscues to see if their RTI students are monitoring for meaning. Julian noted that his student read "crawls" for "curls," or "silver" for "service," which showed him the child was not monitoring for meaning. He also noted that his student's miscues "had a lot of the same letters but some of them were in different positions," which showed that Julian also observed the graphic similarity of the miscues. When I asked Julian about the students' comprehension, he did mention that his student's comprehension was affected, as she was not monitoring meaning during her reading, and most of her miscues did not make sense. This shows that Julian reflected on the impact of miscues on his student's comprehension.

Violet shared that she sometimes used miscues to discuss reading strategy use with her students, especially when she worked with students during guided reading groups. She noted that if a student paused when getting to an unknown word and tried to sound out the word, she often took that opportunity to remind them of additional strategies that they can use in reading, such as reading to the end of the sentence and using context to help with the word. This was echoed by Cora and Holly as well, who also shared that they focused on teaching their students multiple strategies for meaning-making and word identification. Holly mentioned that she prompted her students to re-read the sentence and think of what word would make sense, while Violet mentioned how she encouraged her students to use chunking. Holly noted that she also encouraged her students to look for patterns that they recognized, or she told her students it's OK to "skip" the word and read to the end. Violet, Cora, and Holly acknowledged the

importance of teaching their RTI students a variety of sociocognitive strategies for meaning-making along with basic skills and comprehension strategies.

Cora mentioned that she explicitly taught her students to examine illustrations, but that she also focused her instruction on keeping meaning as central to reading:

I would have to work on making sure what she's saying makes sense. But what, and thinking about what she's reading, I would probably work on phonics, sounds, and maybe vowel ones with her, because it seems like she's already got the beginning and ending sounds in most of the words. So, I would have to just work on making sure the word makes sense, making those vowel sounds correctly, and then putting it out together.

Cora mentioned that she would focus on working with her student on monitoring meaning, but also on additional skills and strategies such as basic phonics skills in context. She mentioned she would work on “making sure the word makes sense,” showing that she recognized the importance of meaning-making in reading. The six teachers were aware that sounding out is not always effective, and that they need to provide their RTI students with a multitude of tools and strategies to navigate text and become effective and efficient meaning-makers.

Examining Their Own Miscues Fostered Teachers' Awareness of Their Own Reading Processes

In our fifth teacher group session, the six teachers had the opportunity to examine their own miscues. I invited the teachers to record themselves reading a fragment of O. Henry's short story “The Purple Dress” (1907/2019) and to mark their miscues on a copy of the text I handed them before the meeting. According to Y. Goodman et al. (2005), the

reader must be unfamiliar with the text, and as the teachers are experienced, adult readers, selecting an authentic text that was difficult ensured that they would have the opportunity to employ their use of cueing systems as they got to something they didn't know (Fahrenbruck & Liwanag, 2021). Using the RMA guiding questions and the single miscue analysis form (see Appendix E), I invited each teacher to self-select one of their miscues for analysis, in the same way they analyzed their RTI students' miscue samples in our previous session.

Violet noticed how her reading speed changed as she navigated reading "The Purple Dress" (Henry, 1907/2019), acknowledging that she felt pressured to read for accuracy, so she slowed her reading down. She noted:

It was funny. I took the printout as I was starting to read it. It was so difficult, and it's been a long time since I've had to slow down because I've had a difficult time reading. I took my time a little bit more knowing I only had one chance with it.

Violet observed how her reading speed changed while reading challenging text, but also because she focused on reading with accuracy. Violet attributed her miscues to her slow reading speed, saying "I've noticed a whole lot of mistakes. Cause I slowed down. I think if I read faster, I would have read it for meaning and sort of how it actually was. And I wouldn't have missed the mistake." Violet admitted that she was so focused on not making miscues that she did not attend to meaning, and had she attended to meaning more, she would have made fewer miscues. Violet reflected on the effort it takes to read with accuracy and speed, recognizing how her meaning-making process as a reader was hindered due to her attempt to read with speed and accuracy (see Figure 5). Violet also noticed that even if she read slowly, she still made some miscues:

Instead of genial, I said gentle, and then I went back, and I was like, actually, that's not gentle, but I don't, I didn't even know what that word was, to be honest. So I try to sound it out. And then when I was done reading, I actually had to look it up to figure out the pronunciation and the meaning.

Figure 5

Violet's Single Miscue Analysis

Miscue: gentle for genial
jean-yal

Analysis:

1. Does the miscue make sense? Yes
2. Does the miscue sound like language? Yes
3. Was the miscue corrected? Yes (after looking up)
4. Should it have been corrected? Yes
5. Does the miscue look like or sound like the way the text is written?
SAME Beginning & Ending Sounds
6. Why do you think the reader made this miscue?
genial - not so common
not a known word to me
7. Did that miscue affect the reader's understanding of the text?
NO

*COMP → HARD!

Violet shared that she thought she made the miscue because she encountered unfamiliar vocabulary, and that it would have been impossible to self-correct because she didn't know its meaning. She also reflected upon the fact that her prediction about the word meaning was not accurate when she looked up the word in the dictionary. Reflecting on her miscue, Violet also noted that overall, she had a broad idea of the story, but that her focus on reading at a rate that she considered acceptable, and without miscues, detracted from her attention to meaning.

Like Violet, while reflecting on her miscue, Holly pointed out the fact that even though she was eventually able to sound out the word, she did not know the meaning of it:

I said gallon, and then I was like, I guess it's galloon. I had to stop myself like, wait a minute! I think there was a double "o." Saying "gallon" and then "galloon," I don't even know if that's correct. Um, when thinking about my miscue, I don't even know if I fully understood this passage, but I mean, I get like, it was about the color purple and how things were different back then. But, um, I mean, it did kind of impede that meaning, but visually it just, "gallon" is what came to me.

Holly explained how she self-corrected one of her miscues, but she was still unsure if she read it correctly due to the unfamiliar vocabulary. Holly also acknowledged that her comprehension was affected by this unfamiliarity, which showed that she also began reflecting on the impact of miscues on comprehension.

When sharing about examining her own reading, Cora, who also expressed that she struggled with understanding the vocabulary in "The Purple Dress" (Henry, 1907/2019), reflected on her RTI readers: "Reading this did make me really feel like an RTI reader because these kids only say words that are familiar to them, and they just keep going." Cora reflected on the importance of vocabulary knowledge in comprehension. She noted that even though she read the word "galloon" correctly, she still did not know the meaning of the word. She connected this to the experience of her RTI readers, acknowledging that while they may be able to read a word they don't know, reading a word correctly does not guarantee comprehension.

Teachers Reflecting on Their Reading Process

As the six teachers reflected on their miscues, they began to discuss and identify the effective reading strategies they used to read “The Purple Dress” (Henry, 1907/2019). Cat shared one of her self-correction miscues: “When I read ‘he,’ I was like, wait a second. I thought I had already read that it was a girl. And so, I went back to find the text evidence, and I went back, and I saw a woman.” Cat realized she read “Mr.” instead of “Mrs.” and she went back and re-read. Cat highlighted how she monitored for meaning and how she self-corrected as she went back and re-read. Cat said that she felt like one of her students as she navigated the text “A Purple Dress” that was difficult for her to read. She also observed that reading a challenging text at first sight is not as smooth as she expected. This experience countered Cat’s expectation that her reading, as an experienced reader, would be fast and accurate, and it made her think of her RTI students’ experience with reading unfamiliar text.

Julian and Violet noted how often they had to go back and re-read the text, as they encountered unfamiliar vocabulary. They both commented that in doing that, they were trying to make use of context clues to make sense of the text. Violet noted how she miscued the word “plaited” as she read it as “pleaded” the first time she encountered in the text. (See Figure 6.)

Figure 6

Selected Sentences That Violet Read From “The Purple Dress” (Henry, 1907/2019, p.25)

“ — soutache braid over a surpliced white vest; and a **plaited** basque and –
“Sly boots — sly boots!” repeated Grace.
“ — **plaited** gigot sleeves with a drawn velvet ribbon over an inside cuff.”

As Violet read further, “plaited gigot sleeves” (Henry, 1907/2019, p. 25) she noted that she self-corrected, as she used her background knowledge “When I saw ‘sleeves’ I knew that word was ‘plaited’.” Julian, who also miscued the word “plaited,” reading it as “pleaded” was unable to self-correct. Julian noted that he was lacking the knowledge to do so, but he shared that he realized he could still understand the story, so he decided to keep on reading. This shows that Julian was reflecting on his meaning-making as he decided to keep reading.

Holly reflected on the quality of her own miscues and shared that she wouldn’t mind her students making miscues as long as they self-corrected when they made low-quality miscues, because that meant that they’re monitoring for meaning. Holly acknowledged that to her, meaning-making is more desirable than accuracy. Mary also reflected on her own reading, noting that she read “The Purple Dress” for meaning. Mary did note that she read slowly, but she did not mention her accuracy. She simply stated that she read the text for meaning because she “already knew all the phonics” and she didn’t have to sound out the words. Mary’s reflection on her own comprehension reflected she attributed her meaning-making to her decoding skills.

As they reflected on their own reading comprehension, all six teachers acknowledged the importance of background knowledge (whether it’s vocabulary, conceptual, or linguistic). As I noted in the examples above, all of them identified meaning-making as the desired outcome of reading, with Cora and Holly noting that their reading with high accuracy did not necessarily equal comprehension.

Eye Movement Miscue Analysis Discussions with Teachers

As I revisited the holistic/comprehensive reading model from the NCTE (2001) Reading Initiative Handout and explained how miscue analysis provides valuable information about the reading process as well as the strategies that a reader uses, we moved on to the application part, and watched an EMMA video recording of a third-grade RTI student reading. The EMMA video consisted of a recording of the computer screen with the cursor representing the eye movement of the reader moving across the text, as a third-grade RTI student was reading a text that I created for her to read during my pilot study. After playing the video for the teachers, I asked them to share their observations regarding what the reader was doing, observations regarding the reader's eye movements in relation to her voice, what the reader looked at, miscues the reader made, and what they noticed in relation to what they know about reading.

Cat noticed how the student's eyes/cursor seemed to move faster than the voice. Holly also noted about the student in the EMMA video that "when she would get stuck, her eyes would stay in that one area, but then once she knew something she really jumped ahead." Both Cat and Holly noted how much this reader seemed to rely on "guessing ahead," which is how they referred to the RTI student's linguistic predictions as she read. This reader made many substitution miscues, and she had many high-quality miscues as she read the text. Both teachers also mentioned how the reading rate changed based on the RTI reader's familiarity with elements of the text. Cora also noted the changes in the reading rate of the RTI student in the video, noting that "when she got to some parts, her tone changes and she was like excited, and then she gets stuck, and you go back to silence."

Cat and Cora both observed how the reader's miscues had high graphic similarity with the text. Cat said:

to me it looked like she was relying heavily on the beginning letter sounds and not really thinking about the rest of the word, or definitely sometimes not reading for meaning because, you know, some of the sentences didn't really make sense, so she didn't really go back and try to correct it. So, I guess that's what I noticed: she was relying heavily on the beginning letter sounds.

Cora noted that "she called the first letter she sometimes didn't realize that did not make sense." The teachers realized from attending to this reader's miscues that she was indeed over-relying on the graphophonic cueing system, and she wasn't consistently monitoring for meaning, as they noticed that some of the substitution miscues did not make sense. For example, Holly pointed out how the reader substituted the word "chipmunk" with "cricket" in the sentence "The chipmunk jumped." Since some of the characters in the story were insects, Holly pointed out that this miscue, although meaning-changing, shows that the reader was probably thinking about the other insect characters in the text, observing how the student's miscue was not random, speculating that it was still connected to the theme of the story.

Eye Movement Miscue Analysis Reflections and Connections to Literacy Practices

The discussions around the EMMA video engaged teachers to reflect upon their own pedagogy. Holly shared her thoughts about the directionality of reading, noting that the RTI reader's eye movements were non-linear: "We teach the direction of reading from left to right, but I think there's also that so much in between that takes into account that we don't think about as we're teaching kids, it's just something they do." This shows

that Holly's emerging understandings prompted her to reflect and evaluate her literacy instructions, as she observed that reading is not a linear process. Observing how the student scanned the text and illustrations, and how when the student paused, her eyes were continuously scanning the text as she was working hard to read an unknown word, Holly acknowledged that teachers should be aware of that, and that pausing is normal during reading.

Cat also acknowledged the RTI reader's hard work in the video, noting in her reflection:

I really enjoyed the one session where you showed us that eye movement. That was the most interesting to me because it wasn't what I was expecting to see. So, it was just really interesting to see, you know just how many times your eye is move across the page, you know, even to sort out one single word, right. It's a lot of work. And it's just, they're looking at a lot of different things, you know, so that's something I would have never guessed."

Cat was surprised to observe what the student did when she paused during oral reading, and how much work went behind that pause that is often perceived as a deficit. Holly also shared her amazement: "It's just crazy to think that all of that's going on during that little bit of time." Holly and Cat's observation of the pause prompted the teachers to discuss the importance of wait time, and how challenging it often is to allow a reader the time they need when constrained by time limitations and large numbers of students in a classroom. Violet noted, "I guess, even though it's awkward and more time crunch, it's probably good to give them all that wait time because they are trying to figure it out, so longer than just a couple of seconds."

Cora's observations about the students' picture use opened a discussion about her own practice, as she acknowledged the role of pictures in making meaning of text. Cora shared how important she thought pictures were in reading, and how she worked on teaching her first graders to look at the illustrations as they read. This shows that Cora viewed reading as a complex process that involves more than just decoding. Cora went even further to reflect on the new curriculum requirements that "don't have us do that anymore" and instead encourage teachers to prompt students to use phonics primarily. Holly chimed in, sharing her own experience with the changing of teaching requirements. While in the past, teaching the picture-to-text connection was included in the curriculum, Holly noted that with the new emphasis on phonics, teaching students about picture use is no longer expected: "I remember somebody telling me don't do a picture with them anymore."

All six teachers agreed that not just the RTI students, but all students need explicit instruction in using multiple cognitive strategies and using the language cueing systems with flexibility and balance. The teachers acknowledged that teaching students how to read requires more than just teaching phonics, and that RTI readers need instruction in a variety of skills and strategies. Due to the overemphasis on phonics as a consequence of the Maryland Ready to Read Act (2019), Cora expressed her frustration that the new curriculum requirements focus mainly on phonics and skills that are mainly taught in isolation:

I feel like the lower readers are still not making that connection. Yes, they know that the letter "e" makes the "a" say its name, but they're not thinking that way, they're not applying it. And that's discouraging to us, you know, as teachers, but

as you and I have talked before, not all learners learn like that. You can't, it's not a one size fits all, then we are going to just keep hitting these walls.

As the teachers reflected more on their understanding of the reading process, they began making connections to their own practice, evaluating not only their pedagogy, but also the curriculum requirements and the impact that their teaching has on all their students, including the RTI readers in their classrooms.

Teachers Implement Their Knowledge of Miscue Analysis in Their Work With Response to Intervention Readers

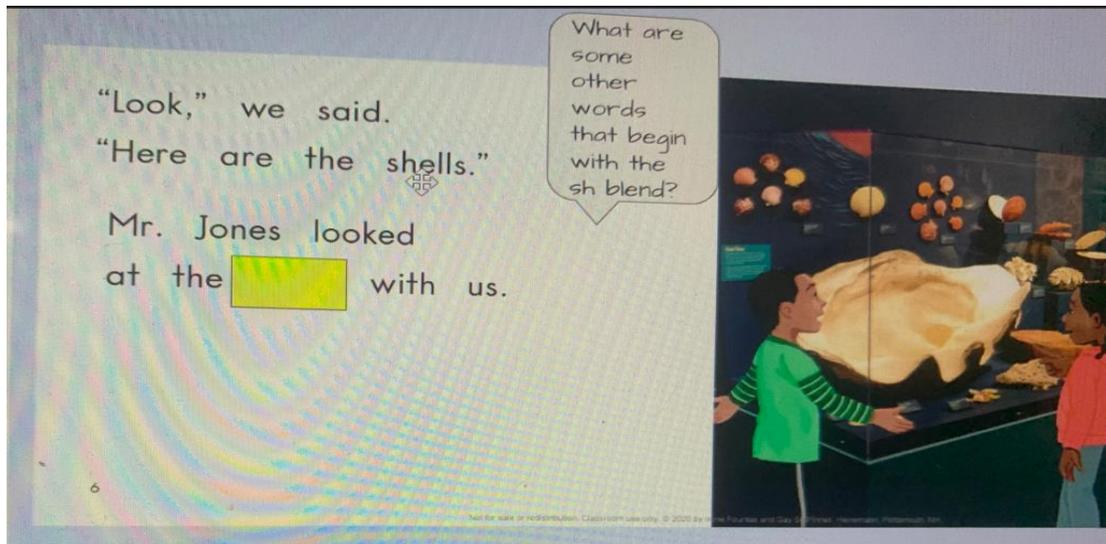
After five hours of miscue discussions during the teacher group sessions, I asked the teacher participants to share how they addressed miscues with their students, and how they used what they knew about miscues in their work with their students. Cora, Holly, Violet, and Julian all shared that one of the most common ways in which they addressed a student miscue was by asking their students: "Did that make sense?" Cora noted that her next step after asking a student that question is providing some scaffolding to assist her students, depending on what the miscue is. For example, she noted, "I sometimes point to the picture if the word is in there, or I ask them to tell me the beginning sound." She noted that she usually prompted her students to use a certain strategy depending on the miscue she was addressing. Violet noted that she sometimes discussed one miscue with her whole group, writing the unknown word on the board and sending the students back to the text, asking them to share what strategies they could use to figure out what they didn't know. She noted she uses miscued as an on-the-spot teaching moment in a small group.

Mary acknowledged the importance of monitoring for meaning, and she said that the quality of miscues made it evident if her students were monitoring for meaning or not. She recognized the importance of scaffolding her students to use syntactic and semantic cues as they read. (See Figure 7). She said:

I've been trying to use, like, predictable text a lot with these readers and like covering up the predictable words so they can see, like, "I can really actually predict what this next word is going to be" without knowing how it's spelled. And then, like seeing if that and showing them like you know that's a strategy.

Figure 7

Cloze Activity From Mary's Guided Reading Lesson



Through using this cloze activity, Mary is working on focusing her students on reading for meaning by removing words from the original text and allowing her students to use different linguistic and semiotic cues in the absence of the written word.

Cat shared that she tried to address the same issue: "I feel my kids stick with one strategy, and then they need to be reminded, like, you know, what else can we try, what other strategies have we tried together." She noted that prompting her students to use

different strategies while they are reading the text out loud and addressing the miscues by asking her students “Did that sound right?” facilitates individual discussions with students about their strategy use.

Julian noted that one of his most significant takeaways from our miscue analysis discussion sessions was the fact that he will never look at running records the same, and that discussing the information that one could get from miscues has helped him better understand the miscue-based assessments that he was required to administer as a teacher.

While the lesson plans the teachers shared did not specifically state anything regarding miscue analysis, the fact that teachers included activities that prompted students to use multiple strategies in reading was evidence that they were applying what they shared with me during the teacher discussion sessions and in their final interview. Both Mary and Violet used cloze activities in their lesson plans and in the small group reading activities I observed. The teachers used various prompts to focus their students on meaning, with Cora, Julian, Cat, and Holly asking their students “Does that make sense?” when their students made uncorrected low-quality miscues during their oral reading in the guided reading activity I observed. All six teachers prompted their students to do picture walks before reading, and all of them previewed and explained the new vocabulary in the text. Cora specifically asked her first-grade students to look at the picture when they get stuck on a word, or prompted them to read until the end of the sentence and use that information to predict what the word is. Violet observed one student’s miscue patterns during the guided reading oral reading activity, and she prompted the student to attend to the final “s” in some words. For one example, she explained how the “s” or “es” suffixes indicated a plural, and that if the student leaves it out, it changes the meaning of the

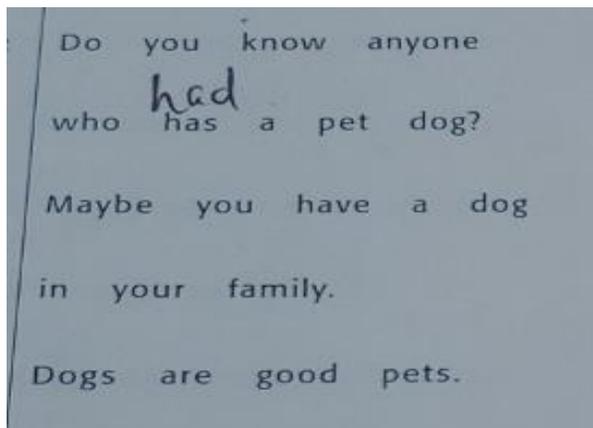
sentence. Julian used one of his student's miscues as a quick reminder of the silent "e" rule, telling the student that we never pronounce the final "e" at the end of a word—that's why we call it "silent."

Evaluating Response to Intervention Readers Using Miscue Analysis

As part of their mandated school-based assessments, all six teacher participants had been using miscue-based assessment tools to evaluate and group their students for reading instruction. They used Fountas and Pinnell's BAS to evaluate a child's reading level based on the assessment results. While this assessment does not use miscue analysis, it does require teachers to mark miscues on a transcript of the text (see Figure 8) and analyze and tally the miscues using the MSV markings. This assessment also includes an accuracy score based on the percentage of words read correctly and a comprehension section that includes a retelling, as well as answering within, beyond, and about the text questions.

Figure 8

Sample of Typescript from School-Based Assessment



Julian noted that while he was trained on how to administer the assessment, he was never taught how to use the information to further inform his instruction. In the last individual interview, after our five teacher group sessions, Julian mentioned that his understanding of miscues had broadened, and he could make more sense of the miscue information in the light of our group discussions. Julian shared that he primarily used miscues to identify miscue patterns and address the phonics skills necessary for his students to read those words correctly:

I really liked talking about the miscues, 'cause it's been something that I really didn't focus a whole lot of time on. I just looked at okay, they missed it. It was a miscue. I didn't really focus on it being, you know semantic or syntax, or something like that. And I just, when I would go to do the BAS, I would just put a tally mark, wherever, I didn't even pay attention. I didn't care. I just had to have tallies there. So, I just did it and I just went, and I was trying to get through and BAS them, but I feel like it is important to look at those things and see what type of errors they continuously miss, so that we can try to figure out and help them with other words that are there. So, I thought that was really good.

Julian acknowledged that he could use miscue analysis to identify miscue patterns and to address the gaps that may be preventing his students from reading some of the words. Holly and Cat shared that they wished they had more time to analyze their students' miscues more closely, and that they found them valuable in evaluating if the students were self-monitoring for meaning, as well as in identifying areas of need in phonics instruction. Cat noted that one of her biggest takeaways from our teacher group sessions was

Understanding that miscues are a good thing to know. You know, if we don't know what they are, they need help with them, we're not going to be able to help them. So, miscues aren't always a bad thing, they really tell us what they need as readers.

Cat shared that she used miscue analysis as an individual assessment to evaluate her students and identify their areas of need, but she also began to understand that miscues can be something positive in identifying her students' potential.

Cora mentioned that she focused her reading instruction on comprehension, so she monitored her students' miscues only if they impacted their comprehension. Cora also shared that after the five group sessions, she had a deeper understanding of how to use miscue analysis to enrich her instructional approaches: "I'm knowing the miscues, I'm following the miscues, but I'm able to pick out the miscues even better and then make a plan from there."

One of the most important considerations that developed for the six teachers of RTI students was their understanding that miscues are a natural part of the reading process and that miscues are a valuable source of information regarding a reader's processes and transactions with the text. By analyzing individual student reading samples, as well as their own miscues, the six teachers began to reflect upon and discuss their understanding that miscues can provide insights into the reading process, language cueing systems, and strategies that the RTI students use to create meaning from the text. By analyzing their own miscues, the six teachers were able to identify insights into their own thinking and reflected upon their own teaching and teaching practices.

Revaluing Processes Through Miscue Analysis

As the RTI students became involved in evaluating their own reading process by learning about miscues and their own reading, they began to reflect on how they thought about miscues, became aware of their effective strategies and strengths, and developed ownership and confidence in their own reading. The six primary teachers also experienced a shift in their understanding of miscues, reading, and RTI readers. The process of understanding and appreciating one's knowledge has been labeled "revaluing" by Y. Goodman et al. (2014).

Response to Intervention Students Learning to Revalue Themselves as Readers

Cole, one of the second-grade RTI students, was quick to understand and describe the concept of high-quality miscues and embrace the idea that high-quality miscues are acceptable. During his first RMA session, when he read "Puppies *can't* see" instead of "Puppies *cannot* see" (Harper, 1996), he quickly concluded his miscue "wasn't bad because it still made sense." During the last session, when I asked him to select his own miscue from the recording, he chose to discuss one of his self-corrections. When I asked him what he thought of his reading, he reported that he fixed a lot of his miscues. The fact that Cole chose to focus on the things he did well during his reading indicated that he began the re-valuing process and became more aware of what strategies he was employing to successfully create meaning, without regarding miscues as a negative outcome (Flurkey, 2020). When I asked him what he thought about listening to himself read in our last RMA session, and what he thought of himself as a reader, Cole said proudly "My reading is really amazing." This self-perspective contrasted with his initial lack of confidence in describing himself as a proficient reader in the initial BRI.

Jack also began to shift his thinking about miscues and accept them as a natural part of reading. He became increasingly excited to listen to himself read during the RMA sessions, and he proudly pointed out his self-corrections every time he heard himself self-correcting in the audio-recording. In the post BRI interview, when I asked him if he thought that his brother (whom he identified as a good reader) ever came to a word he didn't know, Jack noted that "sometimes he does." When I asked Jack what he thought his brother did when he got to a word he didn't know, Jack said "He tries it all and he does all the things I do." This statement shows that Jack believed he was doing the same things all good readers did, and that all readers employed similar meaning-making strategies. Jack also mentioned that he did "everything a smart reader does," which again highlights his growing confidence as a reader, as he became accepting of miscues and more aware of the numerous strategies he was using.

Shy also began revaluing herself as a reader, sharing in the post BRI that she tried many different strategies to figure out unknown words. In one of our RMA discussions, she also noted that she used pictures to help her, and I also observed her carefully examining the illustrations during her oral reading. Shy further noted with pride she self-corrected when things didn't make sense, showing that she was beginning to develop an awareness that meaning is the goal of reading. Learning about all the good things she could do as a reader during our RMA discussions, Shy began to discuss her miscues with increased confidence as she became cognizant of her strengths.

Similarly, Brad and Bobby, both named themselves as good readers in the post BRI. During the last RMA session, when I asked them to tell me what they thought of themselves and their reading after listening to themselves during our five sessions, they

both mentioned that they thought their reading was good because they self-corrected often. This shows that not only were they beginning to be aware of their effective strategies, but they also didn't regard their miscues as bad. Both Brad and Bobby noted that they read with good expression and pointed out their attention to text features as one of their strengths. This is another fact that we discussed during the RMA sessions, as we discussed the sources of information in informational text, and how we need to use everything on the page to make meaning of what we read. During their oral reading, both Brad and Bobby carefully read all the captions and labels, examined the illustrations, and read the glossary, and they were both effective at remembering and including that information in their retellings.

In his last RMA session, Brad happily remarked, "I didn't make any miscues! And I read with expression at three exclamation marks," while Cole said, "I fixed a lot of my miscues." This shows that they were excited to point out their effective reading strategies. Given the opportunity to self-evaluate, discuss their thinking, and identify why they thought they made miscues in an authentic and genuine conversation, the RTI students became very involved, and many of their prior beliefs became demystified. They gained agency in discussing their own reading and began self-evaluating through an asset-based perspective, as RMA brought into focus the actions and strategies that they employed as readers and meaning-makers. They all became aware that all readers, even the best readers, make miscues, and began to develop reading-related understandings from their own perspective, agency, and confidence in their thinking and learning processes.

Response to Intervention Students Began Shifting the Way in Which They Think About Miscues

During the initial RMA sessions, all the readers noted that they were somewhat uncomfortable listening to the recordings of their reading, especially when they engaged in behaviors that they believed were undesirable, such as pauses, low fluency, or repetitions. Some of them would roll their eyes, or shrug upon hearing themselves, but they slowly began to relax as we began our discussions. Throughout the sessions, the students quickly adopted the vocabulary necessary to articulate these self-evaluations and to discuss their miscues. Y. Goodman et al. (2014) noted that “Providing readers with opportunities to discuss reading, both demystifies and demythifies reading” (p. 39). The RMA sessions allowed for the misconceptions that good reading was equated to accurate reading to be addressed and reshaped. The RMA sessions were an opportunity to create a positive discussion around something that all seven RTI students articulated as being “bad” or undesirable (Y. Goodman et al., 2014). This joint examination of their own reading process and strategies allowed the RTI students to develop their own views of the reading process and reflect on their thinking, taking ownership of their own actions. As they began to realize that miscues are a result of a series of strategies that they engaged in, and that they were a natural occurrence in the meaning-making process, the seven RTI students were eager to embrace the normalization of miscues.

Response to Intervention Students Began to Develop Awareness of Their Own Strengths and Strategies

For example, in the initial BRI, prior to the RMA sessions, all seven RTI students named sounding out as a primary strategy employed in trying to read an unfamiliar word

in a text. This was not only corroborated by the miscue data from their oral reading samples, but also by Violet and Cora, two of the teacher participants, who shared their observations that RTI readers “relied heavily on just sounding out individual letter sounds rather than all the other strategies.” However, in the final interviews, all seven student participants reported using several different comprehension and sociocognitive strategies during reading.

Brad, Shy, Bobby, and Cole mentioned how they used the information in the text and context clues to identify unknown words, with Brad noting “I just keep going on, then go back and see what the word is.” Jack and Amy mentioned skipping the word and coming back. Additionally, all seven readers mentioned their use of pictures to help with identifying unfamiliar words in the final BRI. Although I witnessed all seven readers using pictures to scaffold their comprehension, gather information, and mediate word identification, none of the readers articulated this understanding in the initial BRI or in their initial RMA sessions.

Bobby even noted during our last RMA session that he thought of himself as a good reader because he reads all the captions and labels. Not only did Bobby become aware of all the effective strategies that he used to make meaning, but this awareness of the things he did well also helped him revalue himself as a good reader.

While the seven RTI students were young, they were able to not only talk about their reading but also reflect on sophisticated concepts at the end of the study. The readers discussed language and their use of cueing systems, predicting, confirming, and disconfirming, often using their own vocabulary and terminology in the discussions.

The RMA sessions challenged the readers to examine their own thinking and reading strategies. Further, in the case of RTI students who didn't always see themselves as proficient, RMA sessions implicitly highlighted their strengths and pointed out their effective and efficient strategies for creating and preserving meaning. While all seven participants were only able to identify one or two reading strategies in the initial interviews, after the five RMA sessions, all seven RTI students were able to identify more reading strategies than before (see Table 6).

Table 6

Self-Reported Strategies for Reading Unknown Words

Participant	Initial BRI (Before RMA sessions)	Post-BRI (After RMA sessions)
Jack	"I try my best to sound it out"	"I skip it" "I can like try to sound it out" "Look at the picture"
Cole	"I sound it out"	"Sound it out" "Look at words that sound like it" "Look at the picture" "Look at the glossary"
Brad	"I just stretch it out like a slinky. If that doesn't work, I just sound it out" "And then I just skip over the word"	"Sound it out" "If I can't figure that out, I just keep going on, then go back and see what the word is" "I look at the picture and see what it means" "Skip it and then read on and go back and check it"
Bobby	"I sound it out"	"Sound it out" "Break it up" "Look at the pictures"
Joe	"I try to spell it out"	"Spell it out and keep trying" "You can look at pictures even with the words"

Participant	Initial BRI (Before RMA sessions)	Post-BRI (After RMA sessions)
Shy	"I sound out the words"	"Take the words apart" "Look at pictures" "Skip them and come back" "Pick it apart"
Amy	"I would sound out the word"	"I sound it out." "Look on the cover to see the word that you know." "Look at the other words, and you see one letter and it makes a word. Cover up the word and you see a word that you know."

The seven RTI readers had lower self-correction percentages in the early reading samples (see Appendix K), which indicated that they were not consistently monitoring for meaning, but began to self-correct more as we discussed miscues and the importance of monitoring for meaning. The number of self-corrections in the later reading samples were higher than in the first two. The discussions around reading strategies during the RMA meetings not only increased their metacognitive awareness of the strategies they can use in reading also empowered them to employ multiple strategies when one does not work (see Table 6 for the self-reported strategies before and after the RMA sessions). While initially all of the RTI students described themselves as not being proficient with "reading words," or wanted to get better at "sounding out words," as they became aware of their multiple strategies, they developed agency over their own meaning-making process, which increased their confidence in their reading and diminished their concern about miscues. By learning what they could do, and refining their understanding of the reading process and miscues, all seven RTI students began to see themselves as more capable meaning-makers, thinkers, and learners.

Developing Ownership as Readers

The discussions during the RMA sessions highlighted reading processes and engaged the RTI students in critical thinking about their own miscues and strategies. Additionally, the RMA sessions encouraged the young readers to develop awareness of the control they had as they engaged in the reading process and to discover the strategies they employed. By developing this awareness, the readers began to take ownership of their processes, and to understand what they do well and which strategies are effective, allowing them to view themselves as their own evaluators of their reading. This confidence led them to revaluing themselves as readers.

The overall positive response and reflective conversations to the RMA sessions showed that the young RTI students began to accept and understand that miscues are a natural part of reading. All the participants articulated initially that they wish they didn't make any miscues in their reading, and that good readers don't make any miscues; however, as they gained more insights into their own reading, they began re-conceptualizing reading as a dynamic process, centered on meaning-making, in which not every strategy is always successful, and in which miscues happen.

Developing Positive Outlooks Towards Their Own Reading

In the first RMA session, all seven RTI students shared that they were nervous listening to themselves read for the first time. By the final RMA session, they were not only more comfortable about their own reading and miscues, but they became active participants in the discussion. When I asked Cole to select what he wanted to discuss in our last session, he chose to focus on his self-corrections:

SCHULTZ: Anything else that you noticed about your reading?

COLE: That I fixed a lot of my miscues.

SCHULTZ: I thought you did. Awesome. What did you, what did you think as you were listening to yourself read? What were you thinking?

COLE: My reading is really amazing.

Cole also expressed his understanding of miscues, and he was feeling more confident about his reading. When I asked him if he thinks I should use RMA with other students, this was his response:

SCHULTZ: Do you think I should do this with other students? Let them hear themselves read and discuss their miscues? Or not? What do you think?

COLE: Yes, you should.

SCHULTZ: Why?

COLE: Because it's important to fix miscues and they need to know that, um, if it still makes sense what you say it doesn't count as a miscue.

When I asked Brad about what he thought about the RMA sessions, he noted that he found them helpful:

SCHULTZ: I want you to think about how we talked about miscues this year. What did you think about that? How you listen to yourself, and we got to talk a little bit. What, what did you think?

BRAD: Because now I know that if I make a mistake, it's not bad.

Brad said that I should continue using RMA with my students because "If they kept making mistakes and felt bad, that when you teach them, they won't feel bad

anymore. 'Cause you know, they're not that bad." Brad shared that he feared making miscues, but he learned that "It's OK to make miscues." Additionally, Shy expressed the importance of meaning when I asked her if I should let other students listen to themselves read and talk about their miscues: "You should, because they might not pay attention and they just would keep on going and they won't realize their miscues."

Teachers Revaluing Reading Comprehension

As the discussion around miscues continued, the six primary-grade teachers began to revalue reading comprehension over the surface aspects of reading, such as accuracy or reading rate. Mary, Holly, and Violet acknowledged that they found their ELL students' dialectical miscues acceptable, as well as the ones that don't impede comprehension. All six teachers reconsidered how they evaluated RTI readers in terms of accuracy and comprehension. In her reflection, Holly wrote,

Sometimes the way my RTI students interact with the text while reading can give me a prediction on how they will do with the comprehension, but other times they surprise me. I have noticed when some students are focusing more on reading correctly than for meaning, we get to the end of the book, and they aren't sure about what they read. This makes me really think about what do we need to focus on more—reading for accuracy or comprehension? With our RTI readers I feel like we want to find the balance of both, but we tend to focus more on accuracy in the beginning rather than comprehension. It was nice to be able to reflect on that part of reading because sometimes as teachers we are in such a rush that we don't really pay attention to the interactions they make while reading.

Holly's thoughtful reflection showed that she questioned her practice, as she wondered if she should focus more on accuracy or comprehension. Additionally, she also answered her own question, stating that "a balance needs to exist in instruction." As the push during this school year was towards a phonics-focused curriculum, Holly questioned what the best instructional approach may be for her RTI students, as she noted that teachers tend to focus more on accuracy than on comprehension when working with beginning readers. This shows how Holly shifted her thinking, centering meaning-making as central to reading and re-evaluating her instruction of her RTI students. Instead of focusing on what her RTI students didn't do, she chose to focus on reflecting on what the best teaching approach would be for them.

Cat reflected more on her young RTI students' miscues, noting that they rarely self-correct:

I believe it is very important to model as much as possible with our RTI students so that they understand how exactly to use different reading strategies. For example, before they read, I remind them of one strategy they can use to help them identify/decode words. This helps sometimes but other times they need additional support. Questioning to scaffold their thinking usually helps my students. I believe miscue analysis is a great way for teachers to identify reading behaviors that need support. I have noticed that many of my RTI students often do not self-correct.

Cat acknowledged that questioning helps her readers. The RMA questioning that we used to analyze the miscues, which included "Does that make sense?" or "Does that sound right?" are questions that I observed the classroom teachers using in their small groups.

Cat also noted that miscue analysis can help her identify the strategies that she needs to work on based on the individual reader's needs.

Mary reflected on one of her RTI students who made many miscues but whose miscues didn't impact his comprehension. The miscue analysis discussions brought comprehension into focus and prompted the teachers to reflect on the actions and reading development of their RTI students, as well as acknowledging that the RTI students also have strengths.

Violet's reflection from the second teacher group session shows that she not only referenced comprehension but also began to consider her students' individual areas of proficiency and improvement:

I was able to think and reflect on the similarities that RTI kiddos have—their struggles and challenges with reading BUT also on how they are different. . . . lots of RTI kids struggle with accuracy, but there are also RTI kiddos who are great with accuracy and struggle with comprehension. I think that many of them lack decoding skills and strategies—some of them take the time to over decode and go letter by letter while others word called based on the first letter. Even though we can use patterns to generalize these students, I think it's super important to truly understand the reader individually and learn/discover their needs and challenges aside from other RTI students we have or have had!

Using miscue analysis allowed Violet to reflect on the similarities between her students as well as their individual strengths and needs. Acknowledging that each student has different areas of need and that miscue analysis can help focus the instruction of RTI

readers, rather than using a one-size fits all approach, shows how Violet has begun to revalue both miscues and her students.

Cat talked positively about her RTI students who don't always read fluently, yet have good comprehension, thus bringing comprehension into focus. This is a very important aspect to consider, as the miscue analysis discussions led to Cat reflect and revalue the reader that made sense of text regardless of reading with low fluency. Cat shifted the attention from surface features to the purpose of reading, which is comprehension. Although she didn't mention comprehension in our initial interview, the miscue discussions during the teacher group sessions prompted Cat to reflect more on comprehension and meaning-making. Cat's statement prompted Mary's reflection, who agreed that as long as her RTI students can comprehend, then she does not emphasize accuracy.

Teachers Reflected and Revalued Their Response to Intervention Students

After the five teacher group sessions, in which I facilitated discussions around RTI students' miscues and how they can be used to gain information about reading and readers, the six teachers began reflecting on what they were learning about miscues and miscue analysis, and how they integrated the newly discussed concepts and ideas. Julian noted that:

It was nice to see how other teachers handle the miscues their students experience and the strategies to help them. I feel like I definitely need to look at the miscue data better to understand patterns in the miscues my students make.

As younger teachers, Julian and Holly expressed that they would like to learn more about how to utilize miscue information, while the more experienced Cora highlighted the

importance of running records as they allow her to collect important data about fluency, comprehension, decoding, and miscues.

Teachers Began to Understand the Value of Their Response to Intervention Students' Miscues

In the light of her own reading with many miscues and challenges with unfamiliar vocabulary, Cora reflected on the reading miscues of her RTI students and stated that miscues during reading are acceptable as long as comprehension is not impacted: "I would say yes. Especially if they don't change the meaning and we can go back and address them, but the importance is not heavily weighted on that." This statement highlights Cora's acceptance of miscues as a natural part of the process. This acceptance resulted from her reflection on her own reading of a challenging text that she was still able to comprehend despite her reading it slowly and choppily, with many repetitions and abandoned attempts at reading some of the words. Allowing herself to make miscues led to her acceptance of them as a natural part of the process, and thus as acceptable in her teaching of RTI readers. Violet echoed Cora in her reflection, noting that she agreed that miscues are not necessarily indicators of a reading deficit:

I was just going to say, as long as it's not impacting the meaning of the text, and even if a student were to read to me in a guided reading group and make a miscue, if it didn't impact the meaning, I probably wouldn't bring it up right away until the very end, and then kind of just, you know, reflect on.

While I described earlier how the teachers responded to viewing the EMMA video of the RTI reader, it is important to elaborate further on this factor to highlight how it broadened the teachers' perceptions of reading and RTI readers. As the EMMA video

highlighted the complexity of the reading process and made evident the hard work that young readers do as they navigate text, this video shifted the way in which some teachers conceptualized the reading process of RTI readers. For example, Mary shared the following: “I thought my students weren’t trying to figure out the words they didn’t know because they were just getting the beginning sounds correct. After watching the eye movement video, I realize they are doing a lot to read.” Julian also noticed the effort and time that goes into navigating text by noting that:

The eye movement research was eye opening about how it reflects the amount of time students need to figure out a new word. We should be giving them more time since their eyes are looking all over the place trying to solve an unknown word.

Both Mary and Julian acknowledged and reframed their perspective of RTI readers as hardworking readers and considering shifting their practice (such as giving them more wait time) to accommodate them. Since in the initial teacher session, Julian described an RTI reader’s reading as “choppy and slow,” he revalued the reader’s effort to make meaning.

Holly also reflected on the EMMA video I presented, making connections not only to her own practice but also to her own literacy experiences:

It’s interesting to think that we teach this order of left to right for reading when really, we are looking all over the page to grasp the whole concept of reading.

Yes, for what we read to make sense it must be read left to right in the sense of the actual task of just reading, but it was clear that eye movement does not just follow that simple direction—it was neat to think about. When working with RTI readers I think it is important to put the whole concept into the minds of the young

readers because it could really boost their reading confidence. When I think about my own reading, I know there are times my eyes get ahead of where I really am.

Holly's reflection on the directionality of reading as illustrated in the EMMA video made her reflect on her pedagogy, as she was used to teaching her students to track left to right. She reflected upon her old misconceptions in relation to the EMMA data that showed that reading is not linear.

How Teachers Began to Revalue Their Response to Intervention Students and Their Meaning-Making Processes

During the fourth teacher group session, each one of the six teachers brought miscue samples from one of their RTI students. In the way they selected the miscues, Holly and Mary demonstrated that they had begun to revalue their RTI students. While in the initial interviews both the teachers described the RTI students through their perceived skill deficits, in the fourth RMA session, Holly and Mary chose to share two instances in which their reader self-corrected. They chose to focus on what their students could do successfully, highlighting the way in which their students realized that their miscues didn't make sense, so they re-read and self-corrected. Mary's and Holly's thoughtful reflections during their miscue analysis made evident not only the reading process and successful strategies that their RTI students employed, but that these teachers saw the strategies and revalued the strategies and the readers. This shows that the two teachers chose to focus on their RTI readers' strengths by observing and documenting what they did as readers.

During the last teacher group session, I invited the teachers to reflect again on the reading development of RTI readers in the light of what we discussed about miscues, and

how they can utilize miscue analysis to evaluate the readers in the samples they brought.

Violet articulated her perspective on the need for RTI student instruction to be focused on meaning and comprehension:

When it comes to RTI readers specifically, I think that they are all different and have various strengths and weaknesses just as all readers do, but if I were to pull one main pattern, I would say that many do not read for meaning. When they get to an unfamiliar word, they will use visual clues to name a word that it might be, based on the initial letter(s). After word calling, they don't stop to ask themselves, "Does this make sense?," and then they keep reading. I think many of these readers could be involved in activities that help them to slow down to make sure they understand and make meaning, as well as building their confidence. Readers need to understand that it is okay to not know all of the words. It is okay to stop and use a strategy. It is okay to not be perfect!

Violet not only recognized that the RTI readers' instruction should be focused on comprehension, but she also expressed that it is acceptable for readers to stop and think. And while she initially described miscues as mistakes, she concluded her statement with "It's okay not to be perfect," meaning that she was beginning to view miscues as acceptable in the process.

During the fifth teacher group session, each of the six teachers shared strengths of their RTI readers. Cora noted how her first graders were relentless and kept trying; Violet noted that her third graders enjoyed having conversations about books and sharing their background knowledge; Julian, Cat, and Mary noted that the RTI readers were generally very hardworking. The miscue analysis discussions and experiences generated

conversations that engaged teachers to reflect not only on reading as a process but also on the development of RTI readers in the context of assessment and instruction. While teachers were still conditioned to focus on the skills the RTI readers are lacking, the miscue analysis discussions opened additional avenues for the teachers to get to know their students' strengths as well as the areas that need improvement.

The RMA discussions with students and the miscue analysis discussions with teachers provided windows into the reading and thinking processes and the literacy learning of RTI readers. By shedding light upon the complex actions and processes in which RTI readers engage during reading, the miscue analysis discussions facilitated the revaluing process of RTI readers. As RTI readers became aware of their successful reading strategies and thinking, they gained confidence and awareness of their own strengths, revaluing themselves and reshaping their identities as readers. As teachers learned more about how to utilize miscue analysis to learn about their RTI students and reflect upon their practice, they started to reflect more deeply on the reading process, literacy knowledge, and pedagogy, and they began to recognize the strategies the children are already using, to create effective and meaningful instructional strategies.

Summary of Findings

This study of seven RTI students and six primary-grade teachers that had RTI students in their classrooms engaged in an exploration of reading and literacy learning through miscue analysis. Students developed agency in their thinking and strategies, as well as ownership of their own reading, while teachers reflected on their own reading and pedagogy, revaluing reading, and readers. Teachers and students began to expand their

knowledge and understanding of reading, shifting their perceptions and challenging their misconceptions.

The six teachers came together as a community of professionals, open to learning more about themselves and their RTI students. Being given the opportunity to discuss freely and without judgement, they all came together in their co-construction of professional learning and knowledge about miscues and miscue analysis. As they became increasingly aware of the complexity of reading, by exploring their own and their students' miscues, the six teachers began to make explicit connections to their pedagogy, as they were expanding their understanding of reading and readers.

My investigation yielded insights about how seven RTI students made sense of the text strategically, as I took a closer look at the way in which they understood reading, how they navigated text and pictures to make sense of what they read, and their self-reflections on their own literacy understandings and strategies. RTI students made their voices heard in a way they had not done it before. They were given the autonomy to self-evaluate and analyze their thinking and actions, and they were empowered to notice their strengths by listening to themselves read and exploring their literacy practices in an environment in which their individuality was respected and in which their voices and thinking were valued. In this study, each RTI student had the opportunity to discuss their own reading, shifting their perspectives as they became aware of their own strengths and thinking. By exploring their own reading and meaning-making, the young readers began viewing themselves as the capable and hardworking readers that they were.

CHAPTER 5

DISCUSSION

As I began this study, I already had established a positive rapport with the RTI students and the teachers who participated in my study. Through this study, I was able to continue to strengthen the rapport with my students and to create a positive and engaging environment through the Retrospective Miscue Analysis (RMA) sessions. Additionally, I developed deeper connections with my fellow teachers through the time we spent together in the teacher group sessions and during their individual interviews. I thus engaged in this study positioned as a teacher-researcher. My epistemological beliefs shaped my views and choices of theoretical and methodological approaches of this investigation. I positioned my study in the context of my own pedagogy and work with RTI students, seeking to find ways to better understand and foster the literacy development of primary grade RTI students, while supporting teachers of RTI students in developing their awareness of and responsiveness to the strengths as well as the needs of their RTI students.

In this chapter, I focus on highlighting further connections between my findings, as they relate to the literacy teaching and learning of the RTI students in primary grades, and how they can be used to support the literacy teaching and learning of RTI readers. This chapter will include a discussion of miscue analysis as a tool for reading instruction and literacy research. Further, I will discuss the implications for teaching, professional development for teachers, and recommendations for future research.

Revisiting the Significance of the Study

This study can inform literacy educators, administrators, policymakers on effective approaches to supporting the literacy development of RTI students through RMA. The dialogic discussions with my RTI students allowed us all to learn about and from each other.

This study is particularly relevant to today's public-school context in the United States, in all the school districts with similar requirements to the Maryland Ready to Read Act (2019), which demands that all local education agencies screen all students in grades K–3 for at “risk reading difficulties,” and provide phonics-heavy instruction using scripted phonics programs both in the classroom and in reading intervention. RTI student and teacher data from this study indicates that that RTI students need more than just instruction in phonics, as decoding accuracy does not automatically guarantee comprehension. The six teacher participants, with varying years of experience, were all in agreement that RTI students need to be taught a multitude of strategies and skills to read, and that phonics is just one of many components that students need to achieve comprehension and meaning. Corroborating these findings, other literacy studies have also concluded that a holistic approach to literacy instruction, that is based on the individual needs of each learner, is more effective than using scripted curricula or teaching the skills in isolation (Flurkey, 2020; Y. Goodman & K. Goodman, 2013; Pressley & Allington, 2014).

This study also shows that the primary RTI students are already word-focused and over-reliant on decoding. In general, RTI readers do not view reading as a meaning-making process, and the current literacy instructional mandate emphasis on phonics will

further reinforce their concept that reading equates decoding words with accuracy. The prioritization of strategies that do not enforce meaning, such as scripted phonics programs that engage RTI readers in daily rote drills with no application to authentic text, is restricting teachers from individualizing literacy instruction based on each student's strengths or needs. The six teachers all expressed their frustration with the new curriculum, with Cora, who retired the year of the study, being the most vocal. The teacher participants in this study acknowledged that their RTI readers need more than phonics, but the constraints of time and teaching requirements based on the newly implemented policies restrict the teachers from using their expertise and trying new approaches that do not align with the policy outlines.

Miscue Analysis as a Tool to Examine Response to Intervention Students' Reading Development and to Inform Instruction

As the six teachers in this study shared, they found their broadened knowledge and understanding of miscue analysis useful in learning more about their students and reflecting upon their own pedagogy and classroom practices. Through using miscue analysis to learn about one's student, the teacher can become aware of the effective and non-effective strategies a reader uses, bringing the focus of instruction toward meaning-making, and supporting readers by recognizing their effective strategies, or by asking "Did that make sense?" (Y. Goodman et al., 2014). As one of the most timeless and effective tools to learn about a students' meaning-making process, miscue analysis is a tool that works in the classroom, as well as in the research world, and there aren't many research tools that are so easily accessible to literacy teachers. And as teachers are the ones who make the difference in their students' love or dislike of reading, miscue

analysis can help those teachers not only learn about their readers, but revalue them, and “help them revalue themselves as language users and learners, and revalue the reading processes as an interactive, constructive, language process” (Y. Goodman et al., 2014, p. 189). This study is also significant in relation to the professional development of teachers, showing how there is value in bringing teachers together and creating opportunities to discuss and reflect about reading in relation to their own understanding.

While initially the teachers talked about fluency and accuracy, with little mention of meaning and comprehension, after our group discussions and evaluating their own reading of challenging text, the teachers began mentioning comprehension and meaning-making more frequently. This suggests that being given the opportunity to discuss miscues, learn about miscue analysis, share, and ask questions, teachers begin to reflect upon and make connections to their own practice. Learning about miscue analysis allowed these six teachers to discuss the role of language in reading, observing the use of cueing systems and background knowledge in the reading and literacy development of RTI readers.

Although this study was conducted during a very challenging year for teachers, the six participating teachers expressed a positive learning experience that not only was relevant to their practice but also allowed them to engage with peers, ask questions, and exchange ideas and strategies. By enhancing their understanding about the reading process, the teachers can move from a deficit perspective that is omnipresent in the discourse surrounding RTI readers, to a discourse that is centered on meaning-making, through the powerful lens of miscue analysis.

Positive Effects of Miscue Analysis and RMA

This study affirms previous miscue analysis and RMA research that has shown the positive effect of miscue analysis and RMA, with Gilles et al.'s study (2020) revealing that the students engaged in RMA and Collaborative RMA (CRMA) made progress at twice the rate of the students who were in the scripted Reading Intervention programs.

This study showed the positive effect miscue analysis and RMA had on the primary RTI students and the teachers of RTI students. All the seven children in this study enjoyed the individual sessions and were excited to listen to and evaluate their own reading. This study provided the opportunity for the RTI students and teachers to co-constructed knowledge in their discussions with me (and with each other), activating their prior knowledge in response to these interactions, building new knowledge, or transforming older beliefs and knowledge into new information (Unrau & Alverman, 2013). This study highlights the importance of providing RTI students and their teachers opportunities to engage in discussions, where they can learn with and from each other. Miscue Analysis can help teachers identify the patterns and socio-cognitive strategies that their students use, helping teachers focus on what the students do and making the students' strengths more visible. Miscue analysis offers rich insights not only into the reading process, but it also allows teachers to learn about and know their students. The joint exploration during the RMA sessions can create a safe learning space for the students, a space in which there are no "mistakes," and in which RTI students become cognizant of their strengths through analyzing and evaluating their own meaning-making processes as readers. Engaging students in self-reflection of their own thinking and

language use can help them become more confident and take more risks while they are reading

Implications of the Study

The findings of this study have implications for teacher professional development, pedagogy, literacy instruction, and the literacy learning of RTI students in primary grades.

Miscue Analysis as a Heuristic Tool for Professional Development

As I used miscue analysis as the topic of the five teacher group sessions, the engagement in discussing and learning about miscue analysis proved to be an effective tool in the teachers' examination of reading as a meaning-making process. As teachers are always eager to "pick each other's brain" when it comes to challenges in teaching, having the opportunity to explore reading and invite teachers to reflect and make connections to their practice was appreciated by the six teachers I worked with, with Cat suggesting that she would like it if we could get together periodically to discuss miscues, and Holly noting that she wished they had a monthly half-day meeting where teachers would be allowed to go through miscue data and discuss it with peers and reading specialists as they make sense of it. Miscue analysis also brought meaning into focus as the purpose of reading, as the new curriculum requirements for reading in Maryland brought phonics into focus, creating a false sense of deficit when it comes to RTI readers, since students' reading is now estimated through the prism of their phonics assessment with quarterly comprehension assessment that the students take using the digital assessment tool i-Ready.

Cambourne and Kilarr (2020) have also used miscue analysis in helping teachers reframe reading as meaning-making, as they trained three teachers in using the classroom procedure (Y. Goodman et al., 2005). Like the six teachers in my study, the teacher participants in Cambourne and Kilarr's study also began using the term "miscue" more frequently, and they began shifting their focus from accuracy and fluency to comprehension and meaning-making. Cambourne and Kilarr's study suggested that miscue analysis can be an effective platform for teacher professional development, as teachers made significant changes in their classroom practices and pedagogy. Continued professional development that uses miscue analysis as a tool may have the potential to not only expand, but change the teachers' perspectives related to literacy learning and teaching. Miscue analysis can serve as a path towards emphasizing meaning-making as the focus of reading, and embracing a holistic approach to literacy instruction, while building on the individual strengths of each of their students.

As an extension of Cambourne and Kilarr's study, Laman and Whitmore (2020) also introduced a group of pre-K to fifth-grade teachers to miscue analysis over two years as part of an early literacy project meant to help teachers grow into researchers of their own students' literacy knowledge. Their study also found that as a result of learning about miscue analysis, and examining their students' miscues, the teachers began to shift their "views from a discourse of acquisition, to a discourse of meaning" (Laman & Whitmore, 2020, p. 127). In a similar manner, my study of the six primary-grade teachers of RTI students also revealed that miscue analysis has the potential to deepen the teachers' understanding of readers and expand the teachers' view of reading as a meaning-making process.

As the six primary teachers of RTI students noted, they would appreciate the opportunity to discuss and analyze their students' miscues with their peers and ask for opinions and exchange suggestions for instruction. Allowing teachers to bring and discuss reading data to periodic school-based professional development could become a common practice. This way, teachers could use peer collaboration to examine the zones of proximal development and document their students' learning as they mediate with their peers and the context of learning environment" (Gilles et al., 2020).

Using Retrospective Miscue Analysis to Foster the Literacy Development of Response to Intervention Readers

This study suggests the need for literacy educators of RTI students in primary grades to provide opportunities for students to explore their own reading and thinking. By giving the students opportunities to authentically engage in the evaluation of their own reading they not only become more motivated and enthusiastic, but they become more confident as they took ownership of their learning and learned about their strengths as well as their areas of improvement. Students are this way more involved in their own learning, understanding not only their own thinking and meaning-making process, but developing their understanding of reading and reading conceptualizations through RMA and revaluing themselves as thinkers and hardworking readers.

Gilles et al. (2020), who used RMA and Collaborative RMA with students receiving Reading Intervention services instead of scripted instructional programs, also found out that their students began the process of revaluing themselves and seeing themselves as readers. Their students went through similar shifts of perspective, as the miscue discussions normalized miscues, and the readers' anxiety and concerns about their

own miscues dissipated. Using respectful and positive language with the students and treating them as valuable co-investigators of their own reading empowered the readers, motivating them to be more engaged in their own learning and be more confident in the classroom as well. This showed that the teaching strategies and pedagogical framework that can be built around the RMA sessions has the potential to support RTI students' willingness and motivation to take an active role in their own learning by engaging in the discussions and analysis of their own reading (Gilles et al., 2020, p. 93).

Using Retrospective Miscue Analysis to Build Confidence, Revalue and Empower Response to Intervention Students

This study shows that RMA can be an effective and powerful way to engage and motivate students by inviting them to analyze their own reading through RMA. As the six RTI readers in this study grew confident in their self-evaluations, they also became more motivated and willing to read and engage with the text. By participating in RMA sessions, the RTI students became less concerned with their reading speed and pauses, and took the time to attend to meaning more, go back and re-read, self-correct more often, and be proud of it. This is consistent with other RMA studies' findings, which indicated that the readers became confident and engaged, made fewer miscues as they attended to meaning more, and that through RMA the reader became more aware of their strengths (Flurkey, 2020; Gilles et al., 2020). RMA has the potential to be used as a tool for revaluing, especially when working with insecure readers, or students in RTI.

Using Retrospective Miscue Analysis in the Classroom

One practical implication from this study could be following the RTI students' suggestions to continue using RMA with my future students. Reading specialists or

reading interventionists who work with students in small groups in the classroom could also use RMA in their work with RTI students, either in individual conferences or collaboratively with the whole group of students. Just as the RTI students with whom I worked during the time when my study took place became more aware of their own strategies, more reflective, more comfortable with their own miscues, and more focused on meaning, the RMA questioning and procedures in the classroom setting could be an effective practice.

Classroom teachers could also use CRMA with their students during guided reading groups or even with the whole class, to help their students focus on meaning. In the same way the six RTI students responded positively to the RMA sessions and revalued themselves, classroom RMA or CRMA could have the same effect on a broader scale, reaching a larger number of students.

Using Retrospective Miscue Analysis with Teachers

As part of teacher professional development, or a professional learning group, teachers could be introduced to RMA as participants. They could be part of individual or collaborative sessions with each other, experiencing and learning about the process as participants and observers of their own reading. Just as the six primary-grade teachers of RTI students discussed their own meaning-making and reading in my teacher discussion sessions, and then used their self-analysis to make connections to their own practice and understanding of reading, RMA could be an effective tool to highlight the importance of meaning when teaching reading. RMA could provide teachers with a snapshot of inquiry and learning as a process that can facilitate the literacy development of RTI students.

Using Retrospective Miscue Analysis with Families

Family literacy is closely connected with the recognition of the home environment as another locus of literacy development, and it is a part of the exploration of how students are developing literacy knowledge (Kabuto & Martens, 2014). Acknowledging and documenting the school-home connections and the exchange of experiences between home and school, Heath (2012) described learning as unrestricted by time and place, and a “full time human activity without physical barriers of walls, doors and fences or arbitrary limits imposed by age, gender, class and geography” (p. vii). Her ethnographic studies have shown that all children, regardless of their age, enter school with literacy-related knowledge (Heath, 2012). This is especially important to acknowledge in the context of students placed in RTI by their schools, due to the fact that often, schools’ positioning of children, and labeling them as “on level” or “struggling” is conflicting with the way in which children are viewed in their own homes (Kabuto & Martens, 2014). And since the home and school experiences permeate the barriers between the two locations, the “result of parental reactions can shift how learning is organized in the home to either counter or support the beliefs of schooling” (Kabuto & Martens, 2014, p. 3). Through involving families in joint explorations of their children’s reading, along with their children and teachers, researchers and teachers can draw from the home experiences of the students to strengthen their pedagogical and instructional approaches. Inviting families to participate in a family RMA can be a way to share ways in which parents can support their children’s school-based literacy learning, all while teachers could use this opportunity to learn about the competencies and knowledge the children acquire in their families and communities (Moll et al., 1992).

Sharing Current Research and Related Studies with Teachers

As a reading teacher, I will never forget how fascinated I was the first time I saw an EMMA video and was able to see the cursor representing the movements as I was hearing the voice of a young reader. To be able to see the eye movements of the reader at the same time they were reading out loud was a memorable experience. Introducing teachers to professional reading materials regarding EMMA studies focusing on young readers could help teachers revalue children as readers, thinkers, and learners.

While the teachers in this study were able to observe and reflect on the non-linearity of reading and what happens when students pause as they get to something they don't know in their oral reading, other studies have shown that EMMA can reveal information a reader's strategies, meaning-making, and how reading works (Kim et al., 2020). EMMA can provide teachers with information about reading as a process, broadening their understanding of the complexity of reading in order to better support readers (Liwanag et al., 2020). Challenging teachers to re-examine their beliefs and prior knowledge of reading, an EMMA video can serve as proof that reading is a language-based process that is not dependent of the accurate decoding of each word, as many of the commercial phonics curricula frame it. A study by Duckett (2003) that extended the body of EMMA research by focusing on six emerging readers (including participants whose first language is not English), showing that emerging readers do not fixate on every word either, although all participants named sounding out as their main strategy. These conclusions disprove the word-by-word reading view and highlight how readers of various age and language proficiency level use predictive linguistic processes while reading, as they do not look at every word and do not rely on the graphophonic cues

100% of the time. It is evident from this research, and it is important for literacy educators to understand, that readers use more than just the graphophonic cueing system.

Familiarizing teachers with the findings of EMMA research would help bridge such illuminating research to practice, and it also has implications for reading instruction, as teachers would be able to better support readers with strategy use. Prompting students to sound out and focus on every word in front of them limits the young learners from using their linguistic knowledge to predict what comes next and prevents them from focusing on the meaning. Word-focused strategies stall the emerging readers as they try to decode, detracting them from effectively making sense of what they read.

Recommendations for Future Research

As my study took place over the course of the school year and the time was limited, a longitudinal study with teachers may help identify better connections and ways of incorporating miscue analysis in teachers' daily practice. Future studies could include more classroom observations of teachers and more teacher group sessions that would allow teachers to plan together and devise instructional approaches as a team. Future eye movement studies of primary RTI students could also inform our understanding of how RTI students navigate text.

Similarly, future studies into the reading of RTI students could incorporate the students' families, as family also plays a role in supporting a child's literacy development. Involving family members in learning about their children's reading can help families support their children through literacy learning. Families could be involved in family RMA sessions where they could learn about miscues along with their children.

Incorporating EMMA in the inquiries that focus on the reading of primary-grade RTI students could further our understanding and inform the pedagogy of RTI students.

Future studies in the literacy development of RTI students could be focused on exploring the use of RMA with racially and linguistically diverse students and linguistically diverse teachers. The inclusion of bilingual and multilingual texts could be used in further explorations of RTI students' reading, including conducting miscue analysis research using multiple languages to better understand the needs of linguistically diverse students, and to foster their multilingual literacies.

Concluding Thoughts

As I began this study, I already had strong rapport with my RTI students, especially since I had worked with some of them during the prior school year. I was able to interact with them and their families during the online learning times due to the COVID-19 pandemic, thus strengthening my relationship with them and their families during the RMA sessions, reading interventions sessions, and interviews. My primary goal in designing this study was to learn more about my students not only through my work with them, but also through the eyes of teachers who have RTI students in their room. As I do not often get to witness my students in the classroom environment, the classroom teacher perceptions and observations helped me build a better idea about the RTI students' literacy development and experiences. My collaboration with the classroom teachers who kindly donated their time and energy to participate in this study, also driven by a desire to learn more and improve their practice, was an experience that taught me a lot about navigating the challenges of teaching in a time of ongoing

curriculum changes and shift in educational philosophies that guide the classroom instruction.

This study demonstrated how RTI students developed and reflected on reading, literacy knowledge, and experiences, and how they expanded their reading conceptualizations as they learned about their own reading through RMA. This study provided empirical evidence that miscue analysis and RMA can act as a catalyst for developing an understanding of reading and the meaning-making processes. This study further informs our understanding of using miscue analysis as a tool for both research and instruction, in working with both students and teachers.

As a result of conducting this study, I now have a deeper appreciation for the work that RTI readers and classroom teachers do every day. This study used miscue analysis to show how each reader had individual, unique strengths, and how miscue analysis made those strengths visible to me and the teachers of RTI students. Miscue analysis provided educators with the opportunity and tools to not only assess, but also to support student growth through pinpointing the areas of strength and needs of a reader, and “reclaiming reading as a meaningful, lifelong process” (Gilles et al., 2020, p. 93).

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Children's Literature and Text for Teacher Discussion

Children's Literature

Aboff, M. (2018). *The muddy mess*. Heinemann.

Cruz, J. (2019). *Dirt cake*. Heinemann.

Dobeck, M. (2018). *Goat's new hat*. Heineman.

Dopirak, K. (2016). *The watch*. Beach Lane Books.

Hammonds, H. (2007). *At the beach*. HMH Supplemental Publishers.

Harper, C. (1996). *Dogs*. HMH Supplemental Publishers.

Haydon, J. (2007). *Looking at the moon*. HMH Supplemental Publishers.

Mao, C. (2019). *Berries for pie*. HMH Supplemental Publishers.

McDermott, G. (2011). *Monkey, a trickster tale from India*. HMH Books for Young Readers.

Nellie, E. (2011). *Horses*. HMH Supplemental Publishers.

Nichols, C. (2017). *The big jump*. HMH Supplemental Publishers.

Robinson, F. (2009). *The surprise*. Heinemann.

Ross, L. B. (2007). *The coyote and the rabbit*. Heineman.

Rossiter, M. (2018). *The little kitten*. Heinemann.

Springer, K. (2019). *The messy room*. Heinemann.

Text for Teacher Discussion

Henry, O. (1907/2019). *The purple dress*. In *The O. Henry Short Story Collection - Volume I*. Watchmaker Publishing.

Appendix A**Semi-Structured Burke Reading Interview (BRI)**

(Adapted from Y. Goodman et al., 2005, p.275)

Name _____ Age _____ Date _____

Occupation _____ 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 they don't know?
5. "Yes" When _____ does come to something she/he doesn't know, what do you think he/she does?
"No" Suppose _____ comes to something she/he doesn't know. What would she/he do?
6. How would you help someone having difficulty reading?
7. What would a/your teacher do to help that person?
8. How did you learn to read?
9. What would you like to do better as a reader?
10. Do you think you are a good reader? Why?
11. Do pictures help you in any way? How?
12. What books do you like to read?

Appendix B**Reading Attitude Assessment**

(Harp, 2006, p. 22)

Name _____ Date _____

1. How do you feel when you think about reading?
2. How do you feel about reading books at home? How often do you read at home?
3. How do you feel about using the library? How often do you go there?
4. How do you feel when it is time for reading time in class?
5. How do you feel when you are asked to read aloud in class?
6. How do you feel when the teacher reads to you?
7. What do you do best as a reader?
8. What do you need to learn to do better as a reader?
9. What are your favorite things to read about?
10. How do your parents feel about your reading?

Appendix C

Semi-Structured Teacher Interview

(Adapted From Owocki & Goodman, 2002, p. 97)

1. Tell me a bit about yourself and your teaching experience.
2. What literacy assessments do you use with your RTI students?
3. How do you use assessment data to make instructional decisions that contribute to your students' reading development?
4. Do you do anything different for RTI students?
5. From your experience, what do you notice that good readers do? How about less proficient readers?
6. What do you do when a reader gets to something they don't know? Do you do anything else?
7. What strategies do you find essential in teaching of reading?
8. What strategies do you emphasize with RTI readers?
9. What do RTI readers do well?
10. What do RTI readers need help with?
11. What do you do when your students get to a word they don't know? Do you do anything else?
12. What school programs, materials, activities did you find helpful in contributing to your students' literacy development?
13. Is there anything you would like to share with me about reading with your students?

Appendix D

Miscue Handout for Teacher Group Session 1

(Y. Goodman et al., 2014, p. 54)

Appendix: Markings for Miscue Analysis

<p>Substitutions Substitutions are shown by writing the miscue directly above the word or phrase.</p> <hr/> <p style="text-align: center;"><i>comfortable</i> He was sitting comfortably in the carriage.</p>	<p>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. A circle inscribed with an R designates simple repetitions. Multiple repetitions, words or phrases that are repeated more than once, are underlined each time they occur.</p> <hr/> <p>Why don't you do my work some day? All at once I was covered with red paint.</p>
<p>Omissions Omissions are marked by circling the omitted language structures.</p> <hr/> <p>"I can do <u>all</u> that," replied the husband.</p>	<p>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 circle inscribed with a C indicates a correction. (The UC is described on p.9.) The markings in this example show that Gary predicted <i>horses</i> (which he repeated twice), followed by a correction to <i>houses</i>, followed by the substitution of <i>for and</i>, followed by the correction to <i>houses and roads</i>. His multiple attempts are written and numbered in the order of occurrence above the sentence.</p> <hr/> <p style="text-align: right;"> ¹ horses ² horses ³ houses ⁴ houses ⁵ houses ⁶ houses ⁷ houses ⁸ houses ⁹ houses ¹⁰ houses ¹¹ houses ¹² houses ¹³ houses ¹⁴ houses ¹⁵ houses ¹⁶ houses ¹⁷ houses ¹⁸ houses ¹⁹ houses ²⁰ houses ²¹ houses ²² houses ²³ houses ²⁴ houses ²⁵ houses ²⁶ houses ²⁷ houses ²⁸ houses ²⁹ houses ³⁰ houses ³¹ houses ³² houses ³³ houses ³⁴ houses ³⁵ houses ³⁶ houses ³⁷ houses ³⁸ houses ³⁹ houses ⁴⁰ houses ⁴¹ houses ⁴² houses ⁴³ houses ⁴⁴ houses ⁴⁵ houses ⁴⁶ houses ⁴⁷ houses ⁴⁸ houses ⁴⁹ houses ⁵⁰ houses ⁵¹ houses ⁵² houses ⁵³ houses ⁵⁴ houses ⁵⁵ houses ⁵⁶ houses ⁵⁷ houses ⁵⁸ houses ⁵⁹ houses ⁶⁰ houses ⁶¹ houses ⁶² houses ⁶³ houses ⁶⁴ houses ⁶⁵ houses ⁶⁶ houses ⁶⁷ houses ⁶⁸ houses ⁶⁹ houses ⁷⁰ houses ⁷¹ houses ⁷² houses ⁷³ houses ⁷⁴ houses ⁷⁵ houses ⁷⁶ houses ⁷⁷ houses ⁷⁸ houses ⁷⁹ houses ⁸⁰ houses ⁸¹ houses ⁸² houses ⁸³ houses ⁸⁴ houses ⁸⁵ houses ⁸⁶ houses ⁸⁷ houses ⁸⁸ houses ⁸⁹ houses ⁹⁰ houses ⁹¹ houses ⁹² houses ⁹³ houses ⁹⁴ houses ⁹⁵ houses ⁹⁶ houses ⁹⁷ houses ⁹⁸ houses ⁹⁹ houses ¹⁰⁰ houses </p> <hr/> <p>These he made into blocks for building houses and roads.</p>
<p>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.</p> <hr/> <p style="text-align: center;"><i>some</i> "Now I've got more work to do," said the man.</p>	<p>Substitutions Often Called Reversals An editor's transposition symbol shows which words have been reversed.</p> <hr/> <p>I sat <u>looking down</u> at Andrew. Was <u>something</u> wrong with Papa?</p>
<p>Regressing and Abandoning a Correct Form Abandonments are marked by drawing a line from right to left to the point at which the reader went back to repeat but abandoned the expected text. An inscribed AC is used to indicate this type of regression. In this example, the reader first reads <i>head against the wall</i>, then rejects this possibility and produces the more sensible <i>hand against the wall</i>.</p> <hr/> <p style="text-align: center;">AC <i>hand</i> "How many times did I hit my head against the wall?" she asked.</p>	

Appendix E

Single Miscue Analysis Form

(Adapted from Fahrenbruck & Liwanag, 2021, p. 18)

Name of the Reader: _____

Miscue: _____ for _____

Analysis:

1. Does the miscue make sense?

2. Does the miscue sound like language? _____
3. Was the miscue corrected? _____
4. Should it have been corrected? _____
5. Does the miscue look like or sound like the way the text is written?

6. Why do you think the reader made this miscue?

7. Did that miscue affect the reader's understanding of the text?

Appendix F

Reading Miscue Inventory Procedure III-Reader Profile

(Davenport, 2002, p. 238)

Appendix G: Blank Reader Profile

**READING MISCUE INVENTORY
Procedure III—Reader Profile**

Reader _____ Date _____

Selection read _____

Number of sentences coded _____

INFORMATION FROM TYPESCRIPT

Comprehending in Process (Sentence Codings)

_____ % YFN
 _____ % YYP
 _____ % YYY
 _____ % YN-
 _____ % NN-

Syntactic Acceptability

_____ % Acceptable
 _____ % Unacceptable

Semantic Acceptability

_____ % Acceptable
 _____ % Unacceptable

Meaning Change

_____ % No Change (N)
 _____ % Partial Change (P)
 _____ % Change (Y and Dash)

INFORMATION FROM RETELLING GUIDE

Comprehension _____ %

INFORMATION FROM MISCUE TALLY FORM

Total Number of miscues tallied _____

Corrections

_____ % Self-Corrected
 _____ % Uncorrected, No Meaning Change
 _____ % Uncorrected, Partial Meaning Change
 _____ % Uncorrected, With Meaning Change

Total Number of miscues coded for graphic similarity _____

Graphic Similarity

_____ % High
 _____ % Some
 _____ % None

COMMENTS

© 2002 by M. Ruth Davenport from Miscues, Neil Alden, Portsmouth, NH: Heinemann

Appendix G**Miscue Analysis Retelling Summary**

(Adapted from Y. Goodman et al., 2005, p. 126)

READER _____
DATE _____
SELECTION _____

Holistic Retelling Score: _____

Plot Statements

Theme Statements

Inferences

Misconceptions

Comments:

Possible questions:

- Did you like this story? Why?
- What did you think was funny?
- Did this story make you think of something from your life?
- Did it remind you of anyone you know?
- Was that character like you? How?
- What do you think that character should have done? What would you have done in their place?
- Does this story remind you of other stories you read?
- What do you think about the illustrations?
- Do you think this is a true story? Why?

Appendix I

Classroom Observation Protocol

Date _____ Time _____

Teacher's Pseudonym _____

Subject _____ Setting _____

Activities and Interactions

Materials Used

Lesson Topic/Objective

Reflection

Appendix J**The Reading Development Checklist**

(Harp, 2006, p. 34)

Developing Readers

Name_____

Date_____

 Is eager to attend 2 long books in reading and listening Shows an interest in meeting challenges of texts Displays confidence as a reader / is willing to take risks and make predictions Is eager to share ideas with others Has increasing knowledge of book and print conventions Understands how background knowledge contributes to meaning Appreciates the value of predicting confirming an integrating Has several strategies to invoke when meaning fails Increasingly makes more accurate predictions Read increasingly more complicated texts across a range of genres Chooses to read independently

Appendix K

Procedure III – Reader Profile

Information From Miscue Tally Form

Participant	Text	Total Number of Miscues Tallied	Percentage of Self-Corrections	Uncorrected Miscues Percentages			Graphic Similarity Percentages		
				No Meaning Change	Partial Change	Change	High	Some	None
Jack Grade 1	A Surprise for Roxy by Fay Robinson	22	4	10	36	50	37	63	0
	Goat’s New Hat by Maryann Dobeck	27	15	11	7	82	79	16	5
	A Muddy Mess by Marcie Aboff	15	7	33	53	7	67	11	7
	Berries for Pie by Casey Mao	21	0	24	33	43	76	14	10
	At the Beach by Heather Hammonds	9	11	22	11	77	72	24	4
Bobby Grade 2	The Coyote and the Rabbit by Linda B. Ross	4	25	25	25	50	66	34	0
	The Big Jump by Catherine Nichols	60	13	27	10	50	82	12	6
	Horses by Elsie Nellie	8	50	13	13	26	88	12	0
	Dogs by Clive Harper	3	66	66	0	34	100	0	0
	Looking at the Moon by Julie Haydon	4	50	50	0	50	100	0	0
Brad Grade 2	The Big Jump by Catherine Nichols	2	100	0	0	0	100	0	0
	Monkey, A Trickster Tale From India by Gerald McDermott	17	12	77	0	23	95	5	0
	Dogs by Clive Harper	2	100	100	0	0	100	0	0
	Horses by Elsie Nellie	3	100	100	0	0	100	0	0
	Goat’s New Hat by Maryann Dobeck	0	0	100	0	0	n/a	n/a	n/a
Cole Grade 2	The Messy Room by Kate Springer	18	23	7	11	59	68	6	26

Participant	Text	Total Number of Miscues Talled	Percentage of Self-Corrections	Uncorrected Miscues Percentages			Graphic Similarity Percentages		
				No Meaning Change	Partial Change	Change	High	Some	None
	The Big Jump by Catherine Nichols	25	28	55	5	12	80	5	15
	Horses by Elsie Nellie	3	0	0	100	0	100	0	0
	Dogs by Clive Harper	11	56	91	0	9	90	0	10
	Looking at the Moon by Julie Haydon	1	100	0	0	0	100	0	0
Joe Grade 2	The Messy Room by Kate Springer	45	18	13	18	51	80	15	5
	The Watch by Kate Dopirak	10	0	10	10	80	80	20	0
	Horses by Elsie Nellie	20	20	15	10	55	85	10	5
	Dogs by Clive Harper	36	25	5	14	28	67	33	0
	Looking at the Moon by Julie Haydon	18	28	33	11	28	72	17	11
Amy Grade 3	The Little Kitten by Max Rossiter	9	0	67	22	11	83	17	0
	Berries for Pie by Casey Mao	47	4	40	11	45	43	45	12
	My Zoo Album by Julie Haydon	26	7	38	19	36	67	29	4
	At the Beach by Heather Hammonds	22	14	14	14	8	64	14	22
Shy Grade 3	Dirt Cake by Joanna Cruz	44	7	50	9	34	48	46	6
	The Big Jump by Catherine Nichols	42	19	17	14	50	86	14	0
	Dogs by Clive Harper	24	25	38	17	20	84	10	6
	Horses by Elsie Nellie	6	17	33	0	50	100	0	0

Appendix L

Procedure III – Reader Profile

Information From Typescript (Sentence Coding Percentages)

Student	Text Read	Syntactically Acceptable	Semantically Acceptable	No Change	Partial Change	Meaning Change
Jack Grade 1	A Surprise for Roxy by Fay Robinson	73	73	20	53	27
	Goat's New Hat by Maryann Dobeck	92	88	40	28	32
	A Muddy Mess by Marcie Aboff	87	79	67	4	29
	Berries for Pie by Casey Mao	92	88	69	19	12
	At the Beach by Heather Hammonds	100	100	68	11	21
Bobby Grade 2	The Coyote and the Rabbit by Linda B. Ross	100	95	95	0	5
	The Big Jump by Catherine Nichols	100	93	75	4	21
	Horses by Elsie Nellie	100	85	15	0	15
	Dogs by Clive Harper	100	100	100	0	0
	Looking at the Moon by Julie Haydon	100	80	80	0	20
Brad Grade 2	The Big Jump by Catherine Nichols	100	100	100	0	0
	Monkey, A Trickster Tale from India by Gerald McDermott	100	97	91	2	7
	Dogs by Clive Harper	100	100	100	0	0
	Horses by Elsie Nellie	100	98	98	0	2
	Goat's New Hat by Maryann Dobeck	100	100	100	0	0
Cole Grade 2	The Messy Room by Kate Springer	100	96	92	4	4
	The Big Jump by Catherine Nichols	100	100	96	2	2

Student	Text Read	Syntactically Acceptable	Semantically Acceptable	No Change	Partial Change	Meaning Change
	Horses by Elsie Nellie	100	100	86	14	0
	Dogs by Clive Harper	100	96	96	0	4
	Looking at the Moon by Julie Haydon	100	100	100	0	0
Joe Grade 2	The Messy Room by Kate Springer	87	67	40	11	49
	The Watch by Kate Dopirak	100	97	90	7	3
	Horses by Elsie Nellie	100	95	68	9	23
	Dogs by Clive Harper	100	87	71	5	24
	Looking at the Moon by Julie Haydon	100	98	82	11	7
Amy Grade 3	The Little Kitten by Max Rossiter	100	75	75	25	0
	Berries for Pie by Casey Mao	88	50	23	19	58
	My Zoo Album by Julie Haydon	100	79	62	10	28
	At the Beach by Heather Hammonds	100	89	42	26	32
Shy Grade 3	Dirt Cake by Joanna Cruz	100	98	76	9	15
	The Big Jump by Catherine Nichols	94	83	72	2	26
	Dogs by Clive Harper	100	100	86	7	7
	Horses by Elsie Nellie	100	89	89	0	11