

TAKING ACTION: RECIPROCITY IN READING AND WRITING
WITHIN EARLY INTERVENTION

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DEDICATION

To my family for their love and support, and to my former and future students
from whom I learn every day.

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ABSTRACT

CLARENE PELGER HIGHT

TAKING ACTION: RECIPROCITY IN READING AND WRITING WITHIN EARLY INTERVENTION

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In 2004, the reauthorization of the Individuals with Disabilities Education Act, in direct alignment with No Child Left Behind, allowed schools to allocate 15% of their special education funds to improve instruction and provide increasingly expert reading instruction to students at-risk for reading difficulties. Response to Intervention was implemented within schools across the country, and researchers began to study implementation and intervention practices. Researchers have studied a variety of interventions that differ in complexity, however most research tends to evaluate extremely focused interventions aimed at a particular skill or specific task (Pressley, Graham, & Harris, 2006).

The current study moves beyond a simplified, isolated perspective and investigated a more complex view of literacy learning. The purpose of the current study was to describe how reciprocity in reading and writing supports early literacy learning during a comprehensive approach to intervention instruction. Specifically, the study sought to understand the potential power of reciprocity through the careful and direct observation of reading and writing behaviors of children during intervention instruction. The study utilized a descriptive, micro-analysis approach within the context of

intervention instruction to analyze the participants' actions during a variety of literacy events. Findings are presented and discussed as themes of reciprocity with relevant examples from the data. This study hopes to enhance the theory and research base related to literacy intervention instruction, inform teachers and administrators about intervention instructional practices, and enrich how the field understands the relationship between reading and writing.

Keywords: Response to Intervention, intervention, intervention practices, reciprocity, reading, writing, qualitative analysis

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CHAPTER I

INTRODUCTION

No writing...just comprehension.

A seemingly simple directive was spoken by an administrator during a meeting with campus interventionists, the same interventionists, or tutors, who would be working with kindergarten, first, and second grade struggling readers in one Texas elementary school. As one of those interventionists and a doctoral student of literacy education, I thought, just comprehension...no writing?

Nearly twenty years prior, Wharton-McDonald, Pressley, and Hampston (1998) argued “thorough integration of reading and writing activities” contributed to the highest levels of student achievement, based on observational measures of reading and writing, in the first-grade classrooms studied (p. 118). Furthermore, the findings underscored the complexity of literacy instruction that cannot be easily simplified to a single statement, skill, or task. Research and theory clearly illustrate the reciprocal relationship between reading and writing (Anderson & Briggs, 2011; Clay, 1991; Deford, 1994; Graham, et al., 2017; Tierney & Shanahan, 1996) and how writing allows students a way to extend thinking about reading (Dyson & Freeman, 1991; Fountas & Pinnell, 2010a; Graham & Hebert, 2011). Furthermore, through writing students explore and analyze, synthesize details and ideas, and think in increasingly complex ways about reading (Bereiter & Scardamalia, 1987). The current study aims to describe how writing and reading (and vice versa) mutually support literacy learning during intervention instruction.

Background: Intervention

One continually burning concern in education is how to best serve struggling readers. In the last ten years, due to the reauthorization of the Individuals with Disabilities Education Act and in direct alignment with No Child Left Behind, schools are allowed to allocate 15% of their special education funds to improve instruction and provide increasingly expert reading instruction to students at-risk for reading difficulties (IDEA, 2004). Such instruction is known as intervention instruction defined for the purpose of this study as “a comprehensive, systemic approach to teaching and learning designed to address learning problems for all students through increasingly differentiated and intensified assessment and instruction” (Wixson, 2011, p. 504).

The law is purposely written to allow states and districts flexibility in intervention instruction implementation without identifying a particular instructional approach (Johnston, 2010; Wixson, 2011) yet requires “highly qualified personnel” to provide such instruction (IDEA, 2004). The flexible nature of the law allows states and districts the autonomy to construct intervention instruction to best fit their student populations and needs (Berkeley, Bender, Peaster, & Saunders, 2009). As such, states and districts have implemented a variety of interventions, with many that “reduce the parameters of what counts as literacy to a few basic, core reading skills and strategies” (Brozo, 2009, p. 279). As a result, intervention instruction becomes less about responding to students’ strengths and needs and more about isolated skill practice. That is, intervention instruction is often more about learning the small skills or tasks, without addressing the complexity of literacy learning Wharton-McDonald, Pressley, and Hampston (1998) illustrated was

necessary for the highest levels of student achievement.

Researchers have studied a variety of interventions that differ in complexity; however, most research tends to evaluate extremely focused interventions aimed at a particular skill or specific task (Pressley, Graham, & Harris, 2006). The current study moves beyond a simplified and isolated perspective and investigates a more complex view of literacy learning aimed at describing a multifaceted look at intervention instruction.

Background: Power of Writing

Duke and Pearson (2002) examined the qualities good readers possess and what they do when reading to better understand what quality instruction should look like. Duke and Pearson (2002) advocated for a comprehensive approach to literacy instruction that is a blend of explicit comprehension strategy instruction with opportunities for text reading, writing, and discussion. A comprehensive approach includes an appropriate balance on meaning-making and skill instruction that builds on learners' strengths and offers differentiated and individualized instruction. Today, there is an aim to move away from the Reading Wars (late 80s/early 90s) debate of balanced instruction that led to an oversimplified, either-or view of literacy and an often ill-balanced delivery of instruction (Gambrell, Malloy, & Mazzoni, 2011; Madda, Griffo, Pearson, & Rafael, 2011; Rasinski & Padak, 2004). Instead, researchers call for a more comprehensive approach to instruction that "better captures the complexity and integrated nature" of literacy (Rasinski & Padak, 2004, p. 93).

Writing is a key component that deserves equal emphasis within comprehensive literacy instruction. There is substantial evidence supporting the reciprocal and connected relationship between reading and writing. According to Clay (1991), the active process of writing offers opportunities for the student to attend to print in ways that allow the student to learn and build understanding of directionality, spatial concepts, letter formation and sounds, the relationships between letters and words, and the orthographic features of words. The benefits of writing include: increased attention to letter features and letter formation, opportunities to analyze letter sequences and clusters within words continuing to and between words, phrases, and sentences. Even more so, writing promotes the acquisition and use of cognitive skills, such as organizing, monitoring, questioning, and creating and revising meaning while composing meaningful messages that are mutual cognitive processes used when reading (Clay, 2001; Fitzgerald & Shanahan, 2000; Graham & Hebert, 2011; National Writing Project & Nagin, 2003; Tierney & Shanahan, 1996). The mutual cognitive processes used in reading and writing, and the actions taken during reading and writing have the potential to influence learning in one or the other –this is known as reciprocity (Clay, 1998; Fullerton & DeFord, 2000).

Indeed, the reciprocity between reading and writing has led to understanding the powerful benefits of integrating reading and writing instruction. A meta-analysis of research conducted by Graham and Hebert (2011) confirmed that writing about reading through summary, answering and generating questions, taking notes, and extended writing activities improved comprehension in students, including those that struggle with reading and writing, in Grades 2-12. In addition, instruction in writing, including process,

text structure, and paragraph/sentence instruction, increased students' reading comprehension in Grades 4-12, reading fluency in Grades 1-7, and word reading in Grades 1-5. Increased time for writing also improved reading comprehension in Grades 1-6, therefore highlighting that writing should be an important practice in all grades. Ironically, this notable analysis was published after the obvious omission of writing in the essential components of effective reading instruction as identified by the National Reading Panel Report (National Institute of Child Health and Human Development [NICHD], 2000).

An earlier study by Fitzgerald and Shanahan (2000) acknowledged the similar cognitive processes shared between reading and writing while also noting that the two are dissimilar cognitively. Fitzgerald and Shanahan hypothesized that the cognitive "separability" between reading and writing may explain "why they can be combined so effectively to support critical thinking" (2000, p. 43). Effectively using writing to support critical thinking before, during, and after reading is evident in research with elementary students (Rickards & Hawes, 2006; Graham & Hebert, 2011), secondary students (Graham & Hebert, 2011), college, undergraduate students (Jackson, 2005; Simmons-Herts, 2010), and in instructional practice suggestions (Skeans, 2000; Rasinski & Padak, 2004).

Problem and Purpose

Very little intervention research focuses on a comprehensive approach to literacy instruction. Researchers addressing literacy interventions have studied oral language skills in young children (Cabell, 2011), phonological awareness (Hatcher et al., 2006),

word analysis and reading (Graves, Duesbery, Pyle, Brandon, & McIntosh, 2011; Hatcher et al., 2006), vocabulary (Graves et al, 2011), fluency (Graves et al, 2011; Wanzek & Vaughn, 2008), and teacher-student ratios (Schwartz, Schmitt, & Lose, 2012).

Researchers also investigated teachers' perceptions towards intervention (Carlson et al., 2011) and intervention implementation (Martinez & Young, 2011; Mask, McGill, & Austin, 2010; Rinaldi, Higgins-Averill, & Stuart, 2011; White, Polly, Audette, 2012).

A preliminary search of publications and reviews on literacy interventions for students in grades K-12 on the What Works Clearinghouse identified ~82 intervention reports on programs that integrate reading and writing instruction with a variety of measured outcome domains and ratings, including reading comprehension (45), reading achievement (23), general literacy achievement (3), early reading/writing (4), and writing achievement (4) (Institute of Education Sciences, 2014). A closer examination of the individual reports exposed either no mention of writing, writing without further clarification or elaboration, or varied definitions of writing, ranging from spelling to reading response to a writing process approach to integrated instruction. Indeed, low numbers of reports measuring reading achievement and/or writing achievement suggests a need for more research. Despite the aforementioned benefits of integrating reading and writing instruction on literacy learning, there are few research studies that investigate an integrated approach to intervention instruction (IRA/NICHD, 2012).

Intervention research appears to focus primarily on parts of literacy –skills or specific strategies– in intervention instruction (Pressley, Graham, & Harris, 2006), not the big picture of literacy instruction with the goal of developing readers and writers that

can effectively problem solve, build knowledge and ideas, and think critically. However, intervention instruction must include both reading and writing to achieve accelerated growth in literacy learning (Clay, 1991, 1998, 2001; DeFord, 1994; Graham & Hebert, 2011, Graham et al., 2017). If the intention is to develop readers and writers that can function successfully in school, future jobs, and life, then more should be known about the reciprocal value of reading and writing within intervention instruction.

In order to understand the mutually occurring learning benefits of connecting reading and writing in intervention settings, it is necessary to carefully observe readers and writers in the complex process of actual reading and writing; that is, the reading and writing of continuous texts (Clay, 1991). One way to understand the potential power of reciprocity is through the direct observation of reading and writing behaviors of children during intervention instruction. When children read and write, they take action as they attend to texts. The actions are not always overt and often done inside the head; even so, through careful observation and analysis, the actions initiated can offer insight into the mental activity employed by the child as he reads and writes.

The purpose of this study is to describe how reciprocity in reading and writing supports early literacy learning during a comprehensive approach to intervention instruction. Observation of daily work during intervention sessions, district-wide benchmark assessment data, and formative reading assessment data from kindergarten and first grade students will be collected and analyzed. The following research question will be addressed:

How do kindergarten and first grade literacy intervention students demonstrate the reciprocal relationship between reading and writing as they take action in reading and writing texts?

Significance

Pressley, Graham, and Harris (2006) noted the abundance of experimental studies in intervention research that focus on single skills or tasks. While acknowledging the important information contributed by such studies, Pressley et al. (2006) also suggested future research to include more complex interventions. That suggestion, in combination with my personal experience, has prompted me to choose the current study. In order to understand the complexity of the reciprocal relationship between reading and writing within comprehensive literacy intervention instruction, a qualitative methodological perspective is necessary. Qualitative research potentially provides detailed descriptions of contextualized and complex actions that make up literacy development. Rich descriptions of children's literacy learning in comprehensive interventions are sparse given the abundance of experimental and quasi-experimental studies of interventions. This study will enhance the theory and research base related to literacy intervention instruction and how the field understands the relationship between reading and writing. In addition, the current study has the potential to inform teachers and administrators about intervention instructional practices that lead to not only improved academic performance, but also enriched literacy learning.

This chapter has provided the introduction to this study of reciprocity in early literacy intervention instruction. Chapter II will describe in detail the theoretical

framework that guides the study and review the literature related to comprehensive literacy instruction, Response to Intervention, reading interventions, and students' actions while reading and writing.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this study was to closely observe students as they independently read and write in order to describe how reciprocity in reading and writing supports early literacy learning during a comprehensive approach to intervention instruction. Therefore, the current study was guided by the following research question: How do kindergarten and first grade literacy intervention students demonstrate the reciprocal relationship between reading and writing as they take action in reading and writing texts?

Chapter II reviews the literature related to the connection between reading and writing and Response to Intervention. First, the theoretical framework that guided the study will be discussed followed by relevant and specific topics, including: writing as mutually supportive to reading in literacy instruction, the history of Response to Intervention, reading interventions, students taking action in reading and writing, and a summary of the literature review.

Theoretical Framework

Literacy encompasses the connected processes of speaking, listening, reading, writing, and thinking. To begin, learning to read and write is an extension and continuation of early language learning. Halliday (1973) discussed the idea of “learning to mean” through the utterances of young children and the early development of learning how to speak. Halliday (1973) investigated the use of language from a functional perspective: for what purposes is language used, how are these purposes realized through

listening, speaking, reading, and writing, and how has language been shaped through these very purposes. Halliday (1973) believed that language is learned by understanding its meaning potential and developed through experience with others and the world. Thus, language is considered a beneficial source for beginning (and continued) literacy learning; language holds the meaning, structure, and organized thought that can be connected to early literacy acquisition (Clay, 1991; Dyson, 1983).

Likewise, Marie Clay (1991, 2001) believed that meaning drives literate behaviors, such as speaking, listening, reading, and writing. Indeed, “meanings provide the purpose of reading and writing” (Clay, 1991, p. 2); therefore, meaning is not considered a hindrance nor an afterthought, but rather a useful and necessary support in a child’s approximations as he is learning about print in written text. Building upon Rumelhart’s (1994) theory that reading is an interaction between perceptual and cognitive processes, Clay (1991) proposed a complex theory of literacy where emphasis is placed on meaning “as a facilitator of reading, not merely a product of it” (p. 290). From the beginning a child is taught, using connected text, to rely on meaning to guide learning and thinking in both reading and writing.

Another layer to Clay’s (1991) theory is an important and continual consideration of the interplay between reading and writing: the reciprocity between reading and writing that “creates powerful opportunities for the learner’s competencies in one area to support learning in the second” (Doyle, 2013, p. 651). There is considerable agreement among scholars about the potential instructional power held within the reciprocity of reading and

writing, but first a brief history and elaboration of the intermingling of language, reading, and writing in the creation of meaning will be provided.

During the time of early literacy learning, children begin to “play” with writing via symbols (marks and scribbles on paper) that evolve from just markings, to representations of some intended meaning (drawing/labels), to simple messages that can be read by another (Dyson, 1983; Vygotsky, 1978). Early experiences such as these are indicative of the natural ability to connect language with written text and reading that holds meaning between individuals (Bissex, 1980; Heath, 1990).

Many researchers have recognized the inherent nature of writing as a complex and social process (Boscolo, 2008; Clay, 1991, 2001; Dyson & Freedman, 1991). During the 1970s, there was an influx of cognitive research that attempted to create theories and models for the complex process of writing (Flower & Hayes, 1981) which, for some, created an understanding that writing was a solitary and separate task. Also at that time and into the 1980s and 1990s, an emergence of thinking about the social nature of learning modified some previous views and shaped new ways of thinking about both writing and reading as generative and connected processes. During these decades there was also an increased interest in observing young children’s processing during the act of reading and writing (Boscolo, 2008; Clay, 1975, 1991; Dyson, 1983; Graves, 1975). This led to confirmation that writing is not a solitary process, but rather related to the surrounding social context of place, people, and time as well as connected to an audience—the reader(s).

Moreover, and important for the current discussion, an even greater understanding was gained about the cognitive aspects and social nature of writing and the ways in which writing processes, such as observing, searching, monitoring, and creating meaning were parallel to those of reading (Tierney & Shanahan, 1996). In a review of performance-based, process-based, and experimental studies, the researchers found that reading knowledge is shared reciprocally with writing knowledge, meaning that reading can lead to increased performance in writing and writing can lead to increased performance in reading. Thus, highlighting the instructional long-term learning benefits of integrated instruction. Most of the studies in the review included older students (6th grade-college age), although related work with first, second, and third grade students was also included. Tierney & Shanahan (1996) reported findings from the review to be consistent with previous research with early literacy learners, noting that when students are actively creating meaning through interactions around texts in their classrooms, then,

“...writing [is] a powerful tool for the enhancement of thinking and learning. Writing and reading together engage[s] learners in a greater variety of reasoning operations than when writing or reading are apart or when students are given a variety of other tasks to go along with their reading (p. 272).

It is through this lens that current research in literacy and intervention practices will be reviewed including, 1) a consideration of the role of writing in literacy learning, 2) history of legislation and policy implications regarding intervention instruction, 3) competing views, subsequent instructional practices, and clarification of Response to Intervention, 4) a review of current interventions that include writing, and 5) independent action of early literacy learners.

Writing

There is common agreement that there is a connection between reading and writing. Recent research has increased the knowledge base and shown the positive impact of writing instruction and the balancing of reading and writing instruction on literacy development (Graham & Hebert, 2011, Graham et al., 2017, IRA/NICHA, 2001). The following offers a closer look at the literature around writing as it supports literacy learning.

From the Beginning *or* Early Writers

Children need opportunities to create meaning through writing upon entrance to school (Clay, 1975, 1991, 2001, Dyson, 1983). Indeed, writing may provide the first opportunities for children to explore and attend to print (Chomsky, 1971; Clay, 1975, 1991). The active process of writing provides opportunities for the child to direct the eye and the brain to print in ways that allow the child to learn and build understanding of directionality, spatial concepts, letter formation and sounds, the relationships between letters and words, and the orthographic features of words. The benefits of learning to write include: increased attention to letter features and letter formation, opportunities to analyze letter sequences and clusters within words continuing to and between words, phrases, and sentences, and the acquisition and use of cognitive skills, such as comparing, contrasting, and self-correcting.

Moreover, learning to write permits children to work with their language knowledge as well as practice and explore their natural inclination to multimodal thinking—mixing of symbols, drawings, and writing to compose and create expressive and

meaningful messages (Rowe, 2008). Undoubtedly, these are all understandings that would prove useful to visual attention in reading as well, thus identifying a reciprocal relationship between the two tasks (Clay, 1991, 1998; Rumelhart, 1994). Indeed, the knowledge acquired from early writing experiences can transfer into reading and vice versa (Clay, 1998).

Writing to Learn and Extend Thinking

Researchers believe that writing can enrich thinking about what has been read and increase comprehension (Fitzgerald & Shanahan, 2000; Graham & Hebert, 2011; National Writing Project & Nagin, 2003). Using writing as a means of comprehension instruction includes but is not limited to, writing personal responses and evaluating what has been read, summarizing, taking notes, and creating and answering questions. Bereiter and Scardamalia (1987) discussed the ways in which students write to tell (such as, recalling events, details from what has been read) and to transform (using what has been read to analyze and synthesize new knowledge with known through writing to create new thinking and ideas). Bereiter & Scardamalia (1987) noted that young students often tell through writing but are careful to point out that their observations could be related to instructional practices and classroom assignments. Indeed, comprehension does include the ability to retell stories while capturing main ideas and details. However, to extend students' thinking about what has been read and increase comprehension, modeling ways of transforming knowledge and providing opportunities for students to practice higher-level thinking appears to be promising for helping all students, especially those that struggle with literacy learning.

In a recent meta-analysis, Graham et al. (2017) examined intervention studies to test the recommendation that reading and writing should be taught together; findings indicated that literacy programs balancing reading and writing instruction did, indeed, bolster reading and writing and “the two can be learned together effectively” (p. 47). Due to the connected nature of reading and writing, Nelson (2008) claimed an almost blurred line between the concept of comprehension and the act of composing –as though our brains are able to think simultaneously about writing while reading and reading while writing without a clear distinction between the two. So, it seems that helping students to make, understand, and apply those connections is an essential and important consideration for literacy instruction (both in the classroom and as supplementary, intervention instruction). Indeed, including writing instruction and opportunities to actively engage children in writing activities during reading instruction supports the acquisition of multiple literate behaviors necessary for literacy learning.

History of Response to Intervention

In December 2004, in alignment with the No Child Left Behind legislation, the reauthorization of the Individuals with Disabilities Education Improvement Act was signed into law (IDEA, 2004). Included within the law, although not specifically named, was the introduction of the Response to Intervention initiative (RtI) that held two important implications for both general and special education. First, in an effort to improve instruction, RtI allows for 15% of special education funds to be used to provide increasingly expert reading instruction to students at-risk for reading difficulties. Second,

RtI offers educators an alternate method for the identification of students with learning disabilities.

There was much debate among researchers and educators over the use of IQ scores as the primary means for identifying students in need of special education services (Fuchs & Fuchs, 2006). The debate stemmed from reports of incorrect diagnoses (both over-identification and under-identification) as well as an overwhelming amount of minorities identified as learning disabled. Thus, the reauthorization of IDEA provided funding as a way to preventatively intervene with additional support for struggling students and to accurately identify those students truly in need of special education services. The law is purposely written to allow states and districts flexibility in RtI implementation; it does not identify a particular approach, it does not state or define instructional tiers, nor specify nature or frequency of assessment (Johnston, 2010; Wixson, 2011).

Prevention or Identification

The complexity of the RtI initiative with its instructional and measurement implications is acknowledged (and debated) by researchers across the country (Allington, 2009, 2011; Fuchs & Fuchs, 2006; Vaughn & Fuchs, 2006; Wixson, 2011). On one side, researchers that view RtI as a prevention initiative understand that improving the quality of classroom instruction and teacher capacity (knowledge and skills) is the principal intention of the law (Allington, 2009; Buffum, Mattos, & Weber, 2010; Johnston, 2010, 2011; Phillips & Smith, 2010). The primary goal and purpose lies in providing all students with the time and support needed to learn by placing focus and attention on

finding better and varied ways to meet specific learning needs (Buffum, Mattos, & Weber, 2010; East, 2006). Furthermore, a prevention stance proactively addresses “the disproportionate representation of minorities and English-language learners (ELLs) among those identified as learning disabled and the need to wait for documented failure before services are provided” (International Reading Association, 2009, p. 2). Responsive teaching, therefore, becomes a principal instructional practice for meeting the individual and diverse learning needs of all students.

On the other side, researchers recognize the disparities of special education identification and hold the view that RtI will lead to improved identification of students with learning disabilities (Fuchs, Fuchs, & Vaughn, 2008). While believing that RtI initiatives will “provide help more quickly to a greater number of struggling students,” it is also believed that initiatives will “[distinguish] poorly performing children with disabilities from those who perform poorly because of inadequate instruction” (Fuchs, Stecker, & Fuchs, 2008, p. 72). A three-tiered approach to RtI implementation is favored by those seeking quicker and “better” disability identification with researchers arguing that more tiers can lead to *not* identifying those students that truly need special education services and thus, denying students’ rights to an appropriate education as defined by IDEA. Fuchs, Stecker, and Fuchs (2008) further claimed that varied perspectives stem from an understanding that special education is either conventional/traditional –a positive service “existing for only chronically unresponsive students”- or unconventional –as “an undesirable service option” (p. 75). Although this simplistic, either-or view resides with the identification camp and extends beyond RtI to a deeper, much more complex view of

education, special or otherwise, from the prevention camp. Consequently, debate continues among conflicting philosophies regarding the appropriate place of special education within or apart from general education.

Instructional Protocols

The continued debate among researchers suggests very different instructional approaches for intervention instruction and assessment, which in turn leads to special education eligibility and placement. Instructional approaches are classified as standardized or individualized. Although both are believed to deliver systemic, intensive, and explicit instruction with on-going progress monitoring, there are researchers that claim the benefits of one over the other (Vaughn et al., 2008). For example, Fuchs, Mock, Morgan, and Young (2003) advocated for the use of a more standardized protocol that is focused on a single skill or task, provides a timed/scheduled lesson plan that is often scripted, and can be implemented with fidelity (meaning it is controlled across groups and limits teacher decision making and potential error).

Conversely, Allington (2009), Johnston (2011), Vellutino, Scanlon, Small, and Fanuele (2006) called for an individualized protocol that is more responsive to student strengths and needs, is guided by assessment, allows for teacher input and decision making, and considers student choice in text selection and materials. Vellutino et al. (2006) and Scammacca et al. (2007) have found results in favor of a more individualized protocol with both young children (K-3) and older children (4th and up), respectively. And, researchers that advocate for the standardized protocol have acknowledged that an

individualized approach may be necessary, either after receiving a standardized protocol or for those students at Tier III (Fuchs et al., 2003; Vaughn et al., 2008).

As a result of differing views, researchers have investigated the implementation of RtI in schools and districts (Berkeley et al., 2009; Martinez & Young, 2011; Mask et al., 2010; Tackett, Roberts, Baker, & Scammacca, 2009; White et al., 2012), intervention methods and practices (Bonfiglio, Daly III, Persampieri, & Andersen, 2006; Linan-Thompson, Vaughn, Prater, & Cirino, 2006; Vaughn et al, 2006; Wanzek & Vaughn, 2008), and measurement validity (Vellutino, Scanlon, Zhang, & Schatschneider, 2008; Vellutino, 2010). Also found in the literature are studies that investigate the promise and potential of professional development for successful RtI implementation (Mask et al., 2010; Scanlon, Gelzheiser, Vellutino, Schatschneider, & Sweeney, 2008) and educator perspectives regarding RtI (Carlson et al, 2011; Rinaldi, Higgins-Averill, & Stuart, 2011).

Researchers have also noted that research tends to focus on standardized instructional protocols, therefore noting that individualized instructional protocols continue to be highly understudied (Vaughn et al., 2008; Wanzek & Vaughn, 2008; Wanzek et al., 2013). Despite noted gaps within available RtI literature and instructional protocol considerations, researchers agree that intervention instruction has proven successful for increasing student achievement in reading for younger students in Grades K-3 (May et al., 2013; Schwartz, 2005; Schwartz et al., 2012; Vellutino et al., 2006; Vellutino et al., 2008; Wanzek & Vaughn, 2008), for students in Grades 4-12 (Scammacca et al., 2007; Wanzek et al., 2013; Wanzek, Wexler, Vaughn, & Ciullo,

2010), and for adolescent students in Grades 6-12 (Edmonds et al., 2009; Scammacca et al., 2007).

Interestingly in 2015, Bahu et al. reported poor results for literacy learning in a federal evaluation of RtI implementation and impact. However, the researchers noted that results of the evaluation should not deter districts and schools from offering intervention instruction, but rather provide important considerations regarding the scope and delivery of intervention. Certainly, the results of the evaluation highlighted valid concerns regarding varied interpretations about the purpose of RtI, (mis)alignment of intervention instruction with core reading instruction, assessments that identify, or falsely identify, students for inclusion in intervention, and perhaps most important, the oft use of rigid, standardized instruction that mismatches or ignores the individual, instructional needs of students.

RtI Defined and Clarified

Wixson (2011) defined RtI as “a comprehensive, systemic approach to teaching and learning designed to address learning problems for all students through increasingly differentiated and intensified assessment and instruction” (p. 504). Nearly twenty years before the introduction of RtI, Marie Clay argued “teaching ingenuity adapted to pupil peculiarities is called for” in appropriate, proactive, preventative instruction (as cited in Vellutino, 2010, p. 10). For this reason, Vellutino (2010) claimed that Clay’s perspectives of literacy teaching and learning, the imperative need to provide individualized, responsive early intervention, and learning disability identification were seminal contributions to the RtI initiative that are all too often not recognized in the literature.

Additional evidence supports Clay's contributions: her concept of fluid waves of instruction, including effective literacy teaching in classrooms (which ~80% of the students are successful), one-to-one interventions in the second wave (creating success for ~18% of students), and finally a third wave of instruction comprising of further referral and special support (for ~2% of the student population) are a possibly less rigid representation of the best practices classroom instruction and increasingly, intensive intervention inherent in the current, tiered RtI models (van Kraayenoord, 2010).

The flexible nature of RtI allows states and districts the autonomy to implement RtI and construct procedures to best fit their student populations and needs (Berkeley et al., 2009). In order to examine and illustrate the flexibility of RtI, Barnes and Harlacher (2008) identified five common principles of RtI found in the literature: a proactive focus on preventative instruction, an appropriate match of instruction and curriculum to students' skills and strengths, an emphasis on a heuristic model of instruction and assessment delivery driven by student response, use of effective practices in instruction and intervention, and entire school involvement for successful implementation. It is noted that "instruction and intervention are interchangeable, as each refers to the curriculum the student is exposed to and the manner in which that curriculum is delivered" (Barnes and Harlacher, 2008, p. 425). RtI is about providing responsive instruction for all students, not only a process for special education identification. RtI is not a pre-referral, waiting system for special education eligibility nor a way to evaluate teachers and create more paper work for them (Cicek, 2012).

To further clarify RtI with regard to language and literacy, the International Reading Association formed a Commission on Response to Intervention. The Commission embraced the notion of prevention inherent in the law and recognized that RtI is a framework of collaboration shared by general, compensatory, and special education that purposefully allows for adaptable RtI implementation within distinctly different school districts and communities in the country (IRA, 2009).

Guiding principles published by the Commission direct thinking and planning for educators, reading specialists, administrators, and others when working within the RtI framework. Four principles are relevant to the current discussion and will be further explained. Principle #1 – *Instruction*: optimizing language and literacy instruction for all students is at the forefront of the law; therefore, high quality core instruction should incorporate all areas of language and literacy within the chosen curriculum, instructional materials, and research-based practices. Principle #2 – *Responsive Teaching and Differentiation* endorses instruction that is flexible and responsive to teacher-student interactions, instruction that is informed by useful and relevant assessments, and instruction that is not constricted by a single approach or institutional procedures. Principle #3 – *Systematic and Comprehensive Approaches* call for the integration of RtI within an already comprehensive language and literacy curriculum and instructional practices that are continually improving. Principle #6 – *Expertise* specifically addresses interventionists by stating that professionals providing intervention instruction “must have a high level of expertise in...language and literacy instruction and assessment” as well as the ability to provide intense and accelerated instruction (IRA, 2009, p. 4).

As stated, the reauthorization of IDEA provided funding as a way to proactively and preventatively support struggling students with its primary goal and purpose in providing all students with the time and additional support needed to learn. Furthermore, responsive, expert teaching is a necessity of instructional practice to meet the individual and diverse learning needs of all students.

Reading Interventions

There are numerous interventions that address literacy from a variety of perspectives and focal points; some are intended as whole class curriculum and/or supplementary instruction for small groups or individual students. To find and sort through the many offerings can prove a daunting task. One way to search for interventions is via the What Works Clearinghouse (Institute of Education Sciences [IES], 2014). According to the What Works Clearinghouse, interventions are defined as “an education program, product, practice, or policy aimed at improving student outcomes” and intervention reports are defined as “a summary of findings of the highest quality research on a given program, practice, or policy in education” (IES, 2014). The What Works Clearinghouse researchers conduct comprehensive and systematic reviews of relevant research related to a variety of educational topics and domains to write published reports. For the current review, multiple searches were conducted for intervention reports within the topic of *Literacy* (see Table 1 for search history).

Table 1

Search History Used For WWC Intervention Reports

- Literacy Publications and Reviews > Reading and Writing (49)
- WWC Publications and Reviews > Reading and Writing (61, 58)
- Find What Works > Literacy (78) > Early Reading/Writing (4)
- Find What Works > Literacy (78) > Writing Achievement (3)
- Find What Works > Literacy (78) > Reading Comprehension (45)
- Find What Works > Literacy (78) > Reading Achievement (23)
- Find What Works > Literacy (78) > General Literacy Achievement (3)

Primarily, the initial focus was to find publications, reviews, and intervention reports that included reading and writing. The first search yielded 49 results that included *All Related Review Areas* and *All Publication and Review Types*. A second and third search, including *All Topics* and *Intervention Reports*, yielded 61 and 58 results, respectively, with some reports including mathematics topics. Another set of searches approached the What Works Clearinghouse site from the *Find What Works* tab, where a search of five outcome domains within the topic of literacy was conducted. The outcome domains included early reading and writing, writing achievement, reading comprehension, reading achievement, and general literacy achievement. Results from these searches revealed the intervention reports that were rated for each particular outcome domain. These findings (number of reports for the outcome domain) are reported in Table 1, although all rated domains for each intervention report were included

in the feature chart. In late 2017, it was discovered that the What Works Clearinghouse website had been updated. So, another round of searches were conducted similar to the initial search, yet within the search parameters of the updated site (see Table 2 for search history).

Table 2

Search History Used For WWC Intervention Reports

- Find What Works > Literacy
Filters: Program Type > Supplemental
 Outcomes > Literacy: Alphabetics, Comprehension, Early Reading/Writing, Literacy Achievement, Reading Achievement, Reading Fluency, Writing Achievement (30)
- Publications: Intervention Reports > Literacy > Reading and Writing (8)
- Publications: All > Literacy > Reading and Writing (8 –same as above)
- Find What Works → Literacy (220) → Writing Achievement (4)
- Find What Works → Literacy (220) → Comprehension (37)
- Find What Works → Literacy (220) → Reading Achievement (30)
- Find What Works → Literacy (220) → Literacy Achievement (6)
- Find What Works → Literacy (220) → Early Reading/Writing (3)

It should be noted that the What Works Clearinghouse limits studies that are eligible for review to empirical studies using quantitative methods and inferential statistical analysis, randomized controlled trials, regression-discontinuity design, quasi-experimental design, and single-case design studies. The reports and reviewed studies that were analyzed below have met the What Works Clearinghouse eligibility standards

without reservations within the discussed reports, meaning the studies provided the “highest degree of confidence that an observed effect was caused by the intervention,” although citations of other reviewed studies are often included in the individual reports (IES, 2014).

Analysis of the Reports

To begin, the reports yielded in the search results were read, and then all non-literacy reports and reviews were filtered out leaving a total of 82 reading intervention reports. The 82 reports were reread and entered into a feature chart to document how writing was included (and defined) within each interventions report. Writing was documented as being defined in a variety of ways within the reports: no mention of writing, writing without further clarification or elaboration, spelling, reading response, writing process approach, and integrated instruction. Using the feature chart, the ways in which writing was documented within the reports were further color coded into the following five categories: no mention of writing, no elaboration, spelling, related to reading/reading response, sentence/story construction. A total of 36 of the 82 intervention reports did not mention writing at all. Some of the remaining reports received multiple codes, as evidenced below. There were 15 reports that were coded as not offering further elaboration regarding writing, although seven of those reports were dual-coded as spelling, also. A total of 19 reports, including the seven mentioned, were coded for spelling. There were 10 reports coded as writing related to reading/reading response, and 15 reports were coded as sentence/story construction (three reports were dual-coded for both).

As noted in the search histories, seven reports claimed to rate the writing achievement domain. However, upon further review, some were repeated reports between the search histories or the domain was not actually rated, leaving only four of the remaining 46 reports (that mentioned writing) as being rated for the writing achievement domain. Two of those reports coded writing as spelling (What Works Clearinghouse (WWC), *Spelling Mastery*, 2014; WWC, *Lindamood Phoneme Sequencing*, 2010), one coded writing as spelling and sentence/story construction (WWC, *Reading Mastery*, 2010), and one coded writing as sentence/story construction (WWC, *Self-Regulated Strategy Development*, 2017) –all with potentially positive ratings for the writing achievement domain.

Furthermore, the reports coded for writing as spelling or writing without further elaboration were most often rated for the alphabetics and fluency domains with potentially positive effects (WWC, *Read, Write & Type!*, 2007; WWC, *Waterford Early Reading Program*, 2007; WWC, *Voyager Universal Literacy System*, 2007; WWC, *Lindamood Phoneme Sequencing*, 2010), as well as the reading comprehension domain with potentially negative effects (WWC, *Voyager Universal Literacy System*, 2007), potentially positive effects (WWC, *Project CRISS*, 2010; WWC, *Lindamood Phoneme Sequencing*, 2015), or no discernable effects (WWC, *Reading Edge*, 2012; WWC, *Reading Mastery*, 2012; WWC, *Waterford Early Reading Program*, 2007; WWC, *Wilson Reading System*, 2007; WWC, *Read, Write & Type!*, 2007).

Interestingly, the reports that were coded for writing related to reading/reading response and sentence/story construction were most often rated for reading

comprehension and reading achievement with potentially positive effects (WWC, *SpellRead*, 2013; WWC, *Instructional Conversations and Literature Logs*, 2006; WWC, *Student Team Reading and Writing*, 2011; WWC, *Cooperative Integrated Reading and Composition*, 2010; WWC, *Cooperative Integrated Reading and Composition*, 2012; WWC, *Bilingual Cooperative Integrated Reading and Composition*, 2007; WWC, *Early Intervention in Reading*, 2008). In addition, one report received potentially positive effects for reading comprehension, alphabeticity, and fluency, and positive effects for reading achievement (WWC, *Reading Recovery*, 2013), one report received potentially positive effects for fluency and positive effects for comprehension (WWC, *Read 180*, 2015), and another report received potentially positive effects for fluency and positive effects for reading achievement (WWC, *Leveled Literacy Intervention*, 2017).

The above results of the various intervention reports are in agreement with Mathes et al. (2005), who found that despite theoretical differences, comprehensive, integrated approaches to reading intervention instruction that provide students with “instruction in key reading skills, balanced with opportunities to apply reading and writing skills in connected text” prove effective and valuable for literacy learning (p. 179). Although further analysis is necessary to fully understand the extent of integrated instruction, benefits, and limitations within each of the studies analyzed for the reports, it appears that an integrated approach to literacy instruction has proven beneficial for first grade students (Pinnell, Lyons, DeFord, Bryk, & Seltzer, 1994, Schwartz, 2005; Taylor, Frye, Short, & Shearer, 1991), lower elementary students (Ransford-Kaldon, Flynt, & Ross, 2011), upper elementary students (Kim, Samson, Fitzgerald, & Hartry, 2010;

Stevens, Slavin, & Farnish, 1991), elementary bilingual students (Calderón, Hertz-Lazarowitz, & Slavin, 1998), English language learners (Saunders, 1999; Saunders & Goldberg, 1999), and adolescent students (Stevens, 2006). Certainly, it seems that taking advantage of the power of the reading and writing connection, teachers are able to work with students in an integrated way as they learn to read and write, read to learn, and write about their learning, and as a result, according to reports, positively affect students' overall reading achievement.

It does not go unnoticed that only 26% (22 of the 82 reports) of the intervention reports included writing coded as reading/reading response and sentence/story construction. Furthermore, five of those reports did not include studies that met the What Works Clearinghouse evidence standards for review eligibility. So, only 17 reports remain showing the effects listed above as well as potentially positive and positive effects on English language development and potentially positive effects on writing achievement. Even so, the limited number of reports available provides more evidence that there is a lack of intervention practice and research with regard to an integrated approach (one that includes writing and reading) to intervention instruction.

While there is continued need for more studies of reading interventions across grade-levels and student populations, there is obviously a need for studies that focus on integrated intervention instruction. In addition, there is a need for studies that employ qualitative methods that explore the complexity of literacy learning within intervention and the contextual factors that influence outcomes. Thus, the current study aims to describe how students' actions shape our understanding of the reciprocal relationship

between reading and writing within the context of a comprehensive, integrated approach to intervention instruction.

Taking Action

To do something. To ponder a problem. To act. To take action is to attend, or directs one's attention, to some item or problem. Clay (2001) declared "directing attention to reading print and to writing messages are actions initiated and carried out by the reader or the writer" (p. 32). Readers and writers take action as they attend to texts in reading or writing; however, the actions taken are not always overt and often done inside the head as he reads or writes. Consequently, the actions initiated during reading and writing can offer insight into the mental activity employed by the reader or writer. The mental activity, or "inside the head" action, is often thought of as strategies, defined as "in the head neural activity initiated by the learner, and hidden from the teacher's view" (Clay, 2001, p. 128). To further elaborate, Clay (1991) explained that "in the head" strategies are the ways children work to find or use information to generate a response, possibly in relation to something already known or to form a new interpretation.

Through careful observation and analysis, researchers and teachers can hypothesize about a reader's (or writer's) actions, either overt or hidden (Clay, 1991; 2001). Interpretations from observations can reveal what a reader or writer is attending to, particularly what he searches, monitors, and self-corrects, and the types of information that receive his attention: semantic, syntactic, and visual. Searching for information entails a reader or writer to actively search for semantic (relating to meaning),

syntactic (relating to rules of syntax or grammar structure), or visual (relating to graphophonic –letter-sound relationships) information while reading or writing.

Monitoring requires a reader or writer to check on himself and have the ability to know if he is right or wrong. Self-correction involves a reader or writer making an error, noticing that the error was made (monitoring), and then searching further to correct the error.

Accordingly, the term “taking action” is used in this study to connote the students’ work and directed attention when reading and writing connected texts.

Additionally, Clay (2001) believed that an emergent literacy learner “can be encouraged to search for information in either reading or writing, establishing reciprocity between these aspects of learning about literacy” (p. 32). Likewise and as it relates to the current study, analyzing and understanding the ways in which a reader or writer works, or takes action, by searching, monitoring, and self-correcting on information in and between reading and writing reveals reciprocity between these areas of literacy learning.

A Summary of the Literature Review

An established understanding about the reciprocity between reading and writing recognizes the benefits of integrating reading and writing instruction. Despite the noted benefits, intervention instruction has retained focus on the bit and pieces of literacy, skills and tasks, which one hopes translates to successful learning. However, intervention instruction that includes reading and writing is needed to achieve accelerated growth in literacy learning (Clay, 1991, 1998, 2001; DeFord, 1994; Graham & Hebert, 2011, Graham et al., 2017). It is through this lens that the power of reciprocity, intervention instruction, RtI, and current literacy interventions were examined in the study.

More so, there are few research studies that investigate an integrated approach to intervention instruction (IRA/NICHD, 2012). Researchers call for additional research that offers a more complex look at literacy learning within intervention instruction (Pressley et al., 2006). The literature review has revealed gaps in the current knowledge base of intervention research, especially in regard to qualitative research. Qualitative research can provide detailed descriptions of contextualized and complex actions that foster literacy development. Therefore, in order to develop a rich description of the reciprocal relationship between reading and writing and of students' demonstrated action in and between reading and writing, a microanalysis of students' actions while reading and writing was necessary.

This chapter provided the theoretical framework and a review of the literature related to reciprocity and intervention instruction for this study. Chapter III outlines the perspective and methods used to implement the research study.

CHAPTER III

METHODOLOGY

The purpose of this study was to describe how reciprocity in reading and writing supports early literacy learning during a comprehensive approach to intervention instruction. Accordingly, this study aimed to show an in-depth description of the mutually occurring learning benefits of reading and writing through the observation of young children at work during intervention instruction. The guiding question for this study was: How do kindergarten and first grade literacy intervention students demonstrate the reciprocal relationship between reading and writing as they take action in reading and writing texts?

Chapter III outlines the perspective and methods used to implement the research study. The chapter is organized as follows: first, the perspective and design approach will be discussed; second, the role of the researcher will be described; then, the context and participants will be explained followed by a detailed description of data sources used for participant selection and analysis. Lastly, the analysis plan utilized for the study will be outlined as well as trustworthiness of findings.

Perspective and Design Approach

In a review on the state of intervention research, Pressley et al. (2006) stated the strong need for research on more complex interventions with a focus not only on outcomes but also on student processing within those interventions. The authors suggested an increased need for research that includes qualitative methods that could

potentially add insight and provide an in-depth look at what is happening during intervention instruction.

The current study utilized an interpretive qualitative approach to describe and understand the reciprocal relationship between reading and writing in comprehensive literacy intervention settings. According to Denzin and Lincoln (2013), a qualitative study “implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured...” (p. 17). With that said, qualitative inquiry is inherently naturalistic; requiring a commitment to study the selected topic in its natural state, as it occurs, as closely as possible (Lincoln & Guba, 1985; Merriam, 2009). Specific to this study, which aimed to describe reciprocity in reading and writing during intervention instruction, Michael Patton’s explanation seems particularly fitting:

[Qualitative inquiry] is an effort to understand situations in their uniqueness as part of a particular context and the interactions there. This understanding is an end in itself, so that it is not attempting to predict what may happen in the future necessarily, but to understand the nature of that setting...and in the analysis to be able to communicate that faithfully to others who are interested in that setting...[striving] for depth of understanding (as cited in Merriam, 2009, p. 14).

The interpretive, qualitative approach addresses the overall, descriptive aim of the current study as it sought to offer “a comprehensive summary of an event in the everyday terms of those events” (Sandelowski, 2000, p. 336). Clay (1991) stated a necessary obligation of the teacher to be a sensitive, careful observer while attending to children working on print, either in reading or in writing. The observations of behaviors in reading and writing are the “surface events” that provide teaching guidance while the systematic

observation, or “collection of data,” over time improves teaching quality by revealing patterns of observed behaviors that signify moments of in-the-head processing (Clay, 1991, p. 232).

In this view, the current study proposed to focus on the close observation of moment-by-moment events, or interactions of integrated reading and writing behaviors of the participants during intervention sessions, through microanalysis of video-taped intervention sessions. A microanalysis provides a “fine-grained picture of events” that will expose features of processing and patterns of interactions (Anderson, Wilkinson, Mason, Shirey, & Wilson, 1988, p. 273). Specific to the study, the moment-by-moment events are the actions initiated by the participants as they read and write. Through microanalysis of the participants’ actions, the researcher was able to observe within and between the video-taped literacy events to interpret the participants’ demonstrations of reciprocity. Microanalysis was especially suited for the study that sought to provide a thorough description of a complex activity through a detailed examination of that activity, thus revealing aspects of processing and patterns of reciprocity during reading and writing tasks.

Self as Researcher

Researchers of qualitative studies “stress the socially constructed nature of reality [and] the intimate relationship between the researcher and what is studied” (Denzin & Lincoln, 2013, p. 17). A researcher’s personal experiences may very well influence research interests that lead to particular study topics. White (2003) argued that personal experiences need to be explored to reveal oneself within a chosen study topic and

understand how experiences can both negatively and positively inform research findings. Early on in the proposal process for the current research, the researcher wrote about experiences related to the topic to flesh out what was known and what was not known as well as any experiences and related feelings about to the topic. Reflective writing helped the researcher to place herself within the research from the beginning and understand influences that may affect the research process.

Intentional exploration –through continual written reflection during a study– about how the researchers’ experience and background can shape the interpretation of meaning in a research study, acknowledges “the way we interact and make meaning of our world therefore is dependent on how we position ourselves; the way we describe the world describes us” (White, 2003, p. 3). The researcher continually kept both a methodological and analytical journal during the research process. She wrote frequent entries in the methodological journal throughout the research process outlining actions (i.e., assessments, participant selection, data collection and organization) and thoughts regarding the research process and any issues. The analytical journal entries began with the earliest viewing of assessments and indexing of video recordings; notes include thoughts regarding data organization and storage as well as choices made during analysis and plans for on-going analysis.

The role of the researcher of the current study was that of a participant observer as the researcher was the intervention teacher of the student participants. As such, the teacher researcher had both an emic and etic role during the intervention sessions. Emic, as the teacher participating in the planning and instruction of the intervention sessions

and etic, as the researcher observing and analyzing the reading and writing work of the student participants. During intervention sessions, the researcher served as teacher while working with the students and recording their reading and writing actions. Away from intervention sessions, the researcher stepped back from the teacher role while observing the video recordings of the students at work. As such, the researcher focused on analysis of the independent reading and writing actions taken by the student participants during the intervention sessions. In this way, the researcher sought to shift focus and maintain objectivity when observing the actions taken while reading and writing by student participants.

Context and Participants

The current study was conducted in a large and ethnically diverse, public school district in North Texas. First, approval for the study was obtained from the Texas Woman's University Institutional Review Board (see Appendix B). Second, after initial rejection by the school district due to concerns about loss of instructional time, a meeting was held with the researcher and district officials to outline and discuss the study's purpose, intentions, and plans to ensure the protection of instruction time. Upon receiving approval from the district Leadership Team, a written letter of approval on district letterhead was provided to the IRB (see Appendix A). To ensure confidentiality, names of the district, school, and participants are either not mentioned or have been changed. When the study took place during the 2015-2016 school year, the North Texas school district served approximately 23,000 students in 20 elementary schools, 5 junior high schools, and 2 high schools. The student population included ~12% English language

learners and ~53% economically disadvantaged students. Figure 1 shows information about student population race/ethnicity demographics within the district.

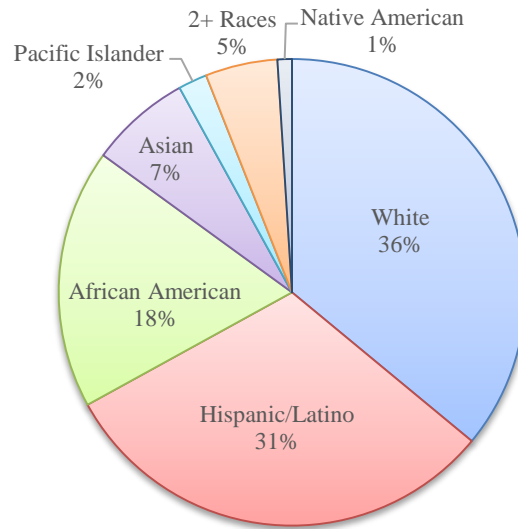


Figure 1. District student race/ethnicity profile for the 2015-2016 school year.

Setting

The current study was conducted in an elementary school within the above school district in North Texas. During the 2015-2016 school year, the school served ~770 students. Figure 2 shows information regarding school student population race/ethnicity demographics. The student population included ~4% English language learners and ~18% economically disadvantaged students.

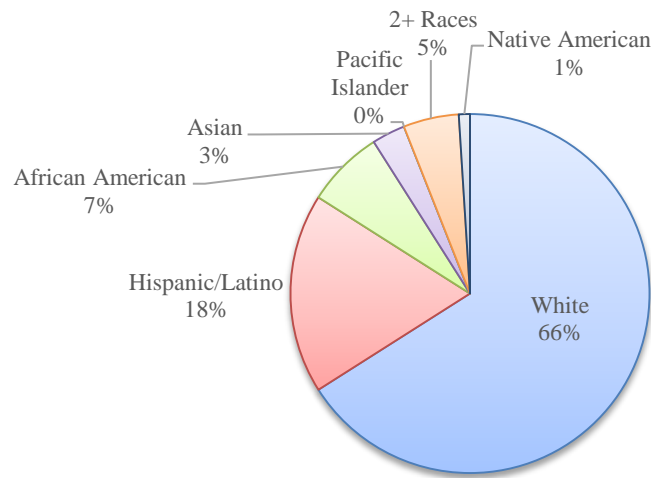


Figure 2. School student race/ethnicity profile for the 2015-2016 school year.

The researcher met with the school administrators and classroom teachers to discuss the study in detail, which allowed for participant recruitment from kindergarten and first grade classrooms. All kindergarten and first grade students were given a district-wide observational reading assessment (mCLASS: Reading 3D) in September 2015. The kindergarten and first grade classroom teachers and administrators of the participating elementary school selected students placed into intervention groups based on scores from the assessment. Following district protocol for intervention services, intervention groups received intensive literacy instruction of grade-level curriculum in small groups.

Participants

The kindergarten and first grade classroom teachers and administrators of the school selected students to be placed into intervention groups of 3-6 students based on

results from a district-wide observational assessment given three times a year to all kindergarten, first, and second grade students. Participants for the current study were recruited from the kindergarten and first grade intervention groups assigned to the researcher after assessments were completed during the month of September 2015. Additionally, students selected for placement into interventions groups did not already receive special education or dyslexia services (what is considered Tier III intervention). Data from the district-wide observational reading assessment that was used for intervention student selection, and thus recruitment for student participants in the study, is outlined below.

District-wide observational reading assessment. The mCLASS: Reading 3D observational reading assessment was given district-wide to all kindergarten, first, and second grade students (Amplify Education, Inc., 2015). The observational assessment is given three times during the school year. The observational assessment includes quick indicators of foundational-skills development and a reading record diagnostic to determine how students find meaning in text. Below is a description of the included Reading 3D assessments.

First sound fluency (FSF). The student says the first sound for words. Assessment is given to Kindergarten students at the beginning and middle of the year.

Letter naming fluency (LNF). The student identifies letters by name. Assessment is given to: Kindergarten students at the beginning, middle, and end of the year; First grade students at the beginning of the year.

Phoneme segmentation fluency (PSF). The student says the individual sounds for words. Assessment is given to: Kindergarten students at the middle and end of the year; First grade students at the beginning of the year.

Nonsense word fluency (NWF). The student is presented with a list of VC and CVC nonsense words and asked to read the words. Assessment is given to: Kindergarten student at the middle and end of the year; First grade students at the beginning, middle, and end of the year; Second grade students at the beginning of the year.

DIBELS oral reading fluency (DORF). The student reads a passage aloud and then asked to retell what was read. Assessment is given to: First grade students at the middle and end of the year; Second grade students at the beginning, middle, and end of the year.

Text reading and comprehension (TRC). The student reads leveled readers from a book set to observe and assess student's reading behaviors when reading text and determine student's instructional level; accuracy, fluency, and comprehension (five explicit and implicit questions are asked after reading texts) are used to determine frustrational, instructional, and independent levels.

Procedures for participant selection. After the district-wide assessments were given, classroom teachers and administrators selected students for intervention services. All students selected for intervention (working with the researcher as their teacher) were recruited to participate in the study. A total of 11 students were selected to work with the researcher for intervention (6 first graders and 5 kindergarteners). Parents of the 11 students selected for intervention were asked to participate in the study, and were

individually notified of the study via telephone calls and face-to-face meetings.

Participants and their parents were able to ask any questions after the study was explained to them. Those parents that chose to give permission for their child to participate in the study were provided with a parental consent form, which outlined details of the study including purpose, procedures, risks/benefits, and duration of study (see Appendix C).

Students that returned the signed consent form were then considered participants of study; nine students (4 first graders and 5 kindergartners) returned the consent form with permission from their families to participate in the study. A copy of the signed consent form was given to the parents of participants that included the researcher's contact information. The researcher was available to answer any questions regarding the study via e-mail or individual conferences during the consent process and study. Per procedures outlined for the study to the IRB, it should be noted that all 11 students received intervention services regardless of participation in the study; therefore, two of the eleven students were not considered study participants but did receive intervention instruction along with others.

Tables 3 and 4 show the Reading 3D scores for the beginning of the year and middle of year (end of study) for the kindergarten participants.

Table 3

Kindergarten Participants' Reading 3D Beginning of Year Scores

Participant	DIBELS			
	TRC (Text Level)	Letter Naming Fluency	First Sound Fluency (Goal 10)	Composite (Support Need)
Ella	PC*	5	13	Strategic
Paige	PC	11	19	Core
Tate	PC	29	2	Core
Molly	PC	4	6	Intensive
Carter	PC	33	16	Core

Note: PC = Print Concepts (TRC level order is PC, RB, A, B, C, etc.)

Table 4

Kindergarten Participants' Reading 3D Middle of Year Scores (End of Study)

Participant	DIBELS					
	TRC (Text Level)	Letter Naming Fluency	First Sound Fluency (Goal 30)	Phoneme Segmentation Fluency (Goal 20)	Nonsense Word Fluency (CLS: Goal 17)	Composite (Support Need)
Ella	A	31	34	64	53	Core
Paige	RB*	43	34	54	16	Core
Tate	B	50	38	63	39	Core
Molly	RB	38	37	50	26	Core
Carter	B	50	44	69	34	Core

Notes: CLS = Correct Letter Sounds; RB = Reading Behaviors (TRC level order is PC, RB, A, B, C, etc.)

Tables 5 and 6 show the Reading 3D scores for the beginning of the year and middle of year (end of study) for the first grade participants.

Table 5

First Grade Participants' Reading 3D Beginning of Year Scores

Participant	DIBELS				
	TRC (Text Level)	Letter Naming Fluency	Phonemic Segmentation Fluency (Goal 40)	Nonsense Word Fluency (CLS* Goal 27 /Whole Words Read Goal 1)	Composite (Support Need)
Zoe	A	49	68	35/0	Core
Max	A	44	48	28/3	Core
Henry	A	37	43	19/0	Strategic
Luke	A	43	40	31/1	Core

Notes: CLS = Correct Letter Sounds

Table 6

First Grade Participants' Reading 3D Middle of Year Scores (End of Study)

Participant	DIBELS			
	TRC (Text Level)	Nonsense Word Fluency (CLS* Goal 43 /Whole Words Read Goal 8)	DORF: Oral Reading Fluency (WCPM* Goal 23 /Accuracy Goal 78)	Composite (Support Need)
Zoe	F	68/15	37/79	Core
Max	F	53/14	64/89	Core
Henry	D	42/11	19/68	Strategic
Luke	F	82/25	67/93	Core

Notes: CLS = Correct Letter Sounds; WCPM = Words Correct per Minute

Observation Survey tasks. Prior to beginning intervention instruction, the researcher administered selected tasks from the Observation Survey to each participant in order to systematically observe student processing as directly as possible that was not evident or displayed on the district benchmark assessment (Clay, 1993). Only four of the six tasks from the Observation Survey were administered to participants. The text reading or the concepts about print tasks were not included due to time restraints and redundancy with the Text Reading and Comprehension (TRC) component of the district-wide reading assessment. Participants in the study were also given the same selected tasks from the Observation Survey at the end of the study. The four tasks are described below, and Tables 7 and 8 show the scores for the kindergarten and first grade participants.

Letter identification. Untimed assessment of student's knowledge of lower and upper case letters with notations for letter or sound response.

Word test. Assessment of student's knowledge of words read in isolation.

Writing vocabulary. Assessment of student's ability to independently write words in every detail in ten minutes.

Hearing and recording sounds. Dictation assessment of student's phonemic awareness and ability to represent sounds in graphic form.

Tables 7 and 8 show participants' scores from the selected tasks of the Observation Survey. Two rows of scores per participant are reported in the tables: the top row scores are from the beginning of the study and the bottom row scores are from the end of the study. While some participants' scores from the Reading 3D assessment and

Observation Survey tasks fall with average stanines for expected student performance at each grade level, the scores were not average for the school.

Table 7

Kindergarten Participants' Observation Survey Tasks Scores

Participant	Letter Identification (Max 54)	Word Test List A, C (Max 20)	Hearing & Recording Sounds (Max 37)	Writing Vocabulary
Ella	35	2	15	7
	52	6	26	20
Paige	41	0	10	3
	51	4	28	28
Tate	48	3	15	10
	52	9	28	27
Molly	34	1	13	8
	53	6	30	25
Carter*	-	-	-	10
	54	13	33	25

Note. Top row shows beginning of study scores, bottom row shows end of study scores.

*Scores were not available for Carter at beginning of study.

Table 8

First Grade Participants' Observation Survey Tasks Scores

Participant	Letter Identification (Max 54)	Word Test List A, C (Max 20)	Hearing & Recording Sounds (Max 37)	Writing Vocabulary
Zoe	52	13	34	28
	54	20	35	56
Max	52	13	25	28
	53	20	33	45
Henry	52	11	29	28
	52	20	35	38
Luke	54	18	35	24
	54	20	37	55

Note. Top row shows beginning of study scores, bottom row shows end of study scores.

Description of Intervention Sessions

Having taught first grade and intervention students for several years, the researcher was granted autonomy to design intervention instruction based on her understanding of reciprocity as well as her professional expertise as a classroom and Reading Recovery teacher. Intervention students (including study participants) received comprehensive, intensive reading instruction following grade-level curriculum. Comprehensive means that instruction emphasized comprehension of written texts, with added attention to genre and the features of nonfiction and fiction texts. In addition, instruction included phonics and word study, explicit teaching of strategies for expanding vocabulary and for fluent and phrased reading. Students also received instruction that included writing, specifically writing about the texts they read (e.g., responding to texts, writing summaries, and creating and/or answering questions about texts) and learning the skills and processes that go into creating a text (e.g., word/sentence/paragraph construction, spelling, and word work skills). Intensive means that students were placed into small groups of five or six students and engaged in reading and writing of continuous text during daily sessions. During the daily sessions, the teacher researcher observed students as they read and wrote, responded to students' strengths and needs accordingly to ensure proficiency and independence over time.

The intervention groups met with the teacher researcher daily for 30-minute (kindergarten) and 45-minute (first grade) sessions Monday through Friday. Intervention instruction began in late-October 2015 and ended in January 2016, for a total of 11 weeks of instruction. However, school activities and teacher or student absences prevented

Intervention sessions typically began with the shared reading (teacher and students together) of a text or independently rereading 2 or 3 familiar (previously read) texts. As the students read independently, the teacher researcher worked with one student, while taking a running record as he reread the new book from the prior day session (see Figures 3 and 4).

School: _____ Recorder: Hogart

Text Titles _____ Running words Error rate Accuracy Self-correction
rate
91/2 % 1: 1-5

1. Easy _____ 1: _____
2. Instructional _____ 1: _____
3. Hard _____ 1: _____

Directional movement _____

Analysis of Errors and Self-corrections
Information used or neglected (Meaning (M) Structure or Syntax (S) Visual (V))
Easy M S V
Instructional _____
Hard _____

Cross-checking on information (Note that this behaviour changes over time)

Analysis of Errors and Self-corrections
(see Observation Survey pages 30-32)

Page		Information used			
		E	SC	E MSV	SC MSV
2	The Fish Tank @ RW 91 ✓ ✓ ✓ - ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ 6 ✓ ✓ ✓ <u>IHE</u> ✓ ✓ ✓ ✓ ✓ ✓	1		MSV	

Figures 3 and 4. Sample of a student running record.

Next, the teacher researcher would direct students to either word work or writing, often alternating between the two for each session. Some examples of word work included sorting letters by features, making words with magnetic letters, working on words with similar patterns and word families, learning about word prefixes and suffixes, and writing words on small white boards or creating large paper charts (see Figures 5 and 6). Planning for word work included selected word study suggestions from *The Literacy Continuum* (Fountas & Pinnell, 2010b) and teacher researcher observations of students' reading and writing work: words taken from books and student writing to further explore and practice.

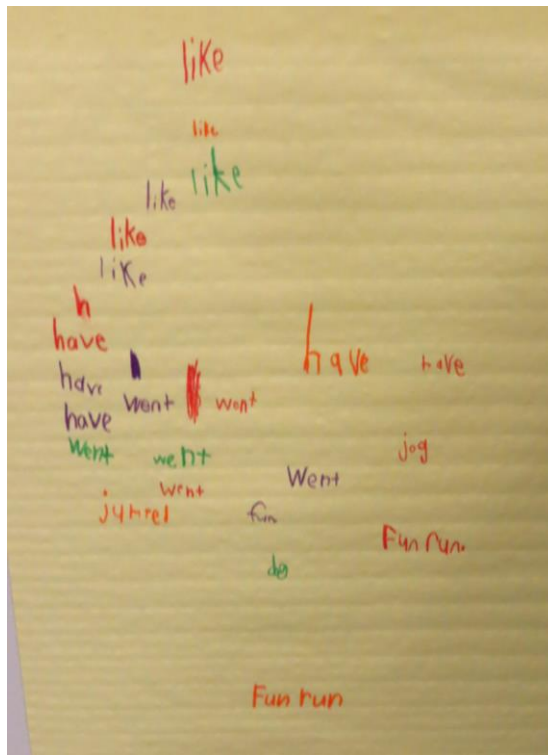


Figure 5. Example of word work chart: Practicing words

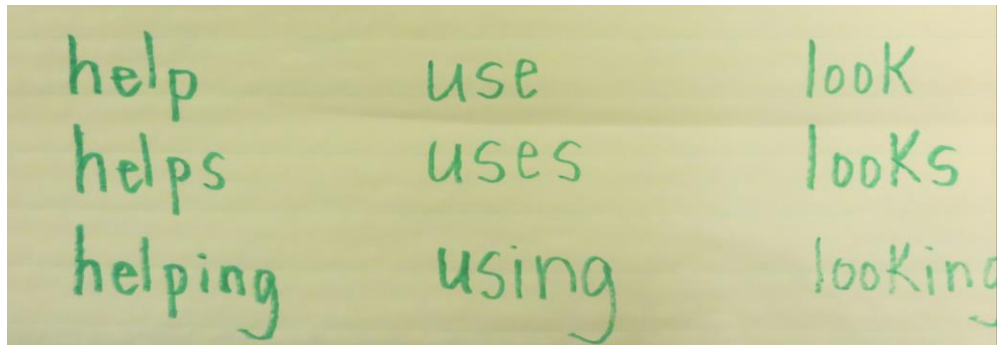


Figure 6. Example of word work chart: Word endings.

For writing, the teacher researcher and students would spend time discussing previously read texts, and students would often write in response to those texts. At times, students were able to choose to continue their writing from a previous session or self-select a topic. Regardless, students spent time either writing interactively with the teacher researcher or writing independently as the teacher researcher worked with individual students as they wrote (see Figures 7 and 8). If time allowed, students would often share their writing with other students. In doing so, students would re-read their own writing, which often led to opportunities for revision through monitoring and self-correction.

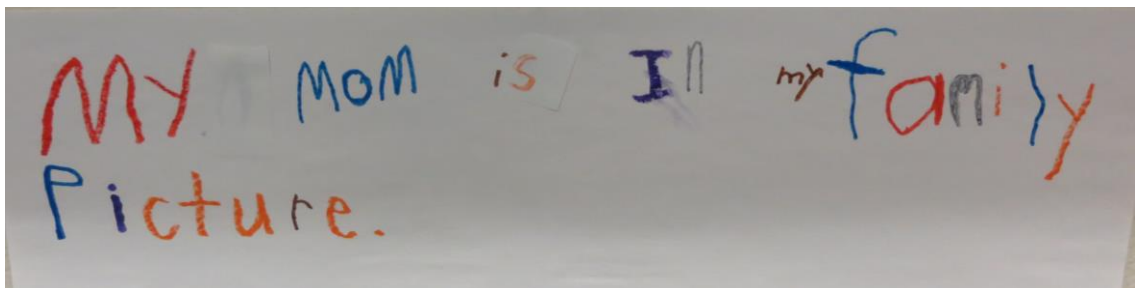


Figure 7. Example of interactive writing with kindergarten students.

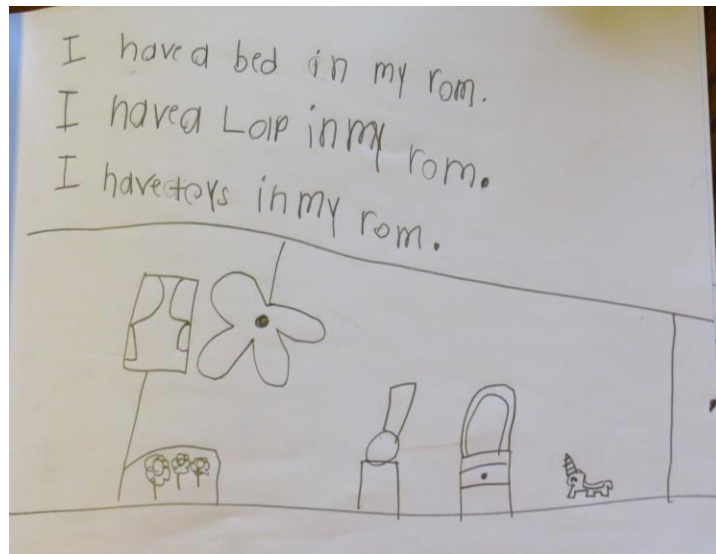


Figure 8. Example of student's independent writing in response to text.

Finally, the students read a new, unseen text to end each session. The teacher researcher chose texts that would have mostly letters and words that the students knew and that would enable them to successfully practice strategies within their control as well as those being learned. Each session was designed to encourage practice with what was known by each student and opportunities to tentatively work on new learning, with an overall goal of continuous “orchestration of all the complex range of behaviors [students] must use” to read and write (Clay, 1993, p. 36). Furthermore, the teacher researcher planned sessions to include both reading and writing of continuous texts to foster the integration of reading and writing knowledge; encouraging students to use what was known and being learned in reading when they were writing and vice versa –planting the seeds of reciprocity.

Data Sources

This section describes the data sources used to facilitate in-depth observation and analysis of students' independent reading and writing work from daily 30-minute (kindergarten) and 45-minute (first-grade) intervention sessions. The sources included video recordings of students' independent reading and writing work, lesson plans and anecdotal notes, and field notes.

Independent Reading and Writing

The following data sources were systematically collected in order to observe and capture students' independent actions while reading and writing texts during intervention lessons.

Video record of independent reading. Weekly video recordings of each participant as he/she read a new, or not previously seen, text.

Running records. A running record of a previously read text (from the prior session) was taken daily with one participant (student) at the beginning of each intervention session.

Video record of independent writing. Weekly video recordings of each participant as he/she writes in response to what has been read or on self-selected topics. Documents also include participants' writing samples from writing books.

Video record of reading of independent writing. Video recordings of each participant as he/she reads what they have written during intervention sessions.

Lesson Plans

Records were kept of teacher's plans for daily intervention lessons, including anecdotal notes of participants' behaviors and actions during intervention lessons.

Field Notes

The researcher wrote systematic notes to document observations while working with participants and analyzing data sources in the study. Field notes included a methodological journal, an analytical journal with additional documents for video recording indexing (preliminary analysis), and analytical memos. Each are described below:

- Methodological journal –included frequently recorded methodological concerns about data collection and research procedures during the research study.
- Analytical journal –the researcher wrote notes about analytical procedures, including thoughts about findings and plans for on-going analysis. A detailed explanation of the video recording indexing process can be found in the Data Analysis section below with included example seen in Table 10.
- “In-process memos” –included memos regarding analytical insights and observations connected to theoretical perspective that guided subsequent data collection (Emerson, Fretz, & Shaw, 2011, p. 123). The researcher wrote memos in the methodological and analytical journals that aided in on-going data collection and analysis. Additionally, the research wrote short analytical memos per video-recorded event and longer, *between events* analytical memos connecting

video-recordings; memos were written and linked to video recordings within Dedoose. An example of a longer, central analytical memo is discussed in Data Analysis below and can be seen in Table 13, and some examples of individual event memos are below:

Luke reads story, he pauses at "set" and reads "s, set, it, set it up..." initially searching visual information, then rereading (monitoring) to cross-check with meaning and structure information on the run.

Max searches for Meaning when he comes to a point in his story that doesn't have his intended meaning; and Visual because the word he intended to write is not there. He wants to insert "still" into his story. I direct him to listen to the sounds...although should have made an analogy to a word that he knows (like: stop, will).

Henry shares his writing. He rereads and pauses when he reaches "...and he looked in under." He monitors visually that it isn't right, I ask him about what he intended to write and he tells me. I also ask him what he needs to do. He replies, "Fix it?" He goes off to work on it.

Pilot Study

A pilot study was conducted during the spring semester of the 2014-2015 school year. The researcher worked with first grade students selected for intervention based on their middle-of-year district benchmark scores. Parents of three of the five students in the intervention group gave permission for their students to be video-taped during reading and writing events. During the intervention sessions, the researcher video-taped the selected students, wrote anecdotal notes of student behaviors during reading and writing events, and took daily running records (rotating students).

In this pilot study, the researcher explored a) which events during the intervention session to video-tape, b) how to video-tape to best capture independent student action, c) procedures to efficiently, yet unobtrusively, record while also providing intervention instruction, and d) procedures for data storage and organization. During this time, the researcher read about Dedoose, an online application for analysis of qualitative and mixed-methods research, and began to learn how to use the application for video data analysis. In addition, the researcher learned some seemingly basic, though essential, routines necessary for data collection: having the camera with her, making sure the camera's battery was charged, and making sure the camera's memory card had available space for videos. Above all, the pilot study provided insight into how to capture and collect data while working with multiple students during each intervention session.

Data Collection Procedures

Data collection began during the first week of intervention sessions in late October 2015. During the first few days, routines for sessions were established.

Participants had opportunities to write on self-selected topics and participated in shared and independent reading. Video-recording of participants began on the sixth day of intervention sessions. In order to obtain permission from the district for the study, the researcher was not able to film the faces of the participants. So, the researcher used one digital camera to film a direct view of the texts, writing notebooks, or cut-up sentence construction on the tables. The camera was held by the researcher at a downward angle, essentially from the view of the researcher (teacher), as she worked with the participants. Although the participants' faces are not seen, their voices are heard and their actions are in full view on the video-recordings.

Based on experience and knowledge gleaned from the pilot study, the researcher created a "film shooting schedule" plan that coincided with lesson plans to capture the independent reading and writing events planned for each intervention session. In order to see how participants' demonstrated a connection between reading and writing while taking action during reading and writing events (such as, reading a new text, writing, or reading their writing), the researcher planned to film individual participants over two to three days of consecutive intervention sessions. Table 9 shows an example of the chart used to plan video-recordings of participants. The chart shows that participants (see Henry, Max, or Luke) were recorded during writing or the reading of a new text and a running record was taken as they read a familiar text over the course of one to three intervention sessions. Not every reading or writing event was planned for each intervention session, nor was it possible to film each participant daily, so every effort was made to systematically video-tape individual participants in the maximum amount of

reading and writing events scheduled for each session. Additionally, as shown in the schedule plan below, participants were video-recorded on a rotating, yet somewhat overlapping, schedule. This allowed for efficient use of time and increased video-recordings of participants available for analysis.

Table 9

Video Recording Schedule Plan

Shot	Date & Time	Context/Action -Participant	Video Index & Comments
	Monday 11/16/15	Reading Record –Student 1 New Text –Zoey	
	Tuesday 11/17/15	Reading Record –Henry Writing –Henry New Text –Henry	
	Wednesday 11/18/15	Reading Record –Max New Text –Max	
	Thursday 11/19/15	Reading Record –Luke Writing –Max Reading Writing –Zoey, Max New Text –Luke	
	Friday 11/20/15	Reading Record –Student 2 New Text –Zoey	
	Monday 11/23/15	Reading Record –Zoey Writing –Luke New Text –Zoey	

Data Analysis

The data was analyzed using a moment-by-moment microanalysis that involved careful observation of students' independent actions when reading and writing. Fine-grained information regarding the actual students' actions was analyzed through the

video recordings and running records of text reading and writing. From the data, the researcher prepared detailed transcriptions and coded moment-by-moment student actions with text. Erickson (2006) noted the necessary development of “systematic ways” to review and analyze video recordings and data “so that some phenomena are neither missed nor over-emphasized” (p. 179). As such, the analysis process consisted of systematic and recursive rounds of analysis as follows: organizing and indexing data, review of indexing notes, creation of an analysis chart, analysis of events, consult with a peer-debriefer, and re-analysis of events. Each round of analysis will be discussed further below.

Organizing and Indexing Data

Initially, the researcher viewed and indexed video-taped recordings. Each week during the study, she uploaded video-recordings to a password protected lap-top; video-recordings were labeled using shot number, participant initials, literacy event, and date (Example: 023.HY.Writing.17Nov15). For indexing of video-recordings, the researcher viewed each video-recording and field notes to write brief, initial thoughts about students’ actions taken during reading and writing. Table 10 shows how the researcher indexed video-recordings adding written comments to the working video-recording schedule (see column on the right).

In mid-February, as the final video-recordings were collected and indexed, the researcher uploaded video-recordings to Dedoose for further analysis. The online data analysis application, Dedoose, was initially explored and chosen by the researcher as a cost-effective and user-friendly option for video analysis during the first pilot study.

Participant district benchmark assessments and formative reading assessments were also uploaded to Dedoose. Other study data, including running records and pictures from writing notebooks, were also uploaded to Dedoose.

Review and Analysis of Index Notes

As data was being added to Dedoose, the researcher began to read and review indexing notes on the video-recording schedule in an effort to find clear instances when participants made connections between reading and writing. In order to “see” participants in relation to the video-taped literacy events, the researcher assigned a color to each participant. In doing so, the researcher was better able to see each participant and related literacy events as she re-read and reviewed indexed notes. To begin with, the researcher looked for obvious connections between reading and writing, such as when a participant began using letters to write instead of just pictures. After finding a few instances of potential reading and writing connections by participants, the researcher developed an analysis chart to record and further analyze literacy events per participant.

Table 10

Indexing on Video Schedule Plan

Shot	Date & Time	Context/Action - Participant	Video Index & Comments
023, 024	Tuesday 11/17/15	Reading Record – Henry Writing –Henry New Text –Henry	023, 024: Independent Writing –HY -023: H articulating to hear sounds/record letters; 00:18: stops at “rum” – monitoring: reread as “rum” and noticed, but unsure how to fix (not on camera) -024: discussion w/me about error...not completed on video: ✓ writing book
026, 027, 028, 029	Wednesday 11/18/15	Reading Record – Max New Text –Max	026, 027, 028, 029: New Book –MT -026: M reading w/finger, although not useful? (short video of one page; stopped because of student interruption) -027: I prompted to read w/eyes; 00:04 a/the, not monitoring w/known words; 00:13 searching picture, continuing w/correct reading; 00:49 searching picture, reads under/hiding, monitors “What? What is this?” and looks closer and self-corrects/cross-checking meaning/visual -028: the/a, not monitoring w/known words; 00:11 pauses, I prompt “What can you do?” and reads “lap” correctly. -029: I redirected M to pg.14 to have him make it look right/make sense: continued to not monitor using known words, I pointed out to him at point of error & he self-corrected then video cuts off.
004, 005, 006, 007, 008, 009, 010, 011	Thursday 11/19/15	Reading Record – Luke Writing –Max Reading Writing – Zoey, Max New Text –Luke	004, 005: Writing –MT -M is writing & I ask about his story; he continues to write, whispering story to himself as he composes; 0:39, M rereads story so far to continue composition...video stopped. -005: Video continues: M notices error and adds “wish”, rereads and again notices, rereads for me and says, “that doesn’t make sense at all” – monitoring w/structure yet still not quite getting it. He continues to reread writing and adds to story.

(continued)

			<p>007, 008, 009: Reading Writing –MT</p> <p>-007: I return to Malcolm to have him read what he has written back to me. He begins looking at what he has added, and notices “t” in his story right away & rereads from the beginning to figure it out. 0:22, stops at “ruf”, should be love –I think he recognizes something’s not right (speech issue?) but continues to fix “t”</p> <p>-008: M re-reads, erases “ruf” I help to articulate for him “love” and he begins writing/correctly w/my help.</p> <p>-009: M writes in “to” and articulates his original error w/missing the “o”</p> <p>006: Reading Writing –ZN</p> <p>While M was working on his writing, I went to work w/other students</p> <p>-Video captures end discussion of her writing and discussion of “fun” in her story (she was feeling like something wasn’t quite right about her story)</p> <p>-0:39 I prompt her to read it again to monitor; Z rereads w/possible attempts to navigate multiple lines of text, which has proven challenging for her in the past</p> <p>-1:19 notices lik/like and corrects</p> <p>010, 011: New Book –LP</p> <p>-010: L reads, monitors and self-corrects w/known words is/This...video stopped</p> <p>-011: L reads w/finger (necessary?); continues to read,</p> <p>-0:04 checks, searching picture/word for climb?; Self-corrects is/This again</p> <p>-0:26 monitors page turning.</p>
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Analysis Chart

The researcher used the finalized analysis chart to begin re-watching video-recordings and reviewing running records to analyze in and between literacy events. The analysis chart was developed using a priori codes used to observe and examine students' strategic behaviors based on the literature review (see Table 11). Analysis charts were labeled with the guiding research question, participant, and dates of literacy events.

Table 11

Analysis Chart

Reading (Running Record) <div>M S V</div> Searching Monitoring Self-Correcting	Memo:	Writing –Independent <div>M S V</div> Searching Monitoring Self-Correcting
Reading (New Text) <div>M S V</div> Searching Monitoring Self-Correcting		Writing -Reading/Sharing <div>M S V</div> Searching Monitoring Self-Correcting

In and between events. To further explain, the researcher looked at a selected participant and the literacy events that occurred over one to three days of intervention. The researcher watched video-recordings of each event and analyzed how and if the participant searched, monitored, and self-corrected using meaning, structure, and visual

information during each individual event (thus, the “in” of each event). The researcher then recorded participant actions into the chart. Table 12 shows a completed analysis chart for Zoey.

In addition to notation on the chart, video-clips were taken, transcribed and coded (using strategic behaviors noted on chart) within Dedoose. The researcher also wrote analysis memos for each event. All memos were labeled and linked to relevant participants and data –video-recordings, running records, and/or pictures from writing notebooks– within Dedoose. Examples of analysis memos for individual literacy events can be reviewed in the above Field Notes section.

Table 12

Zoey’s Analysis Chart with Coded Notation

Reading (Running Record)				Memo:	Writing –Independent (picture)			
	M	S	V			M	S	V
Searching	✓	✓	✓1st choice, across words		Searching	✓composes story (self-selected)	✓	✓articulates to hear sounds across words, known words: my, is, with, worked on –kitten w/me
Monitoring	✓rereading		✓1-1 w/eyes		Monitoring	✓rereading		
Self-Correcting	✓didn’t make sense	✓	✓known word		Self- Correcting	✓erases “plays” to insert “kitten” into story	✓	

(continued)

Reading (New Text)				Writing -Reading/Sharing			
	M	S	V		M	S	V
Searching	✓attention to story	✓	✓known words across words, some onset/rhyme		Searching	✓shares composed story	✓lines of text
Monitoring	✓ *appears to readily cross-check after visual analysis				Monitoring		
Self- Correcting	✓cross-checking w/visual		✓initial letter, known word		Self-Correcting		

Then, the researcher re-watched video-recordings and looked across the reading and writing events to see how connections of reciprocity were made by participants (thus, the “between” of the events). The researcher then wrote a central, across events analysis memo into the center of the analysis chart. Analysis charts were saved to PDFs and uploaded into Dedoose (with central analysis memo copied and linked to analysis chart and participant). Table 13 shows the addition of the central analysis memo into Zoey’s analysis chart. The researcher completed six analysis charts during this round of analysis.

Table 13

Zoey's Completed Analysis Chart with Central Memo

Reading (Running Record)				Memo: In R, Z initially searches using Visual information, showing evidence of cross-checking *at that moment (on the run) with Meaning/Structure to fully problem solve. She appears to be flexible using multiple SOI. Z monitors and self-corrects using known words. In R & W, she monitors by rereading and shows evidence of understanding a breakdown in Meaning and self-corrects. In R & W, she appears to analyze Visually across words to read/write unknown words. Although when sharing her writing, she tends to focus on Meaning with attention to initial visual letters; not always attending across words or known words.	Writing –Independent (picture)			
	M	S	V			M	S	V
Searching	✓	✓	✓1st choice, across words			Searching	✓composes story (self-selected)	✓articulates to hear sounds across words, known words: my, is, with, worked on –kitten w/me
Monitoring	✓rereading		✓1-1 w/eyes			Monitoring	✓rereading	
Self-Correcting	✓didn't make sense	✓	✓known word		Self-Correcting	✓erases "plays" to insert "kitten" into story	✓	
Reading (New Text)					Writing -Reading/Sharing			
	M	S	V			M	S	V
Searching	✓attention to story	✓	✓known words across words, some onset/rhyme		Searching	✓shares composed story	✓	✓lines of text
Monitoring	✓ *appears to readily cross-check after visual analysis				Monitoring			
Self-Correcting	✓cross-checking w/visual		✓initial letter, known word		Self-Correcting			

Reiteration to indexing chart. After completing the first six analyses, the researcher returned to the video-recording schedule to again re-read and review indexing notes to find additional instances of participants’ potentially making connections between

reading and writing. This time, the researcher looked for instances of participants taking action in multiple literacy events over one to three sessions. After finding several instances, the researcher re-watched video recordings and reviewed running records for analysis using the analysis chart. Following the same process, the researcher made notations on analysis charts with matching codes and literacy event memos in Dedoose, including central, across events analysis memos for each chart. Altogether, 21 analysis charts were completed and uploaded to Dedoose.

Peer-Debrief

As the analysis charts were approaching completion, the researcher met with a knowledgeable colleague to watch video-recordings and review two of the completed analyses. The researcher and peer-debriefer analyzed and discussed individual literacy events and the central, across events memos. After mutual agreement was reached between the researcher and peer-debriefer regarding the two analyses, the researcher decided to re-analyze each of the 21 analyses to ensure attentive interpretation.

Final Round – Thematic Analysis

At this point, the researcher returned to further examine each analysis chart and associated data to assure thorough analysis. In other words, the researcher re-watched video-recordings, re-analyzed running records, reviewed, reread, and revised all memos as needed. During the re-analysis process (re-examination of each analysis chart, related data, and the central, across events analysis memos), the researcher also continued to review repeating participant actions, behind the coded sources of information, that demonstrated a connection between reading and writing (see Table 14).

Table 14

Noted Participant Actions

<ul style="list-style-type: none"> • Checking pictures • Checking letters within words • Using more than one source of information simultaneously • Using vocabulary from texts • Using syntax structures from texts • Using ideas from texts to respond • Reading/Writing left to right 	<ul style="list-style-type: none"> • Rereading to monitor message in reading and writing • Noticing errors or dissonance • Fixing errors • Using spaces in writing • Reading using one-to-one • Articulating to hear sounds • Using letters to record sounds
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Through the re-examination of the analyses and associated data, the researcher organized and combined the participants' actions into four potential, yet simply named, categories: *synchronous*, *phonological/print Awareness*, *language*, and *opportunity*. The categories, or preliminary themes, were coded within Dedoose and linked to the relevant analysis charts and data. In addition, the preliminary themes were checked against analysis charts, data, and the central, analysis memos. This iterative analysis of the entire data set led to refinement and definition of themes (Grbich, 2013). For example, for the *phonological/print awareness* theme, the participants' actions appeared to be strengthening their abilities to use visual information in various ways that extended beyond print awareness, so the theme was further sharpened and checked against data to become Consolidating Visual Information. Likewise, the *opportunity* theme initially seemed to be more about the opportunities afforded the participants during the intervention sessions. However, upon further analysis of the participants' actions, it was more about the participants' strategic moves, or Strategic Action, within the literacy

events. Altogether, findings include four key themes of student action that will be discussed in Chapter IV.

Trustworthiness

The researcher sought to establish trustworthiness in the study to the extent possible. In order to ensure a rigorous inquiry had been achieved, the researcher considered the following criteria: credibility, dependability, transferability, and confirmability (Denzin & Lincoln, 2013). To ensure *credibility*, the researcher spent eleven weeks of engagement in the field; she video-recorded students' literacy events during each of the approximate thirty-five intervention sessions for both grade levels included in the study. The researcher also selected and developed a systematic method of analysis, including multiple rounds of recursive, tenacious observation and analysis of data. The researcher regularly met with her advisor to review data, analysis methods, and on-going analysis. The review of data and subsequent discussion helped the researcher to clarify understandings of data collection, refine data analysis, and create the analytical chart in order to look in and between literacy events. The research also met with a committee member to discuss the collected data and on-going analysis process. The discussion added even more clarity to the overall study, reflection of the research question, and allowed the researcher to ponder about possible, pertinent implications of the study.

In addition, the researcher asked a peer-debriefer to provide expertise and consistency of observation and analysis. The peer-debriefer was a doctoral student in the Reading Department at Texas Woman's University. She had completed her research

courses, qualifying exams, and was working on her dissertation at the same time. She was a former Reading Recovery Teacher Leader, professional development creator and provider in her school district, and educated and experienced in qualitative research methods. Her observations of the analysis chart and relevant video-taped literacy events helped the researcher to observe the data more carefully, specifically when considering the students' actions and reflecting on the central, across events memos.

The researcher established *dependability* through the consistent documentation of the research process. The researcher kept both a methodological journal and an analytical journal detailing the research process, including researchers' thoughts about the process, from the beginning of the study to the end. Chapter IV offers numerous data examples in order to provide an understood, thick description (Geertz, 1983) of students' actions that demonstrate reciprocity in reading and writing –authenticating a level of *transferability* of findings. Finally, the researcher provided reasonable and thorough interpretations of the collected data; thus, creating *confirmability* through explicit data examples and the enlisted expertise of a peer-debriefer.

Summary

To summarize, this chapter outlined the methods and design approach used to conduct the current research study. The chapter explained the perspective for the study, research methods, and the researcher's role as both researcher and teacher during the study. The chapter also discussed the setting, the procedures for participant selection as well as description of the participants, a description of the intervention sessions, the data sources, the procedures for data collection, the methods for the subsequent, systematic

data analysis, and finally, trustworthiness of the findings. Chapter IV discusses the findings of the data analysis followed by a summary and discussion of implications of the findings in Chapter V.

CHAPTER IV

FINDINGS

The purpose of this study was to closely observe students during their independent reading and writing in order to describe how reciprocity in reading and writing supports early literacy learning during a comprehensive approach to intervention instruction. The current study was guided by the following research question: How do kindergarten and first grade literacy intervention students demonstrate the reciprocal relationship between reading and writing as they take action in reading and writing texts? The research question was answered by the systematic and careful moment-by-moment observation and analysis of participants' actions during reading and writing events.

Chapter IV offers an in-depth description of the mutually occurring learning benefits of reading and writing as demonstrated by the literacy work of kindergarten and first grade intervention students. In this chapter, reciprocity between reading and writing and the specific findings of the study will be presented by themes with explicit examples from the participant data. A summary of the findings will end the chapter.

Reciprocity

The analysis of participants' actions during the literacy events revealed the nature of reciprocity between reading and writing in young learners. As the findings will show, reciprocity is indeed found between the readers' and the writers' actions to search for and use meaning, structure, and visual information in texts. Additionally, as opportunities for

reading and writing continuous texts were provided to students, their actions included monitoring and self-correcting using meaning, structure, and visual information; thus, tapping into the power of reciprocity and increasing proficiency within and across reading and writing.

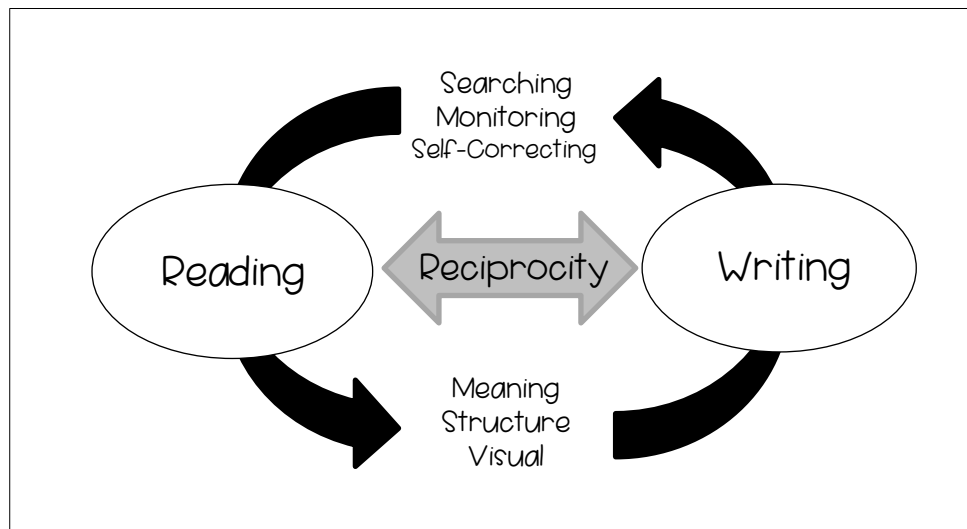


Figure 9. Reciprocity - Student actions across reading and writing.

Across the video-taped literacy events, there is evidence of participants taking action to search, monitor, and self-correct using meaning, structure, and visual information. Four distinct, yet related, themes of reciprocity were found in the analysis. First, several participants showed their ability to use more than one source of information to problem solve when reading and writing. Second, participant examples will show how they began to connect language knowledge acquired from reading experiences into their writing. Third, participants demonstrated an increasing knowledge of how print works and an evolving understanding of visual information. Lastly, the participants showed

strategic action in both reading and writing as they searched for information, monitored their work, and, at times, self-corrected. Themes are briefly explained in Table 15 below and further described in detail with pertinent examples from the participant data.

Table 15

Themes of Reciprocity

Theme	Reading	Writing	Critical Actions
Initiating Synchronous Action	Zoey reading a new text: <i>“She uses it^{sc} her tail to play with her c- ((checks picture)) cub.</i>	Zoey initiates composition with self-selected topic about her kitten & works to hear and record sounds as she writes to create meaning.	<ul style="list-style-type: none"> • Flexible use of more than one source of information • Multiple sources of information simultaneously
Connecting Language and Structures	Portion of shared text with Kindergarten students: <i>Ant met a dog. “Can you bark?” said the dog. “No, I can’t,” said the ant. Ant met a spider. “Can you crawl up a wall?” said the spider. “Yes, I can!” said the ant.</i>	During an interactive writing session, Ella suggests: <i>“Can you climb?” said the spider.</i> –in alignment with language structures and meaning found in text, yet not a direct quote from the text.	<ul style="list-style-type: none"> • Taking on language structures and vocabulary from reading into writing.
Consolidating Visual Information	Ella’s running record shows evidence of matching 1-1 and attempting to get word started using first letter as she checks the picture: ✓ ✓ ✓ #p✓ <i>Look at the paper!</i>	Ella’s writing shows that she has control over some words and attempts to hear sounds and write letters across unknown words: <i>I like my prp ert (I like my purple shirt)</i>	<ul style="list-style-type: none"> • Understanding of print concepts, such as spatial concepts and directionality • Demonstration of letter feature and formation knowledge • Developing understanding of letter to sound and sound to letter relationships

Strategic Action	<p>Max reading a new text:</p> <p><i>Here is a little kitty // She is ((glances at picture)) under, wait what / is this? ((looks at picture and then looks closer at text on page)) She is hiding under the chair.</i></p> <p>Max notices his error, rereads, and self-corrects.</p>	<p>Max notices something's not quite right in his writing:</p> <p><i>Um, let's see, this ((points to new part of story)) What in the world? That's a t!</i></p> <p>He notices the lone <i>t</i>, rereads and corrects. He later tells me he had to add an <i>o</i> to make it <i>to</i>.</p>	<ul style="list-style-type: none"> • Ability to search for sources of information, monitor the response and determine if they are right or wrong • Through monitoring, students are often able to search for additional information to correct initial response, if needed.
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Note: ^{sc} = self-correction

Initiating Synchronous Action

One theme found from the recursive analysis of the data was that participants were flexible in using multiple sources of information while reading and writing continuous texts. Many times, the flexible use of more than one source of information involved quick, on the run searching of two or more sources of information on behalf of the reader or writer. The reader or writer would immediately cross-check sources of information; cross-checking means that a student checks, or compares, one source of information against another (Clay, 1993). On occasion, the reader or writer quickly recognized an error between what was initially searched, and then searched again. Luke's analysis chart below shows coding that Luke demonstrated this on-the-run action while reading and writing (see Table 16 for a detailed description of his behaviors).

Table 16

Luke's Analysis Chart from January 2016

Reading (Running Record)				Memo: In R & W, L appears to readily search using Meaning, Structure, and Visual information. He readily begins both tasks with intention: he reads for meaning while searching visual information, and writes known words quickly or articulating to hear and record sounds with many known S→L relationships.	Writing –Independent w/picture			
	M	S	V			M	S	V
Searching	✓	✓	✓beginning of words & across		Searching	✓	✓	✓
Monitoring	✓story characters	✓name	✓known words		*readily begins and knows intentions for message			
Self-Correcting	✓story		✓known words		Monitoring	✓rereads to continue message		
					Self-Correcting			
Reading (New Text)				In R , there is evidence that he is flexible in searching initially for meaning and structure while monitoring, cross-checking for visual information on the run, as well as the reverse: initially searching across a word visually and cross-checking with meaning and structure to fully problem solve. He monitors using all three SOI and self-corrects using meaning in one instance and visual in another.	Writing -Reading/Sharing			
	M	S	V			M	S	V
Searching	✓picture	✓	✓initial letter & across		Searching	✓	✓	✓
Monitoring	✓rereads	✓			*L shares writing with others			
Self-Correcting	✓bug spray				Monitoring			
					Self-Correcting			
Searching	✓picture	✓	✓across words					
Monitoring			✓known					
Self-Correcting			✓known & across					

More so, there is evidence that the participants were beginning to “build a network of perceptual and cognitive strategies for decision making as they work[ed] across texts” (Clay, 2001, p. 133). In the following examples, participants demonstrated the *synchronous action* of quickly searching more than one source of information, and sometimes cross-checking one source of information with another, across reading and writing events.

Zoey

A first grade student, Zoey, showed flexibility in using multiple sources of information while reading and writing. In the following transcript in Table 17 from reading a new text, Zoey initially attempted to problem solve using visual information, yet quickly cross-checked using meaning and structural information to fully problem solve and at times, self-correct. In line 3, Zoey attempted to problem solve using visual information for the word *shakes*, by trying *shacks*, quickly corrected herself, perhaps using meaning and structural cues, and then read *shakes*. Again, in lines 9, 10, and 11, Zoey synchronized her use of visual and meaning cues by getting the words started using visual cues, then checking the picture to search meaning, and correctly reading the text.

Table 17

Zoey Reading – Tails

Speaker	Text	Line	Discourse and Action
Zoey	The snake has a tail. It shakes its tail to tell you to stay away.	1 2 3	((Reading)) The snake has a tail. It s::a, um, s::akes its tail to, wait, no, that does-, that doesn't make sense, s::, sh::a-cks, shakes its tail to, um, tell you to stay away.
Teacher		4 5	Great work, thinking about what's going to look right and make sense.
Zoey	A horse has a tail. It uses its tail to slap at bugs.	6 7	((Reading)) A horse has a tail. It uses its tail to s::l::ap, slap a, at, at, bugs.
Zoey	A squirrel has a tail. Its tail helps it stay warm.	8 9 10 11 12	((Continuing Reading)) ...has a tail too. Sh::e, um, she / uses it her tail to play with her c- ((checks picture)) cub. A squirrel has a tail. Its tail h::a ((checking word and picture)) h.helps it s.s::s.t.a.sla.s::ta, sta, stay where, warm.

A running record excerpt from the same day shows similar action: Zoey initially searched using visual cues while checking picture to search meaning, leading to synchronous use of sources of information to fully problem solve.

Zoey: ✓ ✓ ✓ ✓ d-u-s SC ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Text: "I see a big bus," I said. I can take a picture of the bus.

Zoey's writing during the same time also shows her use of multiple sources of information (see Figure 1). In this example, Zoey composed a meaningful story on a self-selected topic about her cat. Zoey articulated to hear sounds in unknown words and wrote letters (using visual information to compose in writing). Zoey's use of multiple sources of information is evident across the reading and writing events during the two consecutive intervention sessions.

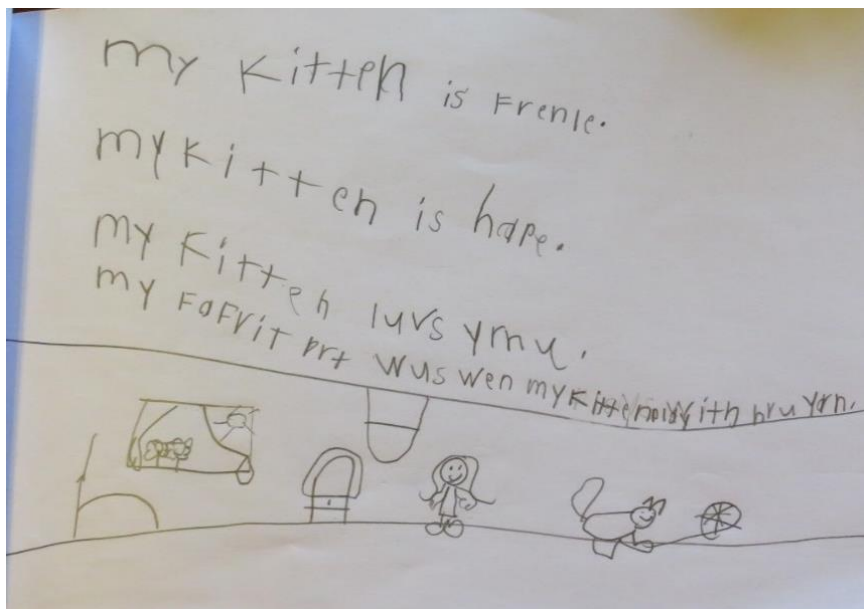


Figure 10. Zoey's writing page from November 30, 2015.

In later sessions, Zoey continued to search using meaning, structure, and visual information. In reading, she often checked the initial letters of a word while simultaneously thinking about meaning and structure to continue reading. Lines 1 and 10 in the transcript below show evidence of this action. At times, she flexibly searched visual information, then meaning information, and again to visual information to search

across a word to fully problem solve (see lines 7 and 13). At times, Zoey was tentative as she synchronously searched and required some support; Lines 14 through 26 show an interaction between Zoey and the researcher as they worked through a problem solving attempt.

Table 18

Zoey Reading – Pop, Pop, Popcorn! and Going Camping

Speaker	Text	Line	Discourse and Action
Zoey	Gramps took out one of the games to play. “Gramps, can we make popcorn?” I asked.	1 2 3	((Reading <i>Pop, Pop, Popcorn!</i> with eyes)) Gramps t-took out the out one of the games / to play. Gramps can // Gramps, Gr-am-ps
Teacher		4	Uh um.
Zoey	“Sure,” said Gramps. “I love popcorn.” “So do I,” said Grace. Gramps got the popcorn. Grace got the pot. I got a bowl for the popcorn. Gramps put the pot on the stove. Then he put some oil and popcorn into the pot.	5 6 7 8 9 10	((Continuing)) can we make pop popcorn I asked. Sure said Gramps. I love popcorn. So did I said Gramps. Gramps got the popcorn. Gramps got the pop, po-, pot. I got a bowl a bowl for the popcorn. Gramps put the pop pop on / the stove, um, pot on the stove. Then he put some o-oil and popcorn into the pot.

Teacher		11	Good job for making it look right and make sense.
Zoey	“Don’t forget the bug spray, Linda,” says Mom.	12 13 14	((Reading <i>Going Camping</i> with eyes)): Da- // Don't // f::fix, f, fr::(frit) forget the dug, d, um, bug, bug, s::topper, stopper?
Teacher		15 16 17	What would make sense and look right? Ok? So go back and read it again ((inserting finger at beginning of line)) and think about what would make sense.
Zoey		18	Don't forget [the bug]
Teacher		19 20 21	[the bug] and what can you do? You can look at the picture. [What is this?] ((pointing to bottle of bug spray in picture))
Zoey		22	[s:]
Teacher		23	Yeah, what is this?
Zoey		24	spray
Teacher		25	Would that look right?
Zoey		26 27	Yes! ((rereads page from beginning to confirm and continue))

Running record excerpts show similar action: Zoey searched initially using visual information, sometimes with meaning information, while quickly considering structure and meaning to fully problem solve.

SC

Zoey: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ (✓ looking)^R ✓ ✓
Text: The bees are buzzing down by the pond. They look for flowers.

Zoey: ✓ ✓ fū^{SC} ✓ ✓
Text: Bees get food from flowers.

Zoey: ✓ ✓ ✓ ✓ ✓ ✓ ✓ lies^{SC} ✓ ✓ ✓ ✓ ✓
Text: It [The Turtle] crawls out of the water. It lays its eggs in the ground.

In her writing from the same intervention sessions, Zoey initially wrote *I like to* while the video recorded. The video was interrupted and the researcher later returned to her. Anecdotal notes recorded that she reread her writing, erased *to* and replaced it with *popcorn* to clarify her intended meaning. Zoey articulated to hear and write sounds in words and wrote some known words quickly. In writing, Zoey also searched using multiple sources of information: she searched meaning and structure to compose a story and searched visual information to write known words and articulate unknown words to write her story (see Figure 11).



Figure 11. Zoey's writing page from January 11, 2016.

As evidenced in the above examples, Zoey demonstrated reciprocity in her ability to flexibly and quickly use multiple sources of information during reading and writing.

Luke

Another first grade student, Luke, appeared to search multiple sources of information when reading and writing in early intervention sessions. The transcript in Table 19 below shows that Luke followed the text with his eyes (searching visual information); anecdotal notes recorded that Luke looked at pictures in the text as he turned each page (searching for meaning information). He read the text with relative ease as he synchronously searched for meaning, structure, and visual information.

Table 19

Luke Reading – Tug of War

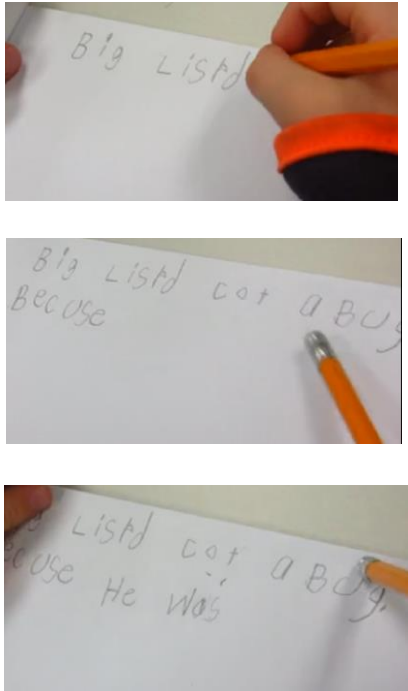
Text	Line	Luke's Discourse and Action
A bird tugged on the rope.	1	((Reading with eyes)): A bird tugged on a on the rope.
He tugged and tugged.	2	He tugged and tugged.
The rabbits tugged on the rope.	3	The rabbit tugged /// ((checking picture)) The rabbits
They tugged and tugged.	4	tugged on the rope. They tugged and tugged.
A monkey tugged on the rope.	5	A monkey tugged on the rope. She tugged and tugged.
She tugged and tugged.	6	A zebra tugged // on the rope. He He tugged and tugged.
A zebra tugged on the rope.		
He tugged and tugged.		

In Table 20 and Figure 12, Luke wrote about a previously read text and shows his ability to use multiple sources of information to write a meaningful story. He articulated to hear and record sounds, monitored spacing, and attempted punctuation usage (visual

information). He reread to maintain the message of his story (lines 8 and 12, searching and monitoring meaning and structure).

Table 20

Luke Writing about Big Lizard

Writing Page	Line	Luke's Discourse and Action
	1	((Writing and talking as he writes)): Big Lizard
	2	Big Lizard Big Lizard c-c ((articulating as he
	3	writes)) c-augh-t:: a bug.
	4	((return sweep to next line, writes "B", returning
	5	to add a period after bug))
	6	I'm making it two, be- be.cause ((continuing to
	7	articulate as he writes)) because /
	8	((rereading)) Big Lizard caught a bug because
	9	he ((continuing to write and articulate as he
	10	writes)) he w-w-a-s:: ((wrote u as he was
	11	articulating, erases to correct)) wa::s,
	12	((rereads again)) Big Lizard caught a bug
	13	because he was h-u-g / hungry ((attempting to
	14	articulate hungry))

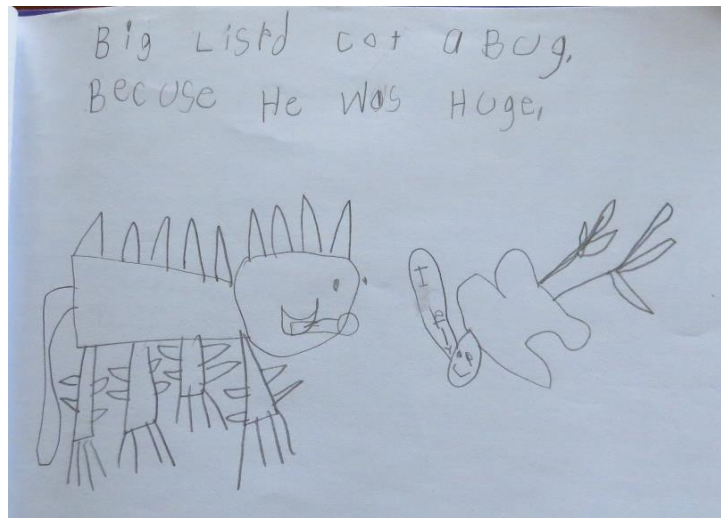


Figure 12. Luke's writing page from November 4, 2015.

Both of the above literacy events happened on the same day of intervention instruction. Across both reading and writing events, Luke used multiple sources of information together to read the new text and compose a story about a previously read book.

In later intervention sessions, Luke continued to readily search multiple sources of information when reading and writing texts. The transcript below shows evidence that Luke was flexible in searching for meaning, structure, and visual cues. In the first text, Luke searched visual information across the word *bug* and read *bag*, quickly monitoring with meaning to self-correct to read *bug spray* (lines 1 and 2). In the second text, Luke read *I* twice in place of *A* (searching meaning), then quickly monitored with known words to self-correct and continue reading (lines 5 and 8).

Table 21

Luke Reading – Going Camping and Little Wolf’s New Home

Text	Line	Luke’s Discourse and Action
“Don’t forget the bug spray, Linda,” says Mom.	1 2	((reading <i>Going Camping</i>)): Don't forget the bag bag s- bag spray? bug spray Linda says Mom.
Little Wolf liked Blue Bird. But she did not like Blue Bird’s home. The tree was too high. “No thanks,” said Little Wolf. A tree is not the right home for me. So Little Wolf went to see her friend, Bear. “Hi, Bear,” said Little Wolf. I am looking for a new home. “Well,” said Bear. “A cave is a good home.”	3 4 5 6 7 8	((reading <i>Little Wolf’s New Home</i>)): But she did not like Blue Bird's home. The tree was too high. No thanks said Little Wolf. I A tree is not the right home for me. So Little Wolf went to see her friend, Bear. Hi Bear said Little Wolf. I am looking for a new home. Well, said Bear. I A cave is a good home.

Running record excerpts from Luke’s familiar reading of *Going Camping* shows similar actions. Luke read while searching for meaning, structure, and visual information; he attempted to search across words using visual information, then self-corrected using meaning and structure. He also initially searched meaning and structure information, and then self-corrected using visual information with known words.

Luke: ✓ ✓ ✓ ✓ ✓ Lēnda^{SC} ✓ ✓
Text: Don’t forget the bug spray, Linda,” says Mom.

Luke: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ a^{SC} ✓ ✓ ✓ ✓
Text: Let’s bring a ball so we can play, says Tom. Let’s bring some games, too,” I say.

Video of Luke's writing from the same sessions shows evidence that he readily began his writing with intention; searching meaning, structure, and visual information to compose his story (see also Figure 13). He articulated *favorite* as he wrote to hear and records sounds. He repeated the word when finished to carry on the message of his story. As he continued writing, he appeared to lose track of his writing as he conversed with Zoey about ice cream. He returned to his writing by rereading (monitoring) his message and continued to write. During the writing time, Luke and the researcher worked with Elkonin boxes for *cheese*, and the researcher made an analogy to *see* for the double *ee*. They also looked at *pizzaa/pizza* to correct and the backward *zz* in the second *pizza* (in the video, he began to write correctly but erases and reverses them as he continued writing).

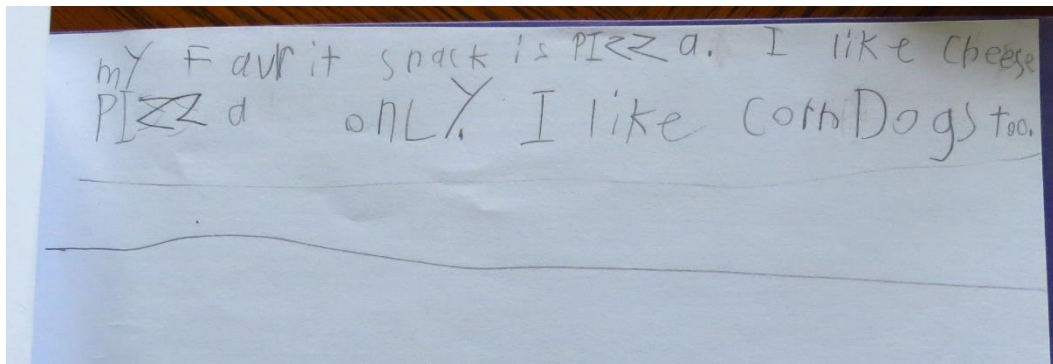


Figure 13. Luke's writing page from January 12, 2016.

During the reading and writing events of these sessions, Luke showed reciprocity through his synchronous use of multiple sources of information to read familiar and new texts, and as he composed meaningful messages in connection to previously read texts.

Carter

A kindergarten student, Carter, searched for meaning, structure, and visual information as he read and wrote during the intervention sessions. He appeared to be flexible in using multiple sources of information as he cross-checked meaning against visual information and vice versa when he needed to problem solve. Line 3 of the transcript in Table 22 below shows that Carter paused to check the picture before reading *boots* as the text changed from the *Look at my shoes* pattern, indicating that he noticed the visual change and confirmed with meaning from the picture before successfully reading the text. Likewise, he attempted to use both visual and meaning information to make a meaningful guess when reading *sled* and then *skate* for *ski* (lines 4 and 6).

Table 22

Carter Reading – Boots and Shoes

Speaker	Text	Line	Discourse and Action
Carter	Look at my shoes. I can run in my shoes. Look at my boots. I can ski in my boots.	1 2 3 4	((reading)) Look at my shoes. ((checking picture)) I can run in my shoes. I can ((finger on my, rereads)) Look at my / ((checks picture)) boots. ((checking picture)) I can s..sled ((checking picture))
Teacher		5	What is he doing?
Carter		6	s..kate!
Teacher		7	He's skiing. This is skiing.
Carter	Look at my shoes. I can kick with my shoes.	8 9 10	((checking across word and continuing to read)) skiing, ski in in my boots. Look at my shoes. I can kick / with ((checking across word)) my shoes.

In his writing, Carter composed a meaningful response to a previously read text. When I asked about his writing, he reread his story and continued to add “*in my shoes*” to his story. Carter appeared to have some known words that he could easily and quickly write, and he articulated to hear sounds in unknown words with many sound to letter correspondences under control (Figure 14 shows his writing page). Across the reading and writing events during the intervention sessions, Carter demonstrated reciprocity as he used multiple sources of information flexibly to problem solve on the run.

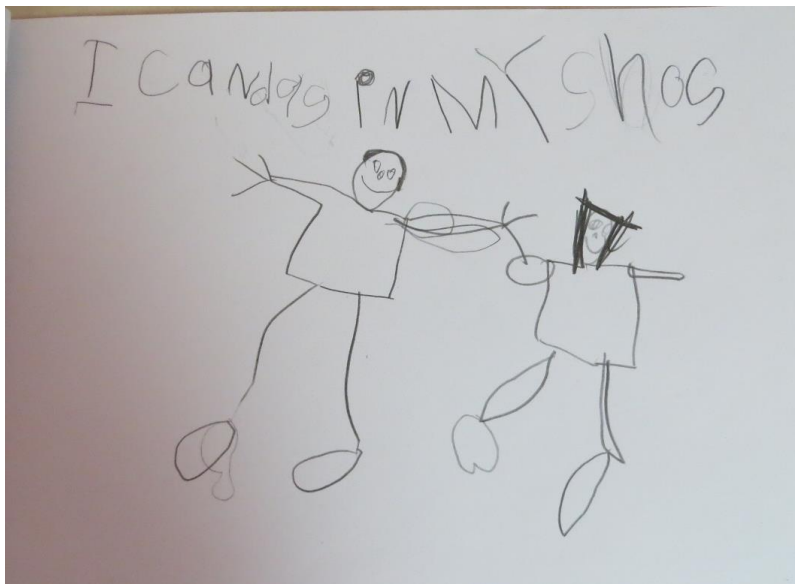


Figure 14. Carter's writing page from January 14, 2016.

Henry

Henry is a first grade student that often initially searched using visual information, often breaking words apart letter by letter with quick cross-checking with meaning and structure to problem solve, although not always successfully. In lines 1 and 2 (see Table 23), he searched initial letter, read *liked* then quickly corrected himself by reading *looked* perhaps recognizing a known word (visual information) or recalling

meaning from the story. In lines 4, 5, and 6, he continued to check picture for meaning while cross-check the visual information in the text. He also searched visual information across the word *f::a.n* –breaking the word apart while cross-checking meaning and then reading *fan*.

Table 23

Henry Reading – The Red Pajamas

Speaker	Text	Line	Discourse and Action
Henry	Froggy looked in the piano. He saw his hats.	1 2	H: ((reading)) Froggy l.l.liked looked in the ((searching picture)) piano. He s.a.w, s::a.w
Teacher		3	((tells word)) saw
Henry	He saw a fan and a clock and his crayons. He saw a fan and a clock and his crayons. Then he saw his red pajamas.	4 5 6 7 8	((continuing to read)) He saw his ((searching picture)) hats. He sawed a f::a.n fan and a ((checking picture)) clock and its his ray, no, c.cap, caps. Th.e::n he sawed his red pajamas.

Running record excerpts show similar action by Henry. He searched initially using visual information across a word while cross-checking with meaning and structure to completely problem solve. The two excerpts below from Henry’s reading of *Billy’s Pen* show that he searched across the words: *with*, *back*, and *them* followed by quickly reading the entire word to regain meaning and structure.

Henry: ✓ w-i-t, w-i-th ✓ ✓ ✓ ✓ M^R ✓ ✓ ✓
 Text: "Come with me, Billy," she said. Matt said, "Look! Billy
 Henry: it^{SC} b-a-ck ✓ He's - ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Text: is back. He is out of his pen, but I can fix it.

In the second excerpt, Henry problem solved on the run; initially, he only looked at first letter of *loves* and made a meaningful attempt with *likes*, taking a second look across with *lōv*, and finally combined visual information with meaning and structure to correctly read *loves*.

Henry: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ Nan ✓ ✓ ✓ th-e-m ✓
 Text: Rose and Matt fixed up the goat pen. Pop, Nana, and Mom helped them.

Henry: ✓ likes, lōv^{SC} ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Text: Billy loved his new pen. Matt and Rose love it, too!

Henry searched meaning and visual information to write a meaningful response to the story. He wrote known words quickly and attempted to articulate to hear sounds in words to write his story. While sharing his writing with other students, he noticed that his story didn't make sense or sound right, so he worked to fix it. Figure 15 shows his finished story.

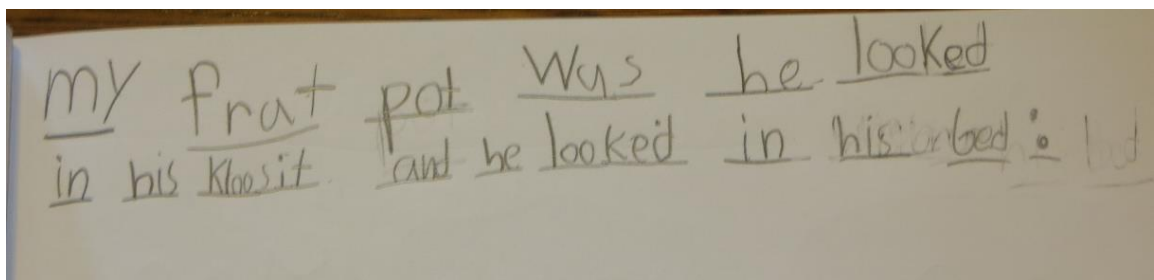


Figure 15. Henry's writing page from December 3, 2015.

In both reading and writing, Henry attempted to use visual information by looking across words in reading and articulating to hear and record sounds in writing. While doing so, he also searched using meaning and structure information, using multiple sources of information together as he read and wrote.

Max

Another first grade student, Max, showed evidence of synchronous use of multiple sources of information during the reading of a new text. A transcript taken from video of Max's reading shows that he read with expression and attention to punctuation (see Table 24). He appeared to flexibly use meaning, structure, and visual information to read the text. Although the transcript shows the teacher prompting Max to continue reading, he continued to read with attention to punctuation, pausing and using expression to reflect the meaning of the text.

Table 24

Max Reading – The Cold

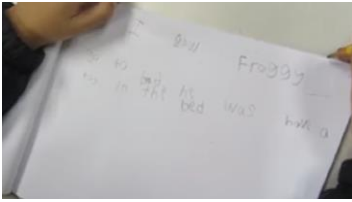
Speaker	Text	Line	Discourse and Action
Max	"I have a game," said Kim. "Can you play with me?"	1 2	((Reading with expression and attention to punctuation)): ...a game, said Kim. Can you play with me?
Teacher		3	Oh, I like your expression. Good job! Let's keep going.
Max	"I can't play a game," said Lizzy. "I have a bad cold."	4 5 6	((Continuing to read)): I can't play a game, said Lizzy. I have a bad cold. Can you read with me? said Kim. I have a book. I can't play at all, said Lizzy. So Kim went home.

	“Can you read with me?” said Kim. “I have a book.” “I can’t play at all,” said Lizzy. So Kim went home.		
Teacher		7	Ok, keep going. You're doing a great job.
Max	Lizzy went to see Kim. “Here I am!” said Lizzy. “Come out to play.”	8 9	((Continuing to read)): Lizzy went to see Kim. Here I am! said Lizzy. Come out to play.
Teacher		10	((Whispering)): Keep going.
Max	“I can’t,” said Kim. “I got your cold!”	11	((Reading)): I can't, said Kim. I got your cold.
Teacher		12	Uh, oh. What happened?
Max		13	She got her cold!

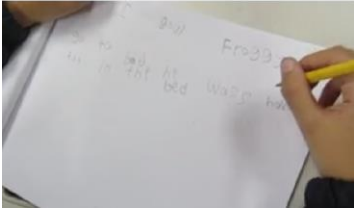
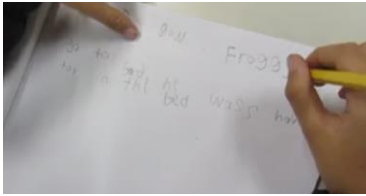
In his writing, Max showed similar evidence of using meaning and visual information together to write a story about Froggy and the toys on his bed. The transcript from video taken while he worked on his writing (see Table 25) shows that he searched for meaning when he comes to a point in his story that does not have his intended meaning (line 4); searching using visual information, he noticed that the word *still* is not there and he worked with me to add it to his story (lines 12-19).

Table 25

Max Writing about Froggy

Speaker	Writing Page	Line	Discourse and Action
Teacher		1 2	((Asks Max about writing)): Read what you have so far.
Max		3 4	((Reading his writing so far)): I saw Froggy go to bed. He was have // I miss something!
Teacher		5 6	Okay. What can you do then? Did you notice something?
Max		7	Yes.
Teacher		8	What can you do?
Max		9	Write it?
Teacher		10	Okay, fix. are you gonna fix it?
Max		11	I'm gonna write it.
Teacher		12	Okay. What do you need to fix?
Max		13	How do you spell "sill"?
Teacher		14	Think about the sounds you hear.

(continued)

Max		15	I know it's an "s" but / ((writes in "s"))
Teacher		16 17	What, what do you want to, what did you want to say?
Max		18 19 20	((Rereading from beginning)): I saw Froggy go to bed. He was "sill" have a toy in the bed.
Teacher		21	He was what?
Max		22	Sill
Teacher		23 24 25	((Understanding that he wants to insert "still" into story; I work with him to articulate "still" to add into story)).

The reading and writing events examined above occurred on the same day of intervention instruction for Max. During both events, he was able to practice and demonstrate reciprocity through his ability to synchronously search for meaning and visual information while reading and writing continuous texts.

Molly

Molly, a kindergarten student, also demonstrated that she could flexibly use multiple sources of information as she read and wrote during our intervention sessions. In the transcript below, Molly was reading a new text (see Table 26).

Table 26

Molly Reading – Oh No!

Text	Line	Molly's Discourse and Action
Look at the mail. Oh no!	1 2	((reading; 1-1 mostly w/eyes, some loosely w/finger)): ...at the mail. Oh no.
Look at the water. Oh no!	3 4	Look at the ((checking picture)) water. ((omits reading "Oh no!" on next page))
Look at the trash. Oh no!	5 6 7	Look at the tr- ((checking picture)) trash can? Oh no. Look at the ((checking picture)) n:: ((checks picture again)) paper.
Look at the paper. Oh no!		

As she read, she was searching for meaning, structure, and visual information. On several pages, she synchronously searched visual information (mostly first letter or onset) and meaning information (checking the picture in the story) to successfully problem solve as she read. The running record below was taken a day before she read the new text above; it shows similar action, yet less successfully. Over the two days of intervention sessions, she appeared to be gaining more proficiency in her ability to use multiple sources of information to problem solve.

Molly: Can^{SC} ✓ ✓ ✓
 Text: The monkey can jump.

Molly: ✓ ✓ ✓ w✓ ✓ ✓ ✓ run ✓ ✓ ✓ hop
 Text: The monkey can walk. The monkey can ride. The monkey can hug.

Similarly, in her writing from the same sessions, Molly appeared to use multiple sources of information to compose a story in connection to a previously read text. She searched for visual information as she wrote known words and articulated to write unknown words. In the video taken as she was writing, she attended to the message (meaning) she intended to write (as seen in lines 10 and 11 of the transcript in Table 27 below). She also corrected “blue” when she saw that she had written it incorrectly, suggesting monitoring and self-correcting with visual information (see Figure 16). Molly’s use of multiple sources of information together when reading the new text and composing a story about a previously read book demonstrated and revealed an emerging understanding of reciprocity.

Table 27

Molly Writing About Her Dress

Speaker	Writing Page	Line	Discourse and Action
Teacher		1 2	((asks Molly about writing)): What are you working on, Molly?

(continued)

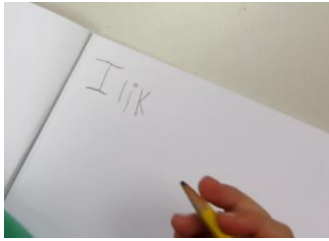
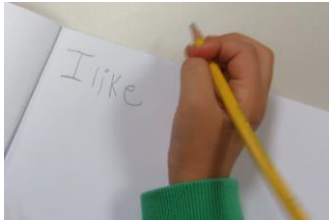
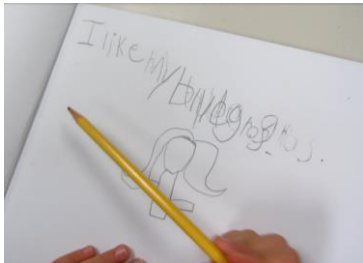
Molly		3	Uh / something
Teacher		4	Yeah? What have you written so far?
Molly		5 6	I like, I'm putting the e ((adding in e as she tells me))
Teacher		7	Okay.
Molly		8	my
Teacher		9	Okay.
Molly		10 11	blue dress ((telling me what she's going to write))
Teacher		12 13	Okay, great. I'm gonna come back and check on you, okay?
Molly		14 15	((pointing with pencil to words in story as she reads)): I like my blue dress.



Figure 16. Molly's writing page from December 2, 2015.

As evidenced in the above examples, one way the participants demonstrated reciprocity was through the synchronous action of quickly and flexibly searching more than one source of information, and at times immediately cross-checking one source of information with another, across the reading and writing of continuous texts.

Connecting Language and Structure

Another theme found as participants took action in reading and writing texts was that participants began to use *language structures and vocabulary* in writing from the previously read texts. According to Rowe (2008), learning to write permits children to work with their growing language knowledge as they compose meaningful messages, often using drawings and writing together. In addition, scholars believe that extensive reading leads to increased vocabulary and spelling knowledge (Krashen, 1989; Nagy & Herman, 1987). Ella's analysis chart from three consecutive intervention sessions below shows that she adopted the questioning style of the text in her composition suggestion

during interactive writing (see Table 28 and a detailed description example for Ella below). To follow are examples from video-taped literacy events that demonstrate how participants connected the language knowledge acquired from reading experiences into their writing –thus, reinforcing reciprocity.

Table 28

Ella's Analysis Chart from November 2015

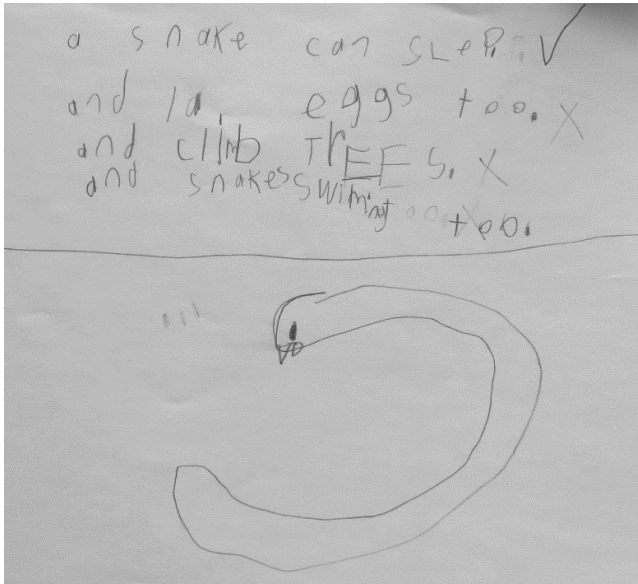
Reading (Running Record)				Memo: In W, E searches M & S to compose sentence related to our recent story using language from the text. She understands some sound→letter (interactive and independent). In R, E searches using Meaning and Structure (checking pictures & in substitutions) and Visual (1-1). She monitors by rereading to regain Meaning and with known words (Visual). E shows evidence of monitoring & self-correcting using visual information while cross-checking M & S.	Writing –Interactive Writing				
	M	S	V			M	S	V	
Searching	✓(substitutions)	✓	✓1-1, across words, onset-rhyme			Searching	✓offers composition 2nd sentence -more like ? structure of text	✓	✓suggests “big one, mama one” for uppercase letter at beginning, known word, beginning to articulate to h/r sounds
Monitoring	✓rereads (sentence)	✓				Monitoring			
Self-Correcting			✓cross-checking MS→V info		Self-Correcting				
Reading (New Text)					Writing –Independent (photo from writing book)				
	M	S	V			M	S	V	
Searching	✓ a/my substitution checking picture, make/paint substitution	✓	✓1-1		Searching	✓string of letters to compose message and picture (drawing)	✓	✓S→L some initial and ending sounds	
Monitoring		✓I/my “No”	✓1-1		Monitoring				
Self-Correcting					Self-Correcting				
*E comments on understanding that book is all about “his, his, his” paintings (M?)					*attempts to compose sentence about what boy has done with his toys (from text).				

Luke

After reading a book about snakes in a previous session, Luke chose to write about what he learned in the book (see Table 29). He wrote about some of the ways snakes behave and what they do. In his writing, he attempted to use vocabulary from the text creating a list-like story of what snakes do much like the story he read.

Table 29

Luke Writing About Snakes

Text: All About Snakes	Luke's Writing
<p>A snake can swim. This snake is swimming in the water.</p> <p>A snake can climb. This snake is climbing up a tree.</p> <p>A snake can eat. This snake is eating an egg.</p> <p>A snake can hide. This snake is hiding under a rock.</p> <p>A snake can hang. This snake is hanging from a tree.</p> <p>A snake can sleep. This snake is sleeping in the sand.</p> <p>This snake can lay eggs. It is laying eggs in the grass.</p>	<p>A snake can sleep.</p> <p>and lay eggs too.</p> <p>and climb trees.</p> <p>and snakes swimming too.</p>  <p>The image shows a photograph of a child's handwritten work. The text is written in pencil on a light-colored background. It reads: 'a snake can sleep, ✓', 'and lay eggs too. X', 'and climb TREES. X', and 'and snakes swimming too. X'. Below the text is a simple line drawing of a snake, coiled in a large 'C' shape. The snake has a small head with two dots for eyes and a forked tongue. There are some faint, illegible markings to the left of the snake's head.</p>

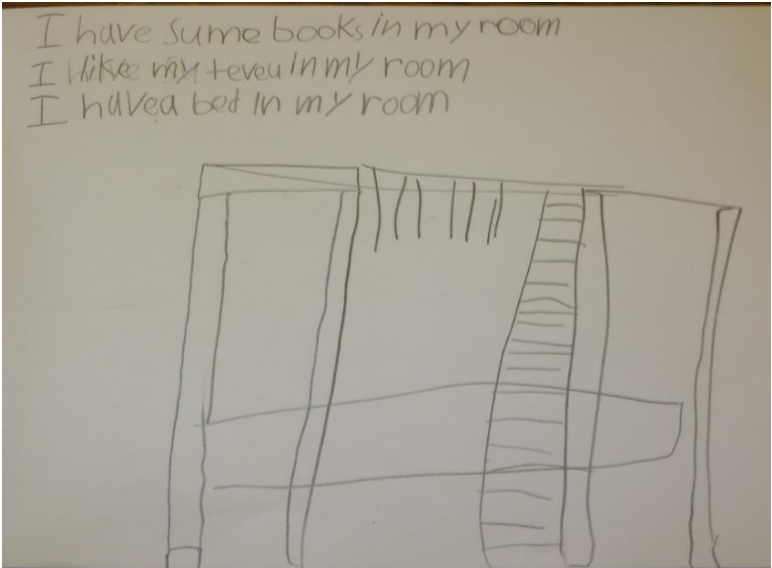
Henry

In a previous session, we read a nonfiction text about a little boy and his bedroom.

The next day, during our writing time, the students were given the opportunity to write about their own bedrooms. Henry chose to write about his own room using a similar language pattern, even alternating between what he has and likes in his room (see Table 30). He included something he and the little boy had in each of their rooms (books) and some new ideas (a tv and a bed).

Table 30

Henry Writing About His Room

Text: In My Room	Henry's Writing
<p>Here is my room. I like my room. I like rocks. I have rocks in my room. I like cars. I have cars in my room. I have shells in my room. I like shells. I have books in my room. I like books. I like puzzles. I have puzzles in my room. I like my rocks and my cars and my shells. I like my books and my puzzles. I like my room!</p>	<p>I have some books in my room I like my tevea in my room I have a bed in my room</p> 


Carter

During three consecutive intervention sessions, Carter spent time reading a new book about a boy's family depicted in photographs. The day after reading the new book, we wrote together using interactive writing. For the interactive writing session, I listened to students' ideas about what to write, but ultimately chose what to write about to intentionally include words that I wanted the students to practice (is, in, my): *My mom is in my family picture*. As we shared the pen to write the composition, Carter offered to write *mom* in our story as well as several initial letters that he heard as he articulated each word. He reread our story to anticipate what word would come next, articulating and offering to write what he could hear. At the end, he initiated rereading the story as he pointed with his marker to each word.

In the next session together, he wanted to write about his own family (see Table 31). Using some words from the story and adopting the language structure from our interactive writing session, Carter wrote about his mom and dad.

Table 31

Carter Writing About His Family

Text: Family Pictures	Carter's Writing
<p> This is my mom. This is my dad. This is my brother. This is my sister. This is my grandma. This is my cat. This is my bear. This is my family! </p>	<p> My mom is i[n my] fn (family) Me and my dod (dad) </p> 

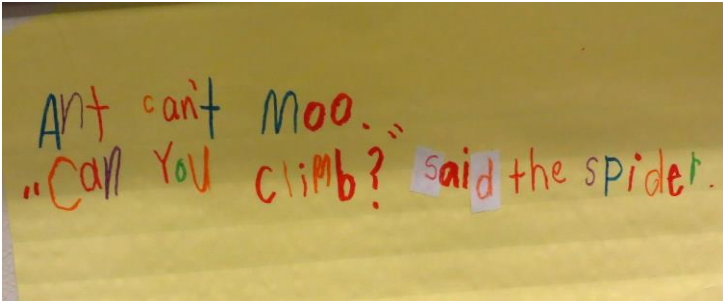
Ella

In an intervention session, the kindergarten students read a shared text about an ant that could not do many things that the other animals could do. At the end, the ant met a spider and discovered he could climb like the spider. The next day, during an interactive writing session, students chose to write about this story. One student, Molly, suggested, “*Ant can’t moo*” for the first sentence. When asked about what should be

written next, Ella quickly offered a suggestion that more closely aligned with the questioning and conversational tone of the text (see Table 32). In addition, Ella often offered to write letters for the sounds she heard as she articulated words to herself and together with the other students.

Table 32

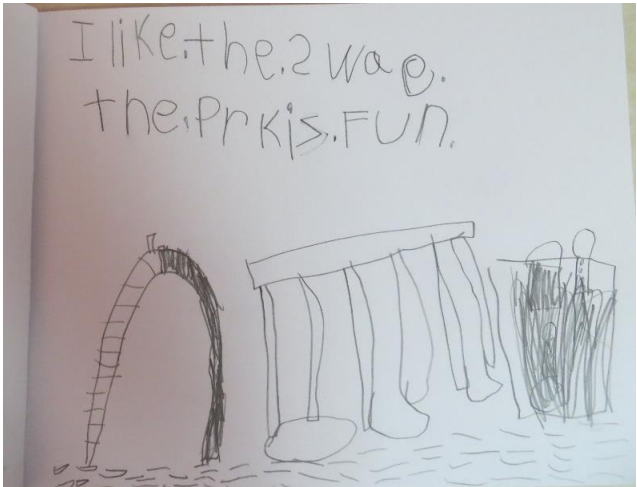
Ella's Contribution During Interactive Writing

Text: Ant Can't	Interactive Writing
<p>Ant met a bird. "Can you fly?" said the bird. "No, I can't," said the ant. Ant met a bee. "Can you buzz?" said the bee. "No, I can't," said the ant. Ant met a frog. "Can you hop?" said the frog. "No, I can't," said the ant. Ant met a cow. "Can you moo?" said the cow. "No, I can't," said the ant. Ant met a fish. "Can you swim?" said the fish. "No, I can't," said the ant. Ant met a pig. "Can you oink?" said the pig. "No, I can't," said the ant. Ant met a dog. "Can you bark?" said the dog. "No, I can't," said the ant. Ant met a spider. "Can you crawl up a wall?" said the spider. "Yes, I can!" said the ant.</p>	<p>Ant can't moo. (Molly's composition)</p> <p>"Can you climb?" said the spider. (Ella's composition)</p> 

In a later intervention session, Ella's independent writing shows that she wrote known words and continued to articulate to hear sounds and write new words (see Table 33). In her writing below, she chose what to write about while taking risks to write unknown words (vocabulary) from a previously read text.

Table 33

Ella Writing About the Park

<p>Text: At the Park</p>	<p>Ella's Writing</p>
<p>I am swinging at the park. I am jumping at the park. I am walking at the park. I am riding at the park. I am climbing at the park. I am sliding at the park. I am running at the park. I am eating at the park.</p>	<p>I like the swing. The park is fun.</p>  <p>The image shows a piece of paper with handwritten text and a drawing. The text reads: 'I like the. 2 wab. the. Pr k's. FUN.' The drawing depicts a park scene with a swing set on the left, a slide in the middle, and a person sitting on a bench or structure on the right. The drawing is done in simple lines and shading.</p>

In the above examples, participants demonstrated another way reciprocity is revealed in the literacy events: each participant made connections as they wrote independently or interactively with others using the language structures and/or vocabulary from previous reading experiences.

Consolidating Visual Information

A third theme found through the close observation and analysis of participants' work in reading and writing was the participants' attention to print in ways that demonstrated a developing understanding of how print works and a *consolidation of visual information*. Carter's analysis chart shows that he has a developing awareness of print knowledge in text as well as sound to letter correspondence in writing.

Table 34

Carter's Analysis Chart from December 2015

Reading (Running Record)	Memo:	Writing –Interactive (9 Dec)																																
<table><tr><td></td><td>M</td><td>S</td><td>V</td></tr><tr><td>Searching</td><td>✓</td><td></td><td>✓1-1; first letter “there’s a p”</td></tr><tr><td>Monitoring</td><td></td><td></td><td></td></tr><tr><td>Self-Correcting</td><td></td><td></td><td></td></tr></table>		M	S	V	Searching	✓		✓1-1; first letter “there’s a p”	Monitoring				Self-Correcting				<p>C searches for and maintains Meaning in R & W; also follows language of text in R, and carries over to his W.</p> <p>C searches Visual information (1-1 and letter knowledge) in both reading and writing; although does not always attend to spacing in writing.</p>	<table><tr><td></td><td>M</td><td>S</td><td>V</td></tr><tr><td>Searching</td><td>✓rereads along to anticipate next word</td><td>✓</td><td>✓hears some first letters (f, m, p); is articulating to make sound→letter correspondences (hears l); writes known words (mom, maybe “is”)</td></tr><tr><td>Monitoring</td><td>✓rereads on own</td><td></td><td>✓1-1 w/marker</td></tr><tr><td>Self-Correcting</td><td></td><td></td><td></td></tr></table>		M	S	V	Searching	✓rereads along to anticipate next word	✓	✓hears some first letters (f, m, p); is articulating to make sound→letter correspondences (hears l); writes known words (mom, maybe “is”)	Monitoring	✓rereads on own		✓1-1 w/marker	Self-Correcting			
	M	S	V																															
Searching	✓		✓1-1; first letter “there’s a p”																															
Monitoring																																		
Self-Correcting																																		
	M	S	V																															
Searching	✓rereads along to anticipate next word	✓	✓hears some first letters (f, m, p); is articulating to make sound→letter correspondences (hears l); writes known words (mom, maybe “is”)																															
Monitoring	✓rereads on own		✓1-1 w/marker																															
Self-Correcting																																		
Reading (New Text)		Writing –Independent (14 Dec)																																
<table><tr><td></td><td>M</td><td>S</td><td>V</td></tr><tr><td>Searching</td><td>✓checking pictures</td><td>✓language of text</td><td>✓1-1</td></tr><tr><td>Monitoring</td><td></td><td></td><td></td></tr><tr><td>Self-Correcting</td><td></td><td></td><td></td></tr></table>		M	S	V	Searching	✓checking pictures	✓language of text	✓1-1	Monitoring				Self-Correcting				<p>C notices first letters in R and can hear first letters in W; evidence that he has some letter→sound & sound→letter correspondences in his control. He appears to also have some known words that he can read and write w/ease.</p>	<table><tr><td></td><td>M</td><td>S</td><td>V</td></tr><tr><td>Searching</td><td>✓composes story</td><td>✓</td><td>✓sounds→letters & known words; articulates to hear sounds in unfamiliar word</td></tr><tr><td>Monitoring</td><td></td><td></td><td></td></tr><tr><td>Self-Correcting</td><td></td><td></td><td></td></tr></table>		M	S	V	Searching	✓composes story	✓	✓sounds→letters & known words; articulates to hear sounds in unfamiliar word	Monitoring				Self-Correcting			
	M	S	V																															
Searching	✓checking pictures	✓language of text	✓1-1																															
Monitoring																																		
Self-Correcting																																		
	M	S	V																															
Searching	✓composes story	✓	✓sounds→letters & known words; articulates to hear sounds in unfamiliar word																															
Monitoring																																		
Self-Correcting																																		

In the following examples from the data, participants demonstrated an understanding of directionality, spatial concepts, letter features and formation as well as a growing knowledge of phonemes and orthographic representation of letters; that is, letter sounds in reading (letter to sound relationships) and in writing (sound to letter relationships). Participants also demonstrated reciprocity by way of an increasing working knowledge of letter sequences and clusters within words, phrases, and sentences in both reading and writing.

Carter

In early intervention sessions, Carter (a kindergarten student) began to show evidence of attention to letter-sound and sound-letter relationships. Across three consecutive sessions, Carter demonstrated his ability to use letter and sound knowledge in reading and writing continuous texts. The running record excerpt below shows attention and acknowledgement of first letters in text.

Carter: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ “There’s a p!” (pointing to p in pants)

Text: Look at my socks. Look at my pants.

The next day, during an interactive writing session, Carter was eager to participate; he articulated words to hear individual sounds to be able to write them in the shared composition. He heard the m in mom, offered to write it, and proceeded to write the whole word into the story. He was attentive to what words followed in the story,

offering to write is and my as well as many sounds. He wrote many other letters for sounds he was able to hear, like f, l, and p. Figure 17 shows the shared composition.

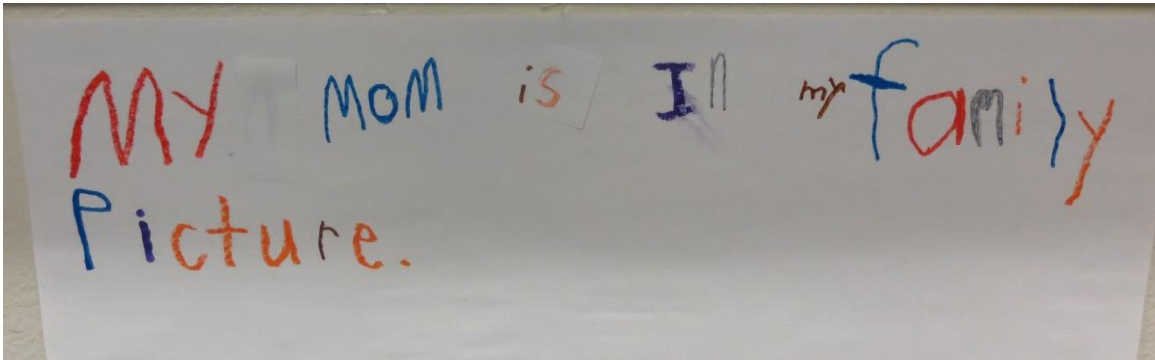



Figure 17. Interactive writing from December 9, 2015.

Carter's independent writing in a later session also shows evidence that he was using known words as well as letter knowledge to write new words. Table 35 shows the conversation around his independent writing work and his final writing page (see Figure 18).

Table 35

Carter Writing About His Mom and Dad

Speaker	Writing Page	Line	Discourse and Action
Carter		1 2 3	C ((saying words as he writes)): My:: mom:: i::s ((appeals to me)) How do you write family? That's a big word.
Teacher		4	It is a big word.


Carter		5	But I don't know how to write it.
Teacher		6 7 8	((reminding him to do what he knows)) You can just listen to what you hear, you can just listen to what you he-
Carter		9 10 11 12 13 14	((proceeds to write: F, then I before the F, then an N and adds to his picture. Later he adds "Me and my Dod" (Dad) below picture, articulating each word as he writes))



Figure 18. Carter's writing page from December 14, 2015.

In later sessions, Carter continued to demonstrate his attention and use of letter and sound knowledge while reading and writing. In the running record excerpt and new book reading, he continued to search visual information and use letter-sound knowledge

while reading. The running record shows his attention to print with accurate one-to-one matching as well as acknowledgement of word size (like in his writing above).

Carter: ✓ ✓ ✓ ✓ Snap! ✓ ✓ ✓ (✓ ✓)^R ✓ ✓ ✓ ✓
 Text: We have some beans in our garden. We have some flowers in our garden.

Carter: ✓ ✓ ✓ ✓^R “That’s a big word!” ✓ ✓ ✓
 Text: We have some strawberries in our garden.

While reading a new book, there is evidence that Carter attended to first letters in unknown words to problem solve (see lines 6 and 8 below in Table 36).

Table 36

Carter Reads – Boot and Shoes

Speaker	Text	Line	Discourse and Action
Carter	Look at my shoes. I can dance in my shoes.	1 2	((Reading)): I can dance ((checking picture to confirm)) in my shoes.
Carter	Look at my shoes. I can run in my shoes. Look at my boots. I can ski in my boots.	3 4 5 6	((Reading)): Look at my shoes. ((checking picture)) I can run in my shoes. I can ((finger on my, rereads)) Look at my / ((checks picture)) boots. ((checking picture)) I can s..sled ((checking picture))
Teacher		7	What is he doing?
Carter		8	s..kate!
Teacher		9	He's skiing. This is skiing.
Carter	Look at my shoes. I can kick with my shoes.	10 11 12	((Checking across word and continuing to read)) skiing, ski in in my boots. Look at my shoes. I can kick / with ((checking across word)) my shoes.

Similarly in his writing, he continued to write known words quickly and articulated to hear and write sounds in new words. As previously seen above, Carter's writing page shows his knowledge to manipulate sounds in order to write letters and words to create a meaningful sentence (see Figure 19).



Figure 19. Carter's writing page from January 14, 2016.

In the above examples, Carter demonstrated reciprocity through his growing knowledge of print concepts (such as, word size and boundaries) and his ability to use letter-sound knowledge when reading and sound-letter knowledge when writing.

Ella

In early intervention sessions together, another kindergarten student demonstrated her ability to understand and use letter-sound and sound-letter relationships. In the

running record excerpt below, Ella searched a variety of word parts (first letters, last letters, across words, onset and rhymes) to problem solve unknown words in the text.

Ella: (✓ ✓ ✓ t-k^{SC} car)^R ✓ ✓ ✓ c-c✓ ✓ ✓ (#sq-r-l)^R✓
 Text: Taco sees a truck. Taco sees a cat. Taco sees a squirrel.

Ella: ✓ ✓ ✓ ✓^R b-ike ✓ ✓ ✓ b-ug✓
 Text: Taco sees a bike. Taco sees a bug.

In an interactive writing session, Ella offered meaningful compositions in response to a shared text. She also heard and offered to write several initial, middle, and ending letters, often thinking ahead to what letter would come next as she or another student wrote on the shared page: *t* to finish *Ant*, *m* for *moo*, *k* and *a* for *can't* and again *k*, *l*, *i* for *climb*, *y* for *you*, *s* and then an *e* for *said*, and *s* and *i* in *spider*. As we began writing, she even suggested “*a big one...a mama one*” meaning a capital letter for the first word in the shared composition (see Figure 20).

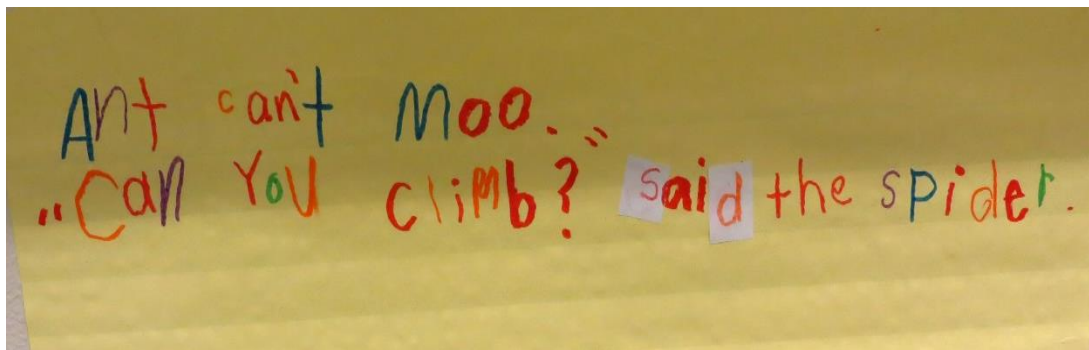


Figure 20. Interactive writing from November 17, 2015.

Her writing from the previous day shows a string of letters representing an independent attempt to share an explanation of how a young boy from a previously read text cleaned up his things. Her story says:

B i ktpk ts
The boy is keeping toys

She recorded initial sounds and some ending sounds as she was learning to articulate, compose, and write on her own (see Figure 21).



Figure 21. Ella's writing from November 16, 2015.

Three weeks later, Ella continued to show attention to letter-sound relationships in reading and sound-letter relationships in writing. The first line of the running record excerpt below shows that Ella searched for visual information, monitors, and self-corrected using a known word. The second line shows that she also searched visual information while cross-checking meaning by checking the picture to problem solve.

Throughout the text, she appeared to demonstrate her knowledge of letter-sound relationships as she read the familiar text.

SC

Ella: (✓ t)^R ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Text: Look at the mail! Oh no! Look at the water! Oh no!

((checks picture))

Ella: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ #p ✓ ✓ ✓
 Text: Look at the trash! Oh no! Look at the paper! Oh no!

During another interactive writing session, Ella was again quick to suggest a composition in response to a shared text (see Figure 17 above). She heard and offered to write many initial and middle sounds for the words in our story (*m* for *my*, *m* and *o* for *mom*, *i* for *in*, *m* and *e* for *family*, *p* and *i* for *picture*). In addition, Ella anticipated what word would follow as she reread the story with the other students and articulated the words; she even said, “I sounded it out and it’s m”... “I said it out slowly and I heard a p,” to let us know of her ability to articulate to hear sounds.

In previous intervention sessions to the above interactive writing session, Ella’s writing shows that she could independently write some known words as well as her attempts to articulate, hear sounds, and record letters across unknown words (see Figure 22).

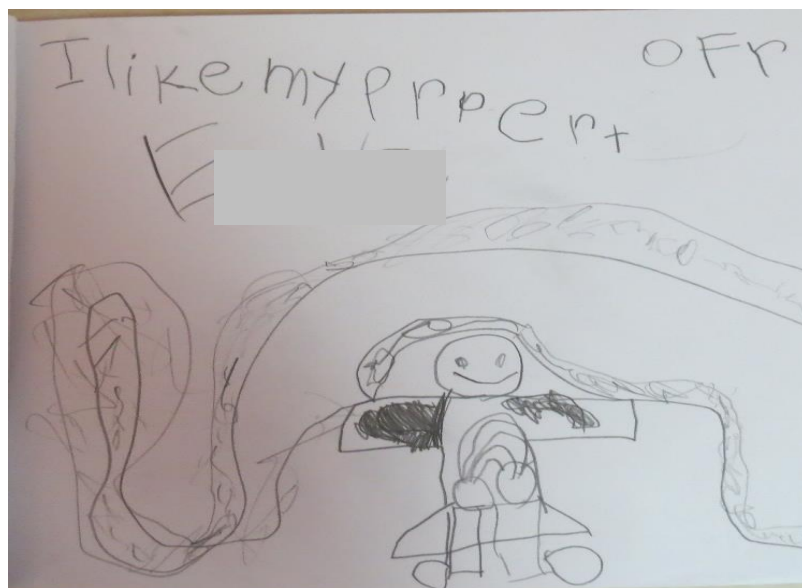


Figure 22. Ella's writing page from December 2, 2015: *I like my purple shirt.*

Ella's growing ability to use her letter and sound knowledge to both read and write meaningful text is evident. During later intervention sessions, Ella read a new text, put together a cut-up sentence, and wrote –all of these events show a consolidation of phonological knowledge. Below, Ella read a new book titled *At the Park*. She appeared to use letter-sound knowledge, although needed prompting to search for meaning cues (see lines 5 and 8 in Table 37); Lines 19 and 20 show that she was using both visual and meaning information to successfully read the next pages in the book.

Table 37

Ella Reading – At the Park

Speaker	Text	Line	Discourse and Action
Ella	I am swinging at the park.	1 2	((reading)) I am swinging # I am swinging to the uh? ((appeals to teacher))

Teacher		3	What can you do?
Ella		4 5	((searching visual cues)) p-a
Teacher		6	Good job, where is he? ((prompting to meaning))
Ella	I am jumping at the park.	7 8	I am //// ((checking picture)) wal- no I am j-u-m-p-i-n-g
Teacher	I am	9 10	What is he making se-, what would make sense? I am...Get it started, ju-
Ella		11	I am jump-ing
Teacher		12	Would that make sense?
Ella		13	Um uh
Teacher		14	Ok, go back [I]
Ella		15	[I] am [jumping at]
Teacher		16	[jumping at]
Ella		17	the park.
Teacher		18	Keep going.
Ella	I am walking at the park. I am riding at the park. I am climbing at the park.	19 20	I am walking at the park. I am riding at the park. I am climbing at the park.

While putting together cut-up sentences during the same time period, Ella quickly began articulating words to build her sentence: *I can see the bubbles in my milk* (see Figure 23). She searched visual information while articulating; in fact using her letter-sound and sound-letter knowledge together, she read and reread to complete the sentence and announced, "I did it!"

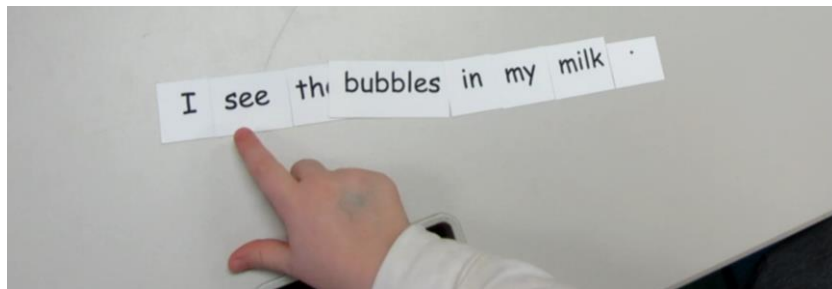


Figure 23. Ella reading her completed cut-up sentence.

During the previous session, Ella wrote a response to the previously read text, *At the Park*. She wrote known words quickly and slowly articulated unknown words to hear sounds and record letters. As seen in the transcript in Table 38, she articulated words into individual sounds as she attempted to write each one. Much like Carter, Ella displayed reciprocity through her emerging knowledge and ability to use sound-letter knowledge in writing and letter-sound knowledge in reading as evidenced in the included examples.

Table 38

Ella Writing About the Swings

Writing Page	Line	Ella's Discourse and Action
	1	((She quickly wrote <i>I like the</i> and articulates
	2	sounds as she writes)): s:: w::
	3	en ((writes a)) g
	4	((looks up toward camera, returns to
	5	articulating and writing))
	6	the p ar:: k i, z:: fu::n::

Tate

Another kindergarten student, Tate, demonstrated an emerging ability to search for visual information and apply his letter-sound knowledge in reading and his sound-letter knowledge in writing. In the running record excerpt below, Tate searched and said the initial letter of unknown words while checking the picture to support meaning to successfully read familiar text.

Tate: ✓ ✓ ✓ ✓ j-j ✓ ✓ ✓ ✓ c-c ✓
Text: I like my purple jacket. I like my purple cap.

Tate: ✓ ✓ ✓ ✓ g-g ✓ ✓ ✓ ✓
Text: I like my purple glasses. I love purple!

While reading a new text, *Monkey*, Tate used his letter-sound knowledge to begin each unknown word while checking the picture on each page (see Table 39). While his attempts show his developing use of letter-sound knowledge, they are not always successful.

Table 39

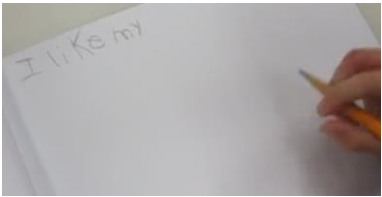
Tate Reading - Monkey

Text	Line	Tate's Discourse and Action
The monkey can ride.	1	((reading and checking pictures))
The monkey can hug.	2	The monkey can r::run.
The monkey can sleep.	3	The monkey can h, h, hold, hold.
	4	The monkey can sleep.


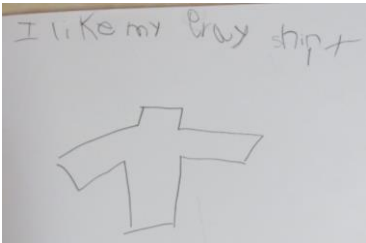
Likewise, his writing shows similar developing ability to articulate words slowly to write his message thus demonstrating some of his sound-letter knowledge (see Table 40). Tate showed his ability to articulate the word *gray* in lines 12 and 17; then, he wrote the corresponding letter for what he heard in lines 14 and 19. He did the same for *shirt* in lines 22 and 23.

Table 40

Tate Writing About His Shirt

Speaker	Writing Page	Line	Discourse and Action
Teacher		1 2	((waiting as I come to him)) What do you have so far?
Tate		3	((rereads what he has written)) I like my
Teacher		4 5	What's the next word you're going to write?
Tate		6	gray
Teacher		7 8	Ok, so say it slow and think about what you hear.
Tate		9	g ((sound))
Teacher		10	Ok, great job!

(continued)

Tate		11 12	((writes g –backwards and begins to articulate slowly)) gray::
Teacher		13	What do you hear?
Tate		14	g ((letter name))
Teacher		15 16	What else did you hear? Keep saying it slow, you're doing a great job.
Tate		17	gray::
Teacher		18	What did you hear?
Tate		19	a
Teacher	I like my gray	20 21	Ok, put it in there. ((adding in r & y for Tate))
Tate		22 23	((continues to articulate and writes in hrt)) shirt

While the examples above show that Tate's knowledge about print is tentative, he did demonstrate developing reciprocal knowledge about letter and sound relationships as he read and wrote continuous texts.

Zoey

Across reading and writing events, there is evidence that Zoey was also consolidating her knowledge of visual information in text. The running record excerpt below shows that when Zoey came to a point in the text where she needed to take action, she used her letter-sound knowledge to get the word started and even looked across the word, often while thinking about meaning.

Zoey: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ (✓ looking)^R ✓ ✓
Text: The bees are buzzing down by the pond. They look for flowers.

Zoey: ✓ ✓ fū^{SC} ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
Text: Bees get food from flowers...It [The turtle] crawls out of the water.

Zoey: ✓ lies^{SC} ✓ ✓ ✓ ✓ ✓ ✓ ✓ # s✓ ✓ ✓ ✓ ✓
Text: It lays its eggs in the ground. The snake is sliding down by the pond.

Zoey: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ frog
Text: It slides into the grass. It looks for mice to eat...The bird and the bees, the frogs

Zoey: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
Text: and the turtle, the snake and the mouse, are down by the pond.

Zoey took similar action while reading new texts: getting the word started (lines 2, 10, 24 in Table 41), searching across words (lines 3, 7, 15), and considering onset and rhyme (line 12). Figure 24 shows her writing page from the same intervention sessions where she articulated to hear sounds in words, showing evidence of many sound-letter relationships as well as evidence of understanding something about digraphs (ck).

Table 41

Zoey Reads – Pop, Pop, Popcorn! and Going Camping

Speaker	Text	Line	Discourse and Action
Zoey	Gramps took out one of the games to play. “Gramps, can we make popcorn?” I asked.	1 2 3	((Reading <i>Pop, Pop, Popcorn!</i> with eyes)) Gramps t-took out the out one of the games.to play. Gramps can // Gramps, Gr-am-ps
Teacher		4	Uh um.
Zoey	“Sure,” said Gramps. “I love popcorn.” “So do I,” said Grace. Gramps got the popcorn. Grace got the pot. I got a bowl for the popcorn. Gramps put the pot on the stove. Then he put some oil and popcorn into the pot.	5 6 7 8 9 10	((Continuing)) can we make pop popcorn I asked. Sure said Gramps. I love popcorn. So did I said Gramps. Gramps got the popcorn. Gramps got the pop, po-, pot. I got a bowl a bowl for the popcorn. Gramps put the pop pop on / the stove, um, pot on the stove. Then he put some o,oil and popcorn into the pot.
Teacher		11	Good job for making it look right and make sense.
Zoey		12 13	((continuing to read)) Gramps put the # 1::id on the pot. Then we went back to play play the game
Zoey	“Don’t forget the bug spray, Linda,” says Mom.	14 15 16	((Reading <i>Going Camping</i> with eyes)): Da- // Don't // f::fix, f, fr::(frit) forget the dug, d, um, bug, bug, s::topper, stopper?

(continued)

Teacher		17 18 19	What would make sense and look right? Ok? So go back and read it again ((inserting finger at beginning of line)) and think about what would make sense.
Zoey		20	Don't forget [the bug]
Teacher		21 22 23	[the bug] and what can you do? You can look at the picture. [What is this?] ((pointing to bottle of bug spray in picture))
Zoey		24	[s::]
Teacher		25	Yeah, what is this?
Zoey		26	spray
Teacher		27	Would that look right?
Zoey		28	Yes! ((rereads page from beginning to continue))

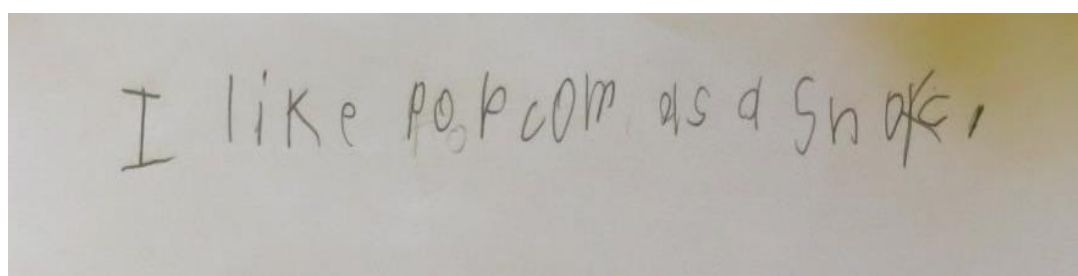


Figure 24. Zoe's writing page from January 11, 2016.

Zoey demonstrated reciprocity in her knowledge of letter-sound and sound-letter relationships as well as her understanding of print concepts (such as directionality and spacing) in both reading and writing.

Henry

Similar to Zoey, Henry approached reading a familiar or new text by initially searching visual information, therefore demonstrating his letter-sound knowledge. While reading a familiar text, the running record shows that he searched across words, like *with*, *back*, *don't*, and *them*, attending to initial and middle sounds, and digraphs; even miscues, like *had* and *go*, share similar letter patterns with the accurate word.

Henry: ✓ w-i-t w-i-th✓ ✓ ✓ ✓ M✓^R ✓ ✓ ✓
 Text: “Come with me, Billy,” she said. Matt said, “Look! Billy

Henry: it^{SC} b-a-ck✓ He’s - ✓ ✓ ✓ ✓ ✓^R ✓ ✓ ✓ ✓
 Text: is back. He is out of his pen, but I can fix it...

Henry: D-o-n-t✓ ✓ ✓ ✓ ✓ had ✓ ✓ ✓ ✓ ✓ ✓
 Text: ...Don’t eat that sock! We have to fix that pen,” Matt said.

SC

Henry: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ (go ✓) ✓ ✓ ✓
 Text: “Come on, Billy,” Rose said. “You have to get back in your pen.”

Henry: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ Nan ✓ ✓ ✓ th-e-m✓
 Text: ...Rose and Matt fixed up the goat pen. Pop, Nana, and Mom helped them.

Henry: ✓ like, löv^{SC} ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Text: Billy loved his new pen. Matt and Rose love it, too!

When Henry read a new text, there is evidence of the same action; he employed letter-sound knowledge as he searched visual information (see lines 1, 9, and 10 in Table 42). While writing, Henry showed the developing consolidation, demonstrating his sound-letter knowledge by slowly articulating unknown words, listening to the sounds that he hears, and writing the corresponding letters (see Figure 25).

In examples from the literacy events (and like many of the other participant examples), Henry demonstrated reciprocity through his knowledge and use of letter and sound relationships, letter features and formation, directionality, and spatial concepts. In a variety of ways and developing abilities, participants revealed a third illustration of reciprocity—consolidation of visual information—through reading and writing.

Table 42

Henry Reads – The Red Pajamas

Speaker	Text	Line	Discourse and Action
Henry	Froggy looked in the piano. He saw his hats.	1 2	((reading)) Froggy l.l.liked looked in the ((searching picture)) piano. He s.a.w, s::a.w
Teacher		3	((tells word)) saw
Henry	He saw a fan and a clock and his crayons. Then he saw his red pajamas.	7 8 9 10 11	((continuing to read)) He saw his ((searching picture)) hats. He sawed a f::a.n fan and a ((checking picture)) clock and its his ray, no, c.cap, caps. Th.e::n he sawed his red pajamas.

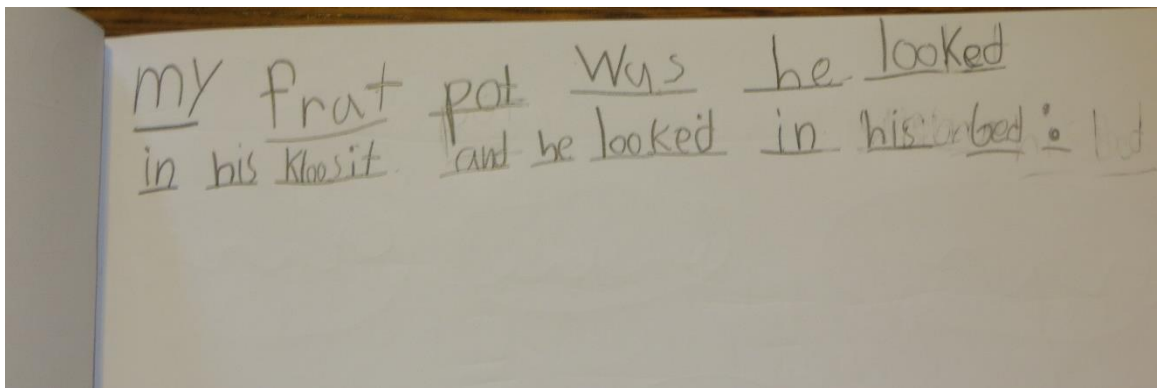


Figure 25. Henry's writing page from December 3, 2015.

Strategic Action

The fourth and final theme found through the recursive analysis of the participants' work in reading and writing was their ability to demonstrate *strategic action*. That is, the participants' developing "sense of knowing how to work on words, sentences, and texts to extract the messages they convey" (Clay, 2001, p. 127). For this theme, the participants showed strategic action in reading and writing as they searched for information and worked on it as they evaluated the work, or monitored, which often led to self-correction. For example, Max's analysis chart (and detailed description of his behaviors) below will show that he noticed when his reading or writing was not quite right and made several strategic attempts to correct (see Table 43).

Table 43

Max's Analysis Chart from November 2015

Reading (Running Record)				Memo:	Writing –Independent			
	M	S	V			M	S	V
Searching	✓	✓	✓ ¹⁻¹	In R & W, M searches for Meaning, monitors for Meaning, and self-corrects to make story more meaningful. In R, M also searches using Structure (language of text) to help maintain meaning, although not always in W. He also searches using known words (Visual) in less patterned text & writing quickly.	Searching	✓composing story		✓writing known words quickly, attempting: kit/kitty
Monitoring	✓rereading				Monitoring	✓rereading to	✓	✓spacing w/finger check/continue story inserts wish/with in attempt to fix
Self-Correcting			✓known word		Self-Correcting			

Reading (New Text)					Writing -Reading/Sharing			
	M	S	V			M	S	V
Searching	✓checking pictures	✓language of text	✓known words, variety, 1-1	<p>In both R & W, M monitors himself, rereading the story or his composition to check on Meaning, as well as monitoring Visual (1-1, spacing, and errors). He shows evidence of often being aware of a problem, but needs some instruction to fully problem solve.</p> <p>In R & W, there is evidence of self-correction using known words and checking closer (V info).</p>	Searching			
Monitoring *aware of problem (0:49) w/eyes			✓1-1		Monitoring	✓rereads to check composition	✓	✓notices "t" but also knows ruf/love is not right
Self-Correcting			✓checking text closer		*M shows me what he had added to story & notices... Video 008: rereads again, erases ruf I help articulate, he writes lu -> we work off camera			
					Self-Correcting	✓		✓known word "to"

Many examples will seem familiar as more than one theme was often found within each analysis. What distinguishes strategic action from the first theme, synchronous action, is the participants' demonstrated ability to reconsider initial attempts, then evaluate and recognize dissonance in their reading and writing work (although not necessarily immediately, or on the run), and therefore monitor their initial action and potentially self-correct. In the following examples, participants' demonstration of strategic action is evidenced in both reading and writing indicating a reciprocal relationship between the literacy events.

Luke

As stated before, Luke searched using multiple sources of information while reading and writing in early intervention sessions. There is also evidence that he monitored himself, many times leading to self-corrections, while reading familiar and

new texts and in writing. The running record excerpt below shows that at a point of error, he noticed (monitored), reread, made a self-correction for the omitted word *on* and kept reading. He again monitored possibly using meaning, structure of story language, and visual information (known words) to read the phrase *on the sand* correctly.

Luke: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
Text: Big Lizard ran on the sand. Big Lizard ran fast. Little Lizard ran, too.

SC SC

Luke: ✓ ✓ ✓ ((- a)^R ✓)^R ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
Text: Little Lizard ran on the sand. Snap! Big Lizard got a bug. Snap! Snap!

While reading a new text, Luke monitored himself using known words (*the*, *a*) to self-correct (lines 1 and 2 in Table 44). He also monitored using meaning, and possible visual information to self-correct (lines 3 and 4).

Table 44

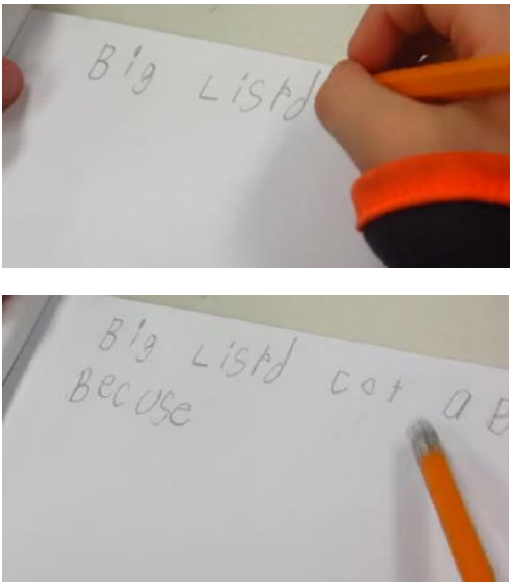
Luke Reads – Tug of War

Text	Line	Luke's Discourse and Action
A bird tugged on the rope. He tugged and tugged.	1 2	((Reading with eyes)): A bird tugged on a on the rope. He tugged and tugged.
The rabbits tugged on the rope. They tugged and tugged.	3 4 5	The rabbit tugged /// ((checking picture)) The rabbits tugged on the rope. They tugged and tugged.
A monkey tugged on the rope. She tugged and tugged.	6 7	A monkey tugged on the rope. She tugged and tugged.
A zebra tugged on the rope. He tugged and tugged.	8 9	A zebra tugged // on the rope. He He tugged and tugged.

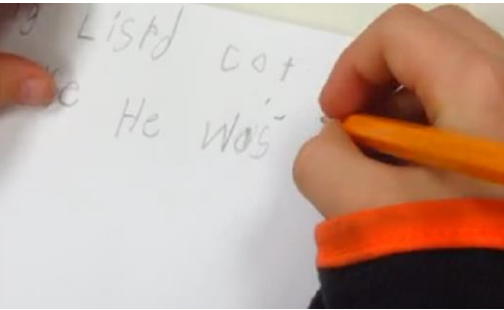
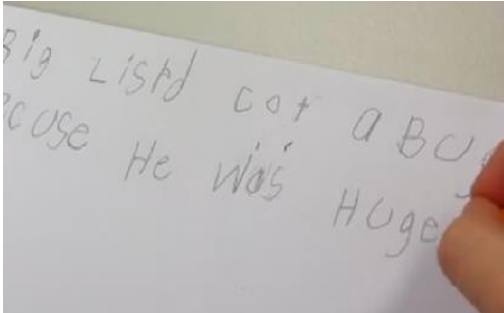
Luke demonstrated similar action while writing. Luke slowly articulated when he wrote his story. Lines 1, 2, 9, 10, and 16 in Table 45 show that he reread often to monitor the meaning of his intended story. Lines 13 and 14 show that he wrote *wus*, quickly noticed that it did not look right (monitoring visual information), and self-corrected by changing the *u* to an *a*. Figure 26 shows Luke's final writing page.

Table 45

Luke Writing About Big Lizard, Little Lizard

Writing Page	Lines	Luke's Discourse and Action
	1	((Writing and talking as he writes)):
	2	Big Lizard Big Lizard Big Lizard
	3	c-c ((articulating as he writes)) c-
	4	augh-t:: a bug. ((return sweep to next
	5	line, writes "B", returning to add a
	6	period after bug))
	7	I'm making it two, be- be.cause
	8	((continuing to articulate as he
	9	writes)) because / ((rereading with
	10	pencil)) Big Lizard caught a bug
	11	because

(continued)

	<p>12 he ((continuing to write and 13 articulate as he writes)) he w-w-a-s:: 14 ((wrote u as he was articulating, 15 erases to correct)) wa::s,</p>
	<p>16 ((rereads again)) Big Lizard caught a 17 bug because he was h-u-g-e / hungry 18 ((attempting to articulate hungry))</p>

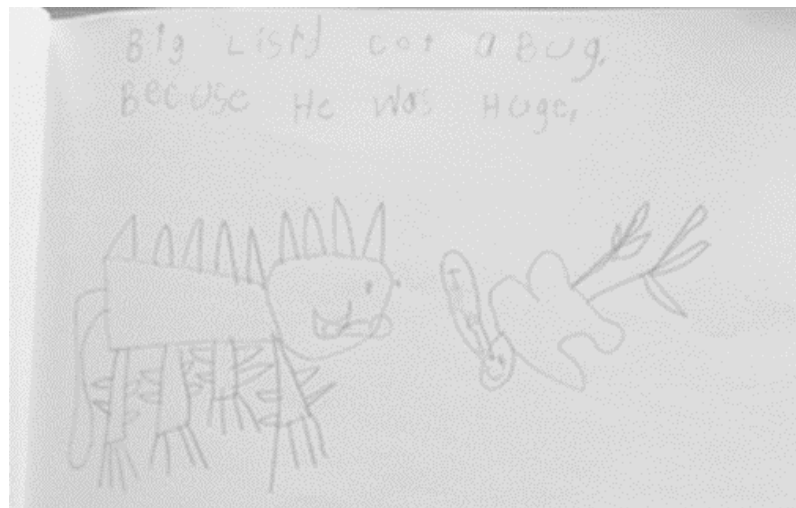


Figure 26. Luke's final writing page on November 4, 2015

In the following reading and writing events from later intervention sessions, there is evidence that Luke was searching, monitoring, and self-correcting as he read a new text and wrote a response the following day. While reading the next text, he not only searched using multiple sources of information, but he is also monitored, leading to self-correction using known words (line 1 in Table 46) and reread to monitor meaning and get back into the story (lines 5, 6, and 7).

Table 46

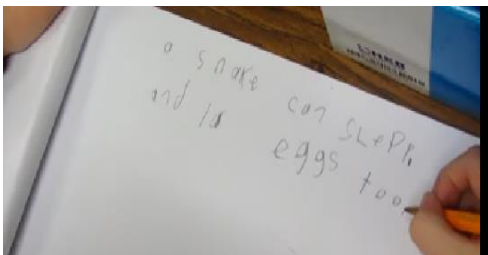
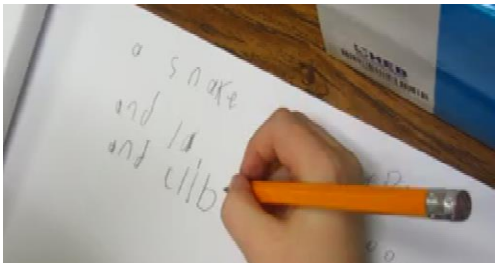
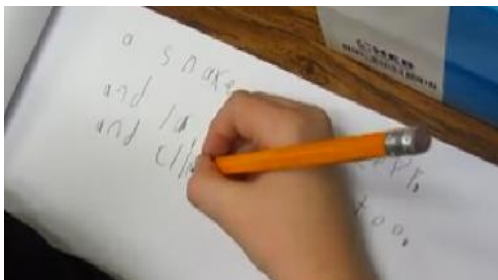
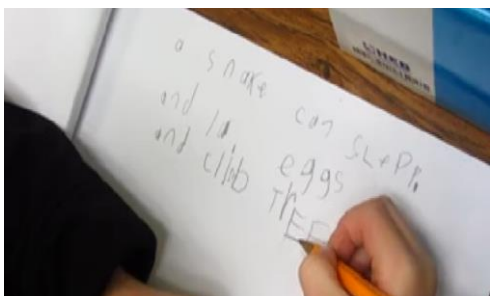
Luke Reading – All About Snakes

Text	Line	Luke's Discourse and Action
A snake can swim. This snake is swimming in the water.	1 2	((Reading)) A snake can swim. Is snake this snake is swimming in the water.
A snake can climb. This snake is climbing up a tree.	3 4	((Continuing to reading)) cl::i::mb:: climb Is This snake is climb.ing up a tree.
A snake can eat. This snake is eating an egg.	5 6	A snake can eat. This snake is eating a egg. A snake can hide ((flips back page)) A snake
A snake can hide. This snake is hiding under a rock.	7	can hide. This snake is hiding under a rock.

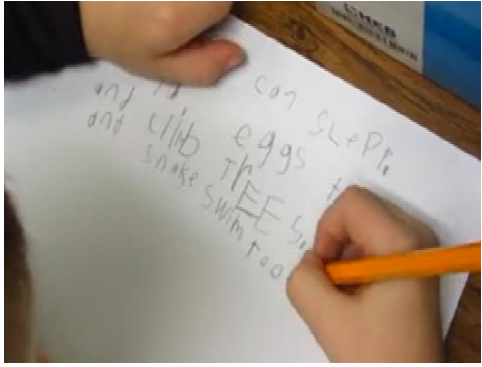
While writing, he slowly articulated words to know what he is writing and to hear sounds in the words he was writing. Lines 2, 5, and 8 show that he monitored by rereading to maintain his message. He also monitored using visual information in line 5, when he self-corrected *clib* by adding in an *m* to correctly spell the word, *climb*.

Table 47

Luke Writing About What Snakes Do

Writing Page	Lines	Luke's Discourse and Action
	1 2 3	((Writing and Talking)) and l-ay eggs:: ((rereads writing)) A snake can sleep and lay eggs, too.
	4 5 6 7	and ////////// c, cl::i:: ((writes b)) climb ((returns to add in m)) tr::ees ((written in all caps, stops to erase hanging line on E)).
		
		

(continued)

	8 9	and ////////// ((rereads)) and snake swim too.
---	--------	---

Later during the intervention session, Luke shared his writing with the other students. When he read his writing, he noticed –monitored for structure– the final line of his story and decided to revise. He attempted to revise his thought to align more with the language of the story and he has also monitored *slepp* using visual information, attempting to correct by erasing the extra *p*. Figure 27 shows his revised version.

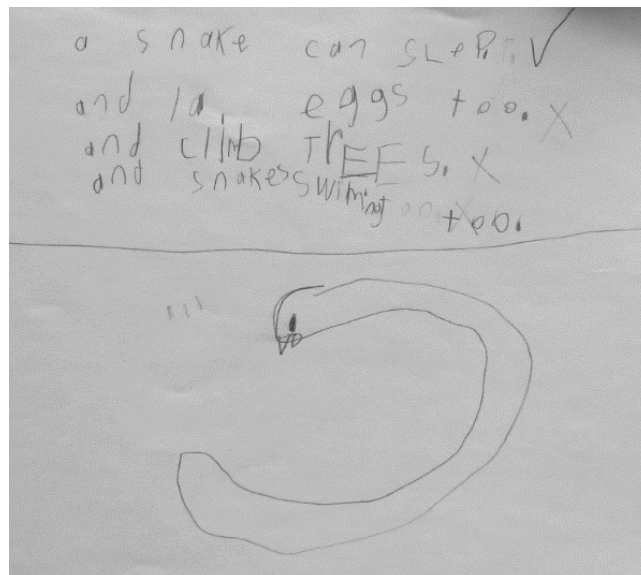


Figure 27. Luke's revised writing page.

Luke continued to search, monitor, and self-correct as he read a familiar text, new texts, and wrote in final intervention sessions. The running record excerpt below shows that he searched using visual information across the name *Linda*, monitoring and self-correcting for meaning and structure. In the second line, we can see that he searched for meaning and structure, but then monitored and self-corrected using visual information (perhaps known words).

Luke: ✓ ✓ ✓ ✓ ✓ Lēnda^{SC} ✓ ✓
 Text: Don't forget the bug spray, Linda," says Mom.

Luke: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ a^{SC} ✓ ✓ ✓ ✓
 Text: Let's bring a ball so we can play, says Tom. Let's bring some games, too," I say.

While reading the new text *Going Camping* (see Table 48), there is evidence of similar action: Luke searched visual information, while monitoring and self-correcting using meaning (line 2), and searched using meaning and structure while monitoring using visual information (lines 5 and 8).

Table 48

Luke Reading Texts

Text	Line	Luke's Discourse and Action
"Don't forget the bug spray, Linda," says Mom.	1	((Reading <i>Going Camping</i>)): Don't forget the
	2	bag bag s- bag spray? bug spray Linda says
	3	Mom.

(continued)

Little Wolf liked Blue Bird. But she did not like Blue Bird's home. The tree was too high. "No thanks," said Little Wolf. A tree is not the right home for me. So Little Wolf went to see her friend, Bear. "Hi, Bear," said Little Wolf. I am looking for a new home. "Well," said Bear. "A cave is a good home."	4 5 6 7 8 9 10	((Reading <i>Little Wolf's New Home</i>)): But she did not like Blue Bird's home. The tree was too high. No thanks said Little Wolf. I A tree is not the right home for me. So Little Wolf went to see her friend, Bear. Hi Bear said Little Wolf. I am looking for a new home. Well, said Bear. I A cave is a good home.
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In his writing during this time, Luke slowly articulated unknown words (favorite) as he wrote. He also appeared to monitor meaning of his intended message by rereading his writing.

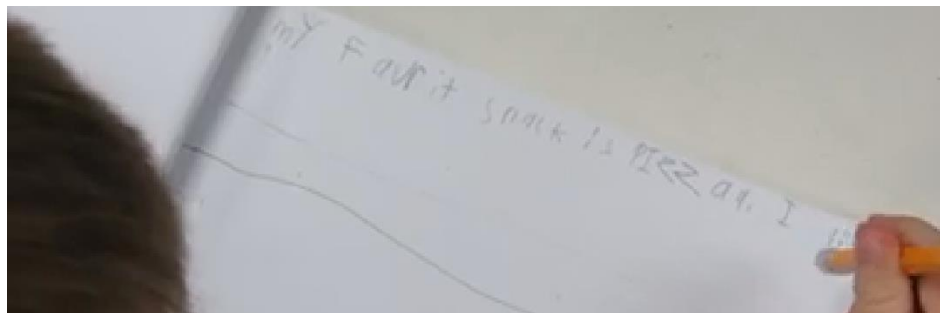


Figure 28. Luke stops to reread what he has written so far to continue his story.

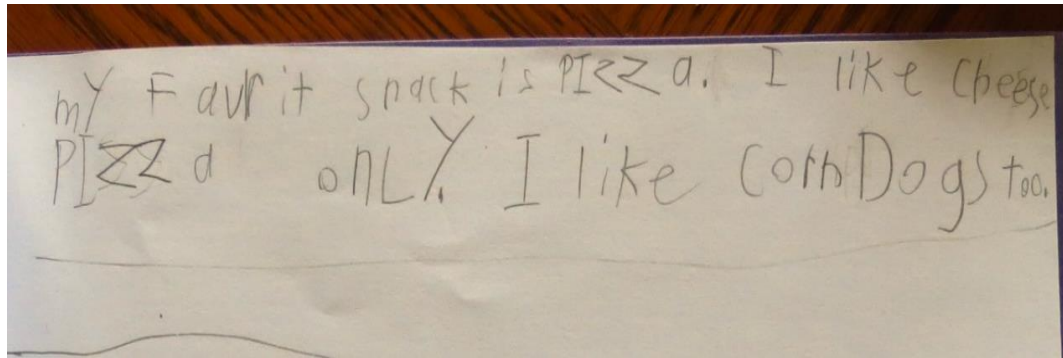


Figure 29. Luke's final writing page on January 11, 2016.

After conversing with another student about whether or not ice cream can be enjoyed as a snack at home, Luke again returned to his writing by rereading (monitoring meaning) and continued to write. Figure 29 shows his final writing page.

Across reading and writing, Luke demonstrated reciprocity as he searched, monitored, and self-corrected using multiple sources of information. He took advantage of the opportunities presented within continuous text to be flexible in his use of strategies for problem solving; at times, he monitored and self-corrected using visual information, while at other times he monitored and self-corrected using meaning and structural information.

Paige

During early intervention sessions, a kindergarten student, Paige, worked to use what she knew about language, print, and stories to help herself. She attempted to monitor meaning in both reading and writing. There is also evidence that she searched and monitored visual information in writing (letters representing sounds, spacing between

words) and in reading (concepts about print such as, where the story begins and one-to-one voice print matching).

While reading a new text, Paige relied on meaning to read the text. There is evidence that she reread to monitor meaning (line 3 in Table 49); she also monitored using visual information (line 4) to begin with possible known word *I* at the beginning of the text. After providing language of the text to Paige, she continued to read the story. On lines 8 and 9, Paige attempted to monitor meaning (matching picture) and visual information (matching one-to-one). She also reread to match one-to-one on the last page of the story (line 14).

Table 49

Paige Reading – Frog Food

Text	Line	Paige's Discourse and Action
I like bugs on pancakes.	1 2 3 4 5 6	((Reading <i>Frog Food</i> – pointing to <i>bugs on</i>): eating pancakes, no ((returns finger to point to <i>on</i> and reads)) I ((returns to beginning of text)) I like eating bugs on my pancakes. ((Turns page to continue reading))
I like bugs on soup. I like bugs on bread. I like bugs on pizza. I like bugs on salad. I like bugs on cake. I like bugs.	7 8 9 10 11 12 13 14	((pointing to each word)) I like, um bugs on my spaghetti, sauce, I mean, I don't sous, sauce I like bugs on bread I like bugs on pizza I like bugs on salad I like bugs on // um ((checking picture)) cake I like bugs ((pointing to each word)) I like bugs

During independent writing, she began by drawing a picture in response to a shared story. When asked about her pictures, she explained that the boy is cleaning his room by putting his toys, a ball and a train, into his closet. Paige was beginning to understand that what she said can be written and she attempted to write down her story, understanding that words need to be represented by letters. She heard a mix of initial and ending sounds as she wrote. After she had written *sphi* (*He put his*), she reread to monitor the message of her story and continued writing *t* for *train*, *n* for *in*, *i* for *his*, and *lks* for *closet*. Figure 30 shows her writing page.



Figure 30. Paige's early writing: *He put his train in his closet*.

The next day, the students participated in an interactive writing session. During the event, Paige suggested many letters to represent sounds (a mix of initial and ending sounds). She also reread with the teacher to anticipate the next word in the story (monitoring for meaning) –all actions similar to her independent writing. Although not evident in her independent writing, she understood a need for spacing between words by inserting her finger on two occasions to provide spacing for another student and herself

(see Figures 31 and 32). She also quickly identified the question mark as the teacher wrote it into the story (see Figure 33).



Figure 31. Paige offered a finger space to Carter before he writes the next word.

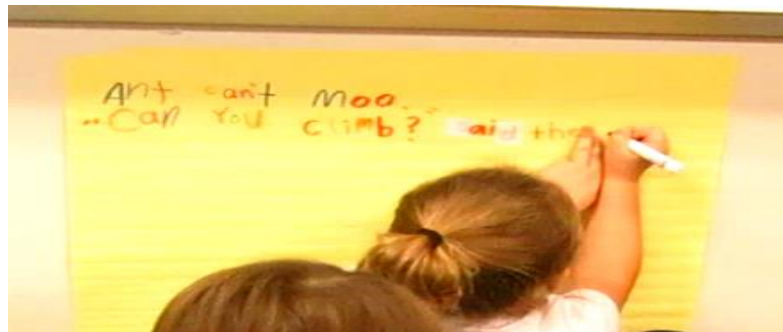


Figure 32. Paige inserted her finger to leave a space before writing.



Figure 33. Paige identified the question mark in the story.

In later intervention sessions, Paige, engaged in reading a familiar text, writing in response to the text, and putting together a cut-up sentence. In reading the familiar text, a running record excerpt shows that she monitored using visual information: known words (*my, the, at*), reread to monitor meaning, and self-corrected using visual (first line), structure, and meaning information (second line).

SC

Paige: (✓ ✓ ✓ ✓ my)^R ✓
 Text: I am swinging at the park.

SC

Paige: (✓ ✓ ✓ on^{SC} ✓ slide)^R
 Text: I am sliding at the park.

During the following intervention session, students were given various cut-up sentences from a shared text to put together. Paige worked on her sentence quietly attempting to locate known words while searching to put the sentence together. Figure 34 shows her beginning attempt. Right after this, Paige located *in* and added it before *sky* into her sentence.



Figure 34. Paige worked on her cut-up sentence.

The teacher asked her to read her sentence. While pointing to each word, she read, “I see the [pause] bubbles in, no.” She then switched *in* and *bubbles* and reads *the* while pointing to *bubbles*.

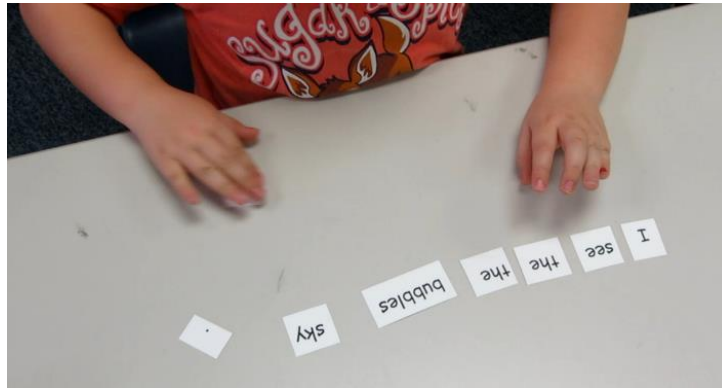


Figure 35. Paige continued to work on cut-up sentence.

Noticing something is not quite right (monitoring), she then switched *sky* before *bubbles*. While searching, monitoring, and self-correcting using a known word *the*, she searched for the second *the* and moves it to the right of *in* (moving “*in the*” closer to “*I see the*” and adds *sky*).

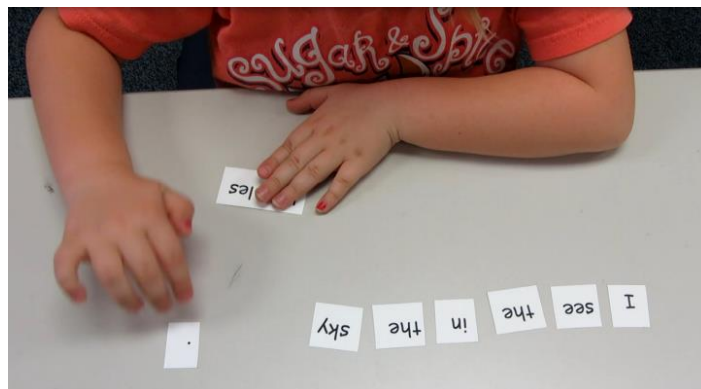


Figure 36. Paige still working on cut-up sentence.

Realizing that she still has *bubbles*, Paige added it to end before the period. The teacher asked her to check it again. Pointing to each word, Paige rereads her sentence searching for meaning –as she knew what the sentence should say– while searching for visual information (known words and 1-1 voice print match). She read “*I see the*” and stopped (searching/monitoring), then switched *bubbles* to the correct position.

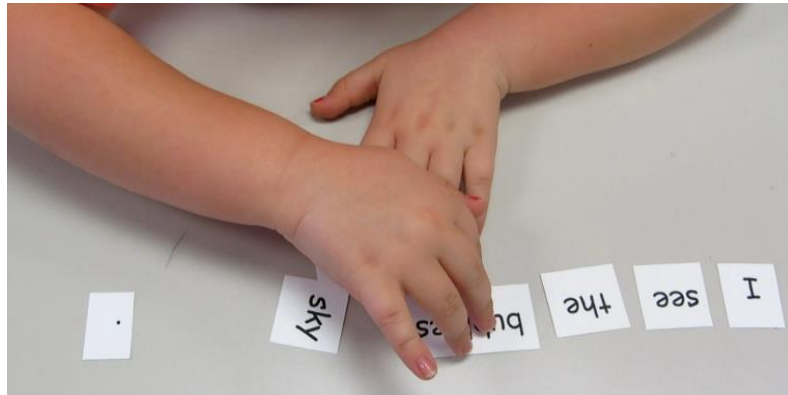


Figure 37. Paige searched and monitored using meaning, structure, and visual cues.

Paige then added *in the sky* after *bubbles*, switching *the* and *in*. The teacher asked her to check again, she reread while pointing to each word, corrects *in* and *the*, and independently returned to reread the entire sentence. Again, Paige demonstrated her ability to search, monitor, and self-correct as she successfully completed her cut-up sentence.

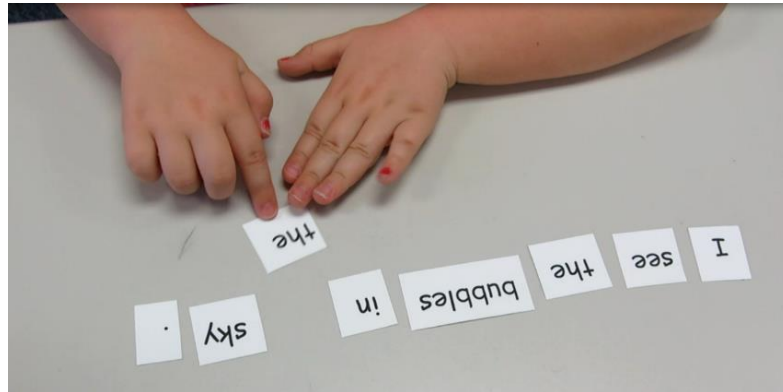


Figure 38. Paige successfully completed her cut-up sentence.

Paige showed that she also searched for meaning and visual information as she composed during independent writing. During the same intervention sessions as above, Paige's writing book shows that she attempted to write a sentence about playing on the slides at the park (see Figure 39). She wrote using some initial sounds and known words (*at, the*). Prior to writing the *p* for park, she reread *at the* indicating monitoring using known words to maintain meaning of her composition to continue writing.

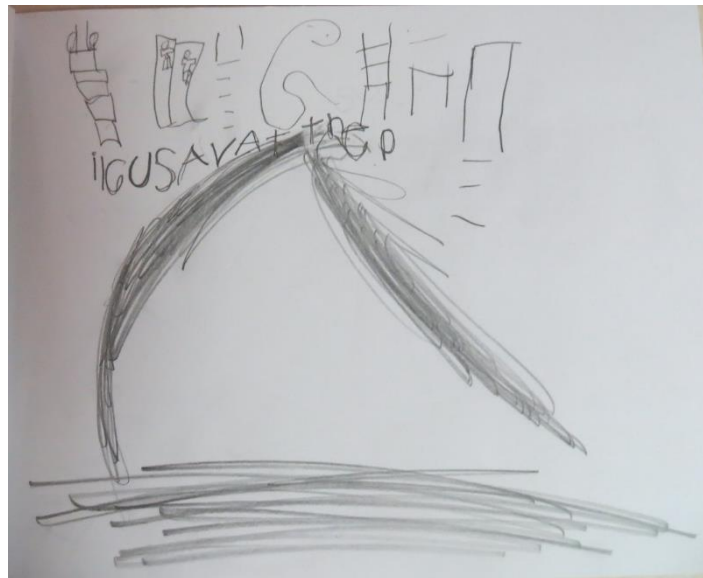


Figure 39. Paige's independent writing page from January 5, 2016.

In both the reading and writing events, there is evidence that Paige searched using meaning, structure, and visual information. There is also evidence that she used what she knows, either visual information or meaning, to monitor and problem solve during the literacy events, showing a developing awareness of reciprocity.

Zoey

As previously seen, Zoey, showed flexibility in using multiple sources of information while reading and writing. In addition, she took advantage of opportunities while reading and writing continuous texts to strategically search, monitor, and self-correct using multiple sources of information. For example, the running record excerpt below shows that Zoey initially searched using visual cues with a confusion, while checking pictures to search and monitor meaning leading to a self-correction. In the same text, she reread to monitor meaning and structure, then self-corrected using visual information.

Zoey: ✓ ✓ ✓ ✓ d-u-s^{SC} ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Text: "I see a big bus," I said. I can take a picture of the bus.

Zoey: ✓ ✓ ✓ ✓ ✓ ✓ ✓ (✓ ✓ ✓ ✓ ✓)^R (✓ the)^R
 Text: "Look at the big lion," Mom said. "You can take a picture of it."

While reading a new text, Zoey initially attempted to problem solve searching visual information, yet monitored using meaning when she said, "that doesn't make sense" in line 2 (see Table 50). She returned attempting to search using visual information across the word *shakes*, saying *shacks*, quickly self-correcting while cross-checking with meaning and structure cues (line 3).

Table 50

Zoey Reads – Tails

Text	Line	Zoey's Discourse and Action
The snake has a tail. It shakes its tail to tell you to stay away.	1 2 3 4	((Reading)) The snake has a tail. It s::a, um, s::akes its tail to, wait, no, that does-, that doesn't make sense, s::, sh::a-cks, shakes its tail to, um, tell you to stay away.

Zoey's independent writing during the same time shows similar action (see Figure 40). As she wrote the last sentence, she reread her work, "My favorite part was when my plays with her yarn." Zoey monitored meaning and/or structure, erased *plays* and inserted *kitten* (self-correcting the intended meaning of her composition) followed by "play with hru yrn."

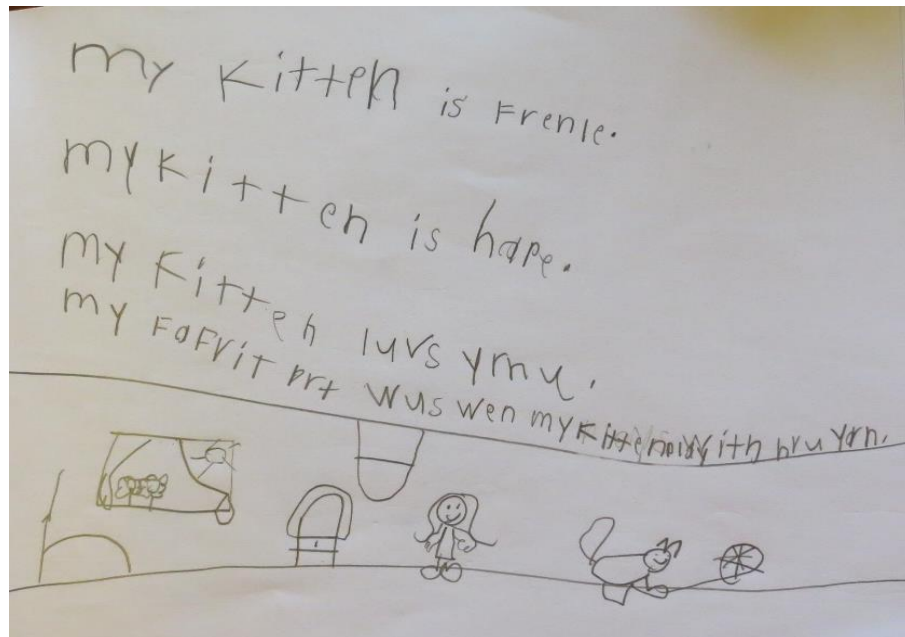


Figure 40. Zoey's writing page from November 30, 2015.

In later intervention sessions, Zoey continued to search, monitor, and self-correct using multiple sources of information. The running record excerpts below show that Zoey searched initially using visual information, then monitored and self-corrected using structure or perhaps visual information (first line), searched initial visual information while cross-checking and self-correcting with meaning (second line), and searched using meaning and visual information, monitored and self-corrected using structure and/or visual information (third line).

SC

Zoey: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ (✓ looking)^R ✓ ✓
 Text: The bees are buzzing down by the pond. They look for flowers.

Zoey: ✓ ✓ fű^{SC} ✓ ✓
 Text: Bees get food from flowers.

Zoey: ✓ ✓ ✓ ✓ ✓ ✓ ✓ lies^{SC} ✓ ✓ ✓ ✓ ✓
 Text: It [The Turtle] crawls out of the water. It lays its eggs in the ground.

While reading a new text, Zoey similarly searched meaning and visual information to problem solve. Line 2 in Table 51 shows that she searched meaning and visual, reread to monitor and self-correct using visual information. Lines 7 and 8 show that she searched both meaning and structure information with her original substitution, yet searched across the word using visual information while checking picture to confirm meaning. Lines 9 and 10 show that she again searched meaning and visual information, monitoring by reading for meaning and structure, and self-correcting.

Table 51

Zoey Reading – Pop, Pop, Popcorn!

Text	Line	Zoey's Discourse and Action
Gramps took out one of the games to play. "Gramps, can we make popcorn?" I asked.	1 2 3 4	((Reading with eyes)) Gramps t-took out the out one of the games.to play. Gramps can // Gramps, Gr-am-ps can we make pop popcorn, I asked.
"Sure," said Gramps. "I love popcorn." "So do I," said Grace. Gramps got the popcorn. Grace got the pot. I got a bowl for the popcorn. Gramps put the pot on the stove. Then he put some oil and popcorn into the pot.	5 6 7 8 9 10 11	((Continuing to read)) Sure said Gramps. I love popcorn. So did I said Gramps. Gramps got the popcorn. Gramps got the pop, po-, pot. I got a bowl a bowl for the popcorn. Gramps put the pop pop on / the stove, um, pot on the stove. Then he put some o-oil and popcorn into the pot.

Zoey's independent writing from the same intervention sessions shows that she searched using meaning, structure, and visual information. Video and anecdotal notes from the pictured writing event noted that Zoey monitored meaning while writing by rereading and self-correcting, erasing *to* and replacing with *popcorn*, to clarify intended message (see Figure 41). Zoey demonstrated reciprocity in her strategic ability to search, monitor, and self-correct using multiple sources of information across reading and writing events.



Figure 41. Zoey's writing page from January 11, 2016.

Max

A first grade student, Max, monitored for both meaning and visual information when reading and writing. A running record excerpt below shows that he reread to monitor using meaning and visual information, and self-corrected possibly searching visual information.

SC

Max: (✓ put)^R ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

Text: We got some little fish. We put the fish in the fish tank.

While reading a new text, Max monitored when what he was reading does not look right (visual information) and self-corrected by searching both meaning and visual information (lines 2, 3, and 4 in Table 52). Lines 7-14 show an interaction between Max and his teacher as he worked to problem solve: in line 7, he came to a stop and paused. The teachers asked him, "What can you do?" He searched meaning and visual

information and tentatively answered, “Lap?” The teacher then reinforced the ways he can check by asking if *lap* looks right and makes sense.

Table 52

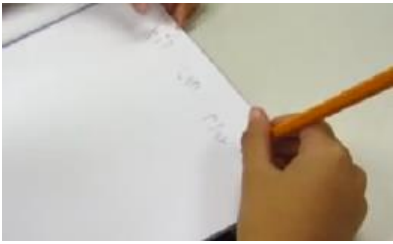

Max Reading - Kittens


Speaker	Text	Line	Discourse and Action
Max	Here is a little kitten. She is hiding under the chair.	1 2 3 4	((reading <i>Kittens</i> with eyes)) Here is a little kitty // She is ((glances at picture)) under, wait what / is this? ((looks at picture and then looks closer at text on page)) She is hiding under the chair.
Max	Here is my kitten. She is sleeping in my lap.	5 6 7	((Continuing to read)) ... little kitty. He is sleeping in the basket. Here is my kitty. She is sleeping in my //// hum
Teacher		8	What can you do? // <u>What</u> can you do?
Max		9	lap?
Teacher		10	Would that look right? //
Max		11	Yeah::
Teacher		12	Would it make sense? /
Max		13	Yeah
Teacher		14	Yes it does, it does.

The next day, Max chose to write about a kitten in response to the previously read text about kittens (see Table 53). There were many instances during the writing event that provided opportunities for Max to search using multiple sources of information, as well as monitor and self-correct. For example, Max reread his writing several times (lines 1, 3, 4, 6, 14, and 21) to monitor his intended message and return to writing. Max also monitored for meaning and attempted to correct his writing by erasing (line 4), telling me that he erased (line 11), and indicating that it “didn’t make sense at all” (see line 13).

Table 53

Max Writing About a Kitten

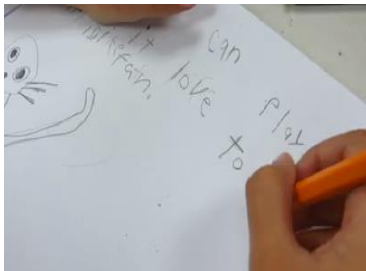
Speaker	Writing Page	Line	Discourse and Action
Max	<p>A kit can play a</p>  <p>A kit can play a wish</p> 	<p>1 2 3 4</p>	<p>((rereads what he has written so far)) A kitty can play ((writes in a and rereads, writes in wish, rereads and then erases))</p>
Teacher		5	What happened?
Max		6 7	I did ((rereading)) A kitty can play a wish

	A kit can play a wish yarn 		
Teacher		8	Oh
Max		9	Oh
Teacher		10	Okay
Max		11	That's why I start erasing it.
Teacher		12	Ok, you're gonna fix it.
Max		13	Yes // doesn't make sense at all.
Teacher		14	Okay, so, no, it didn't make sense.
Max		15	Yes ((rereads and writes))
Teacher		16 17	So what did you want to say? Do you have what you wanted to say?
Max		18	Yes
Teacher		19	What does it say?
Max		20	I'm not done yet.
Teacher		21	Oh, okay
Max		22 23	((rereads again and continues to write))

Upon returning to Max, he has finished his writing. The teacher asked about his writing and what was added to his story (see Table 54). As he pointed to what was added, he monitored visual information noticing the lone *t* in his story (line 4); he erases the *t*, returned to monitor meaning of his story by rereading and notices *ruf* for a second time, knowing that was not visually correct (line 8). At this point, Max and his teacher worked on the word *love* together: first by articulating together and then by thinking about what it looks like in print (lines 9-13). After writing in *love* to his story, Max realized that he originally intended to write *to* in his story (monitoring meaning and structure), and he writes in *to* while telling his teacher that he forgot to write in the *o* (lines 14-16). Figure 42 shows Max's final writing page.

Max Continues His Writing

(continued)

Max		6 7 8	What in the world? / Let me read it. ((rereads, stops on ruf and then t, erases, rereads again and erases ruf))
Teacher		9	What are you wanting it to say?
Max		10	love
Teacher		11	((Articulating)) love:: / l::ove
Max		12 13 14 15 16	((writes as he articulates: l, then u - works on <i>love</i> off camera)) ((writing in <i>to</i>)) to play, I forgot to do the o to make to ((circling to with his pencil))
Teacher		17	Oh, and you fixed that, right?
Max		18	Yes

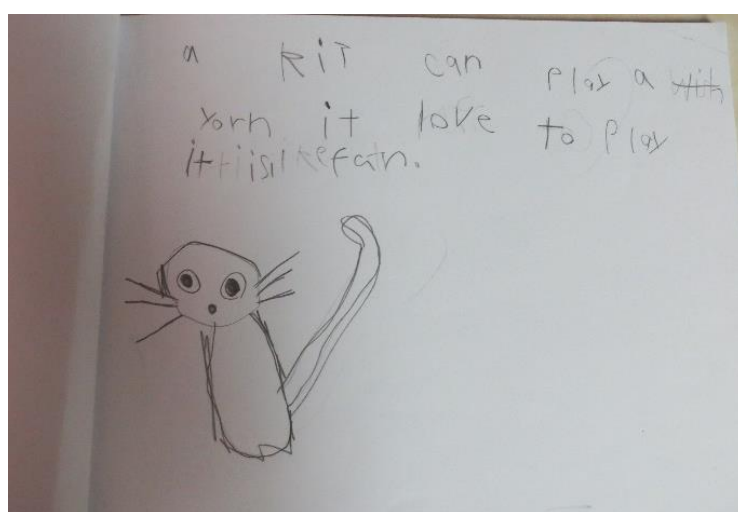


Figure 42. Max's writing page from November 19, 2015.

While reading and writing, Max demonstrated reciprocity as he attended to meaning and visual information; he often recognized, or monitored, when meaning and visual information are not matched and made attempts to self-correct.

Henry

First grade student, Henry, showed reciprocity through strategic action as he monitored and self-corrected in reading and monitored himself while writing; all events below occurred during one intervention session. First is an excerpt from a running record of a familiar text. Henry reread to monitor several times. He also self-corrected mostly using visual information.

SC

Henry: ✓ ✓ r-o-ck-s ✓ ✓ ✓ ✓ I^{SC} ✓ ✓ (✓ ✓ ✓)^R (✓ like ✓)^R
 Text: I like rocks. I have rocks in my room. I like cars. I have cars

SC

Henry: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ (✓ have ✓)^R
 Text: in my room. I have books in my room. I like books.

SC

Henry: (✓ have ✓ ✓ ✓)^R ✓ ✓ ✓ ✓
 Text: I like puzzles. I have puzzles in my room.

Henry: ✓ ✓ ✓ room^{SC} ✓ ✓ #p✓ ✓ ✓ ✓ ✓
 Text: I like my books and my puzzles. I like my room!

The same action is also evident in the excerpt below as Henry read a new text.

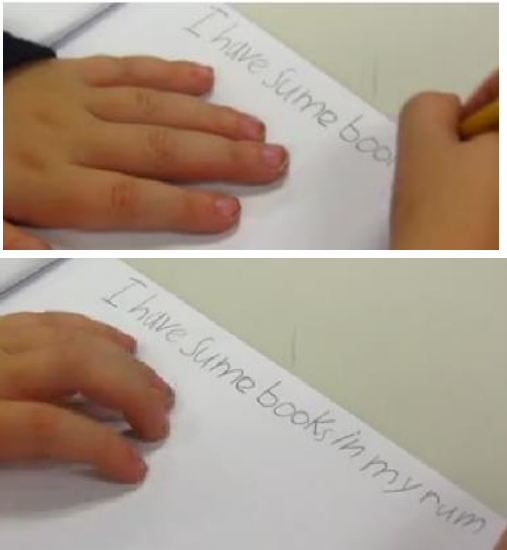
SC

Henry: (✓ get a)^R ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Text: We got some little plants. We put the plants in the fish tank.

While writing a response about his own room, Henry talked to himself as he wrote each word in his story. He also slowly articulated as he wrote (line 2 in Table 55). After writing *rum* for *room*, he paused, reread, and then let the teacher know that it did not look right. Off camera, the teacher told him that *room* works like the word *boo*, he erased and quickly corrected himself. He continued to write two more sentences to his response. As noted above, he revised his second sentence to be more in line structurally with the language of the previously read text. While Henry did not independently self-correct, the writing event provided him an opportunity to monitor using visual information when he clearly knew what he had written did not look right. Figure 43 shows his final writing page.

Table 55

Henry Writing About Contents in Room

Writing Page	Line	Henry's Discourse and Action
	1	((writing and talking as he writes))
	2	in my room / r-oo-m ((pauses after
	3	writing rum and rereads))
	4	I have some books in my room.
	5	((stops to tell me he doesn't think it's
	6	right))

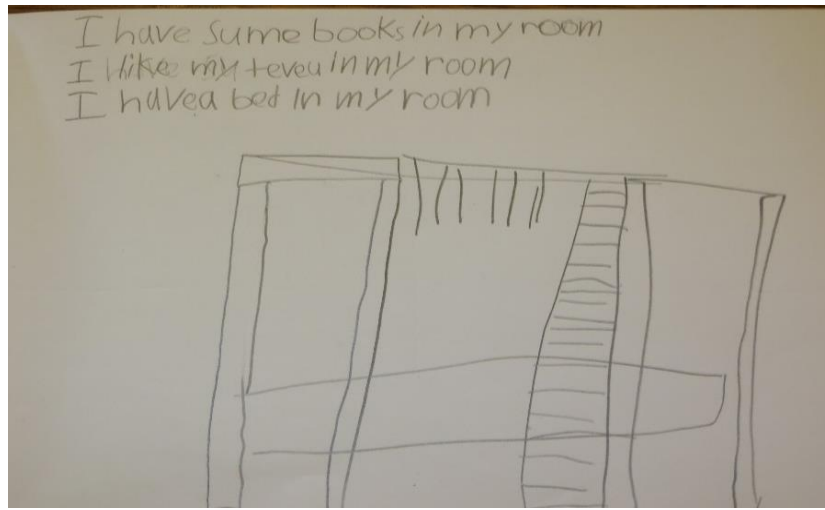


Figure 43. Henry's writing page from November 17, 2015.

A couple of weeks later during consecutive intervention sessions, Henry continued to demonstrate his ability to monitor and self-correct in reading and writing. The running record excerpt below shows three examples of monitoring and self-correction. First, he continued to search initially using visual information and quickly self-corrected possibly using visual (known words: *it* and *is*) and/or structural information.

Henry: ✓ w-i-t w-i-th ✓ ✓ ✓ ✓ M^{✓R} ✓ ✓ ✓
 Text: "Come with me, Billy," she said. Matt said, "Look! Billy

Henry: it^{SC} b-a-ck ✓ He's - ✓ ✓ ✓ ✓ ✓^R ✓ ✓ ✓ ✓
 Text: is back. He is out of his pen, but I can fix it...

Second, he reread to self-correct using visual (again known words: *go* and *get*) and possibly meaning information from the story.

Henry: D-o-n-t ✓ ✓ ✓ ✓ ✓ had ✓ ✓ ✓ ✓ ✓ ✓
Text: ...Don't eat that sock! We have to fix that pen," Matt said.

SC

Henry: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ (go ✓) ✓ ✓ ✓
Text: "Come on, Billy," Rose said. "You have to get back in your pen."

Third, his error shows evidence of searching for both meaning and initial visual information; however, he searched closer attempting to use visual information while cross-checking using meaning and structure to problem solve and self-correct.

Henry: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ Nan ✓ ✓ ✓ th-e-m ✓
Text: ...Rose and Matt fixed up the goat pen. Pop, Nana, and Mom helped them.

Henry: ✓ like, löv^{SC} ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
Text: Billy loved his new pen. Matt and Rose love it, too!

On the same day, Henry employed similar action during the reading of a new text (see Table 56). Line 1 shows that he searched using structure and initial visual information, then quickly self-corrected possibly using meaning and visual information.

Table 56

Henry Reading About Froggy

Speaker	Text	Line	Actual Discourse
Henry	Froggy looked in the piano. He saw his hats.	1 2	((reading)) Froggy l.l.liked looked in the ((searching picture)) piano. He s.a.w, s::a.w

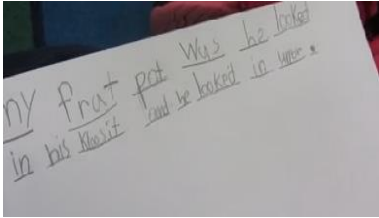
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Teacher		3	((tells word)) saw
Henry		4 5	((continuing to read)) He saw his ((searching picture)) hats.

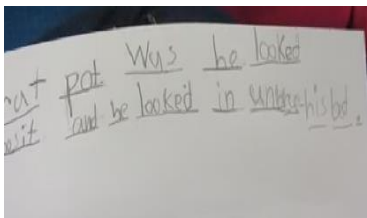
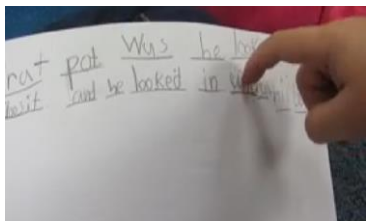
In writing, Henry continued to monitor himself using meaning, structure and visual information. Table 57 shows an exchange between the teacher and Henry as he shared his writing with the other students. Line 2 shows that he came to a point of error in his story and he paused for several seconds, indicating that he noticed something was not quite right (monitoring). He realized that he has forgotten to write part of his story (line 7) and got up to revise (lines 9 and 10). He returned to read what he had revised (he added *his bed* to the end of his story) and again noticed that it is not right (lines 15-17). This time, he pointed to where he thought he needed to fix his writing as he reread to confirm (lines 22-24). His final writing page (Figure 44) shows that he erased *under* to read “...and he looked in his bed.”

Table 57

Henry Reading His Writing

Speaker	Writing Page	Line	Discourse and Action
Henry		1 2	((reading writing)) ...looked in his closet and he looked in //////////////

(continued)

Teacher		3 4	Do you know what you were thinking? What did you want to say there? ////
Henry		5	his bed?
Teacher		6	Is that what you were wanting to [say?
Henry		7	under] his be::d
Teacher		8	Okay, so what do you need to do?
Henry		9 10 11 12 13 14	Fix it. ((Henry gets up to revise his writing and returns to read again)) My favorite part was he looked un- in his closet and he looked in under his bed.
Teacher		15 16	Okay, does that look right and sound right to you now?
Henry		17	No
Teacher		18	Why not?
Henry		19	((points to page))
Teacher		20 21	Where? Where does it not look right and sound right to you?
Henry		22 23 24 25	((again points to <i>under</i> in his story and rereads)) in his closet and he looked in his, Ugh! ((takes writing book to revise again))

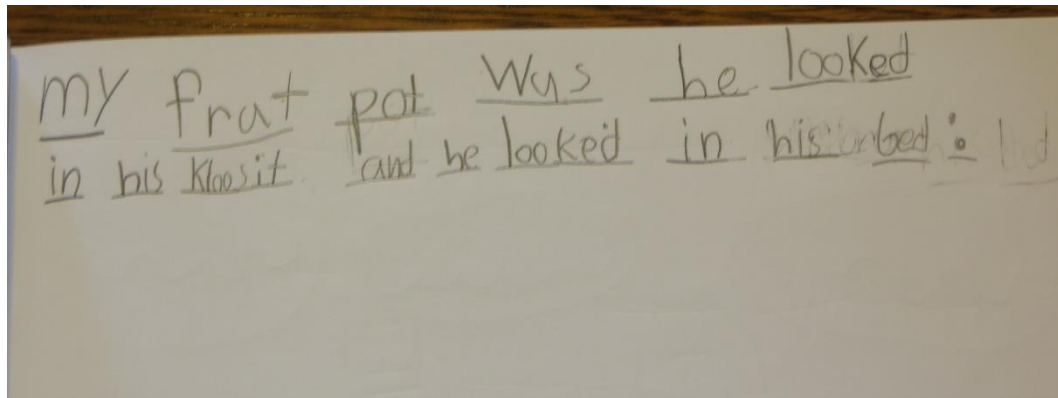


Figure 44. Henry's writing page from December 3, 2015.

Carter

Kindergarten student, Carter, also shows that he can monitor and self-correct in reading and monitor himself while writing. While reading a next text, Carter searched meaning and structure, using the language pattern of the text (see line 2 in Table 58). He stopped when his finger was on *my*, monitoring visual information, and reread as he searched visual information to self-correct (line 3). Line 4, 5, and 6 shows an interaction where he initially searched visual information (first letter) and meaning (checking picture) and paused, indicating that he was not quite sure –possibly monitoring himself. Then, he attempted to cross-check meaning with further visual information at his teacher's prompt to meaning. The teacher told him the word, he repeated “*skiing*” and returned to read as he checked across *ski* for himself.

Table 58

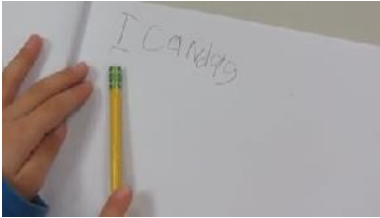

Carter Reading New Text

Speaker	Text	Line	Discourse and Action
Carter	Look at my shoes. I can run in my shoes. Look at my boots. I can ski in my boots.	1 2 3 4 5	((reading)): Look at my shoes. ((checking picture)) I can run in my shoes. I can ((finger on my, rereads)) Look at my / ((checks picture)) boots. ((checking picture)) I can s..sle / ((searching across word and checking picture))
Teacher		6	What is he doing?
Carter		7	s..kate!
Teacher		8	He's skiing. This is skiing.
Carter	Look at my shoes. I can kick with my shoes.	9 10 11	((checking across word and continuing to read)) skiing, ski in ^R my boots. Look at my shoes. I can kick / with ((checking across word)) my shoes.

While writing a response to the above text, Carter quickly began to write. He wrote *I can das/dance* and stops. The teacher asked about his writing, and he immediately reread what he had written so far (line 5 in Table 59), perhaps to monitor his intended message. Afterwards, he continued to write the rest of his story. Carter demonstrated reciprocity through the strategic action of monitoring in both reading and writing.

Table 59

Carter Writing About His Shoes

Speaker	Writing Page	Line	Discourse and Action
Carter		1 2 3	((has already written "I can das (dance)" on his page and has stopped writing))
Teacher		4	What are you writing about today?
Carter		5 6 7	((rereads what he has written and continues to articulate and write on his own)) I can dance in my shoes.

Ella

Another kindergarten student, Ella, demonstrated her ability to monitor and self-correct while reading a familiar text. The running record excerpt below shows that Ella searched visual information, yet noticed that her substitution did not make sense or sound right (monitoring meaning and structure information). She reread and self-corrected perhaps searching using visual information (known word) and or structure. The second error, shows that she initially searched across *dog* using visual information with a b/d

confusion, monitored using meaning and structure, reread, and then substituted with meaning.

SC

Ella: (✓ t)^R ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Text: Look at the mail! Oh no! Look at the water! Oh no!

Taco

Ella: (✓ ✓ ✓ b-o-g)^R
 Text: Look at the dog!

While participating in an interactive writing event, Ella told the teacher on three occasions about her efforts to articulate slowly, listen for sounds, and identify the correct letter(s) to write –searching visual information. For example, Ella offered *m* to begin writing *mom* by saying, “I heard it, and I said it out slowly.” As she articulated to hear sounds and search visual information, she also recognized what she was doing to help herself indicating a degree of self-monitoring during this interactive event. Ella also reread with other students and the teacher to monitor the message (meaning) and correctly anticipate the next word to be written before the other students.

In the reading event above, there is evidence that Ella is monitoring and self-correcting, at times. When reading a new text, Ella was inconsistent in her ability to successfully monitor and self-correct. During the same invention sessions, Table 60 below shows that she reread (lines 2 and 3) and self-corrected using visual information (known words), yet read *jeans* for *pants* the second time. The teacher prompted her (line 4), and she seemed content with her reading (line 5). The teacher redirected her to the page, monitoring by calling her attention to the first letter in *pants* (lines 9-13) and once

again, prompting her to consider both meaning and visual information. Ella correctly offered *pants* and reread to check (lines 14-17). During both events, interactive writing and reading a new book, Ella was tentative in her independent attempts to monitor and self-correct. Still, the event examples show that Ella is developing her understandings about reciprocity and how to monitor herself as a reader and writer.

Table 60

Ella Reading – Getting Dressed

Speaker	Text	Line	Discourse and Action
Ella	Look at my pants.	1 2 3	((reading <i>Getting Dressed</i>) Look at the pants. ((stops and rereads)) Look at my jeans. ((looking at me))
Teacher		4	Does that look right and make sense to you?
Ella		5	Uh hum.
Teacher		6 7	Try that again. Go back and let's make that look right and make sense ((pointing to words)) Go here.
Ella		8	Look at my:: jeans.
Teacher		9	((pointing to the p in pants and saying sound)) j, j
Ella		10	j::eans
Teacher		11	What is that?
Ella		12	((saying sound)) p
Teacher		13	So, what would make sense and look right?

Ella		14	pants
Teacher		15 16	I think that would make sense and look right. Keep going.
Ella		17	E: ((rereads)) Look at my pants.

Tate

A kindergarten student, Tate, was also developing his ability to monitor and self-correct in reading and writing. While reading a new book, Tate monitored and self-corrected using meaning information (see lines 4 and 5 in Table 61).

Table 61

Tate Reading – My Bath

Text	Line	Tate's Discourse and Action
This is my duck. This is my boat. This is my soap. This is my fish.	1 2 3 4 5 6	((reading <i>My Bath</i> as he points to each word)) This is my duck. This is my boat. This is my sponge. ((turns page, then turns page back)) I mean, this is my soap. This is my fish.

The running record excerpt from a text read the previous day shows that he was able to monitor and self-correct on the run using visual information (known words: *a* and *the*). There is also evidence that he reread to perhaps monitor meaning of the story to continue reading.

Tate: ✓ ✓ ✓ ✓ ✓ ✓ ✓ A ✓ ✓ ✓ a^{SC} ✓ ✓
Text: The big dog ate a little grass. The big dog ate the big cookie.

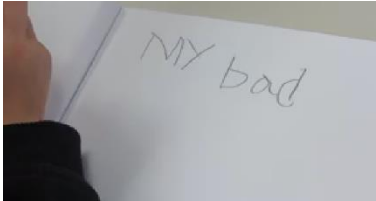
Tate: (✓ ✓)^R # ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ little ✓
 Text: The big dog ate a little stick. The big dog ate a big bone.

Tate: ✓ ✓ ✓ ✓ a^{SC} ✓ ✓
 Text: The big dog ate the little apple.

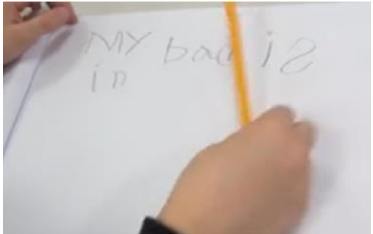
Likewise, there is evidence of rereading to monitor meaning during independent writing. As he wrote, Tate reread to monitor his intended message three times (lines 6, 22, and 24 in Table 62). An interaction between Tate and the teacher over the word *in* (lines 9-20) indicates that he was unsure about what he wrote, but also uncertain about how to monitor and check himself. Tate completed the rest of his story independently as the teacher worked with another student (see Figure 45). Much like Ella, Tate was developing his ability to act strategically as a reader and writer.

Table 62

Tate Writing About His Dad and Mom

Speaker	Writing Page	Line	Discourse and Action
Tate		1 2 3 4	((Tate has written My bad (dad) on his page when I come to him; he shares what he has so far)) My dad /////

(continued)

		5 6 7 8 9	((continues to write <i>is</i> and again pauses, then rereads)) My dad is ((continues to write: <i>in</i>)) I don't know how to write in.
Teacher		10 11	Check it ((pointing to <i>in</i> on his page)) Check what you wrote.
Tate		12	i, n ((saying letter names))
Teacher		13	What does that say?
Tate		14	I don't know.
Teacher		15 16 17 18	Let's check ((again pointing to <i>in</i> and articulating sounds as finger moves across)) i::n::
Tate		19	in::
Teacher		20	in / you wrote it.
Tate		21 22 23 24 25 26 27	((rereads writing)) My mom, my dad is in ((continues to write first line of an <i>m</i> , stops, and rereads again)) My dad is in my ((completes writing <i>my</i> and rest of story))

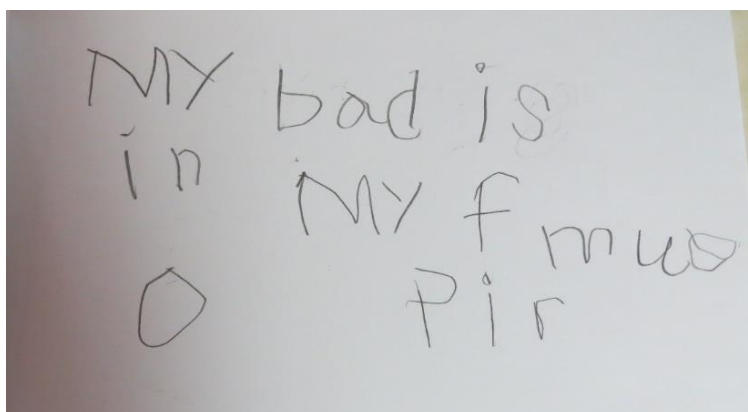


Figure 45. Tate's writing page from December 14, 2015.

Molly

In early intervention sessions with kindergarten students, Molly, demonstrated an emerging ability to monitor and self-correct in reading and writing. As Molly read a new text, she began by searching for meaning and structure, yet monitored for visual information and self-corrected, perhaps using known words or initial letters (line 2 in Table 63). However, a memo regarding her substitution in line 9 noted that she and the teacher worked together to search for meaning and cross-check using visual information to problem solve. The interaction indicates that she was not always certain how to check on herself.

Table 63

Molly Reading – Woof!

Speaker	Text	Line	Actual Discourse
Molly	Taco sees a bird. "Woof!"	1	((Reading and pointing to words))
		2	Taco can / wait, Taco sees a bird.
		3	((omits reading "Woof" on picture page))

(continued)

Teacher		4 5	Good word, good work for making it look right and make sense.
Molly	Taco see a cat. “Woof!” Taco sees a truck. “Woof!” Taco sees a car. “Woof!” Taco sees a squirrel. “Woof!”	8 9 10 11	Taco sees a cat. Taco sees a ((checking picture)) garbage truck? Taco sees a car. Taco sees a squirrel.

During an interactive writing event, Molly quickly suggested a composition in response to a shared text. Several times during the session, she offered the first and sometimes last letter for the words written into the story. She searched and monitored for visual information as she inserted her finger to create a space as she wrote *m* for *moo* into the story (see Figure 46). Additionally, she often anticipated the next words in the story demonstrating monitoring using meaning information. For example, after completing the word *Ant*, the teacher told the students that they were going to write the next word and Molly quickly offers *can't*. Another time, as other students are still considering *said*, Molly readily offers the next word, *the*, and then reminds everyone what they were writing (by telling them *spider*). Finally, she offered to write *Yes* anticipating a response to the second sentence of the story. Figure 47 shows the story completed during the event.



Figure 46. Molly uses fingers to create space between words.

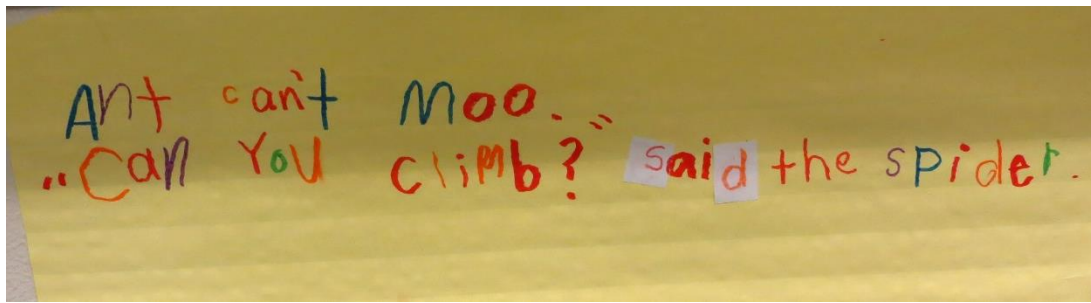


Figure 47. Interactive writing event on November 17, 2015.

In later sessions, Molly continued to monitor and self-correct in reading and writing. While reading a new book, Molly, searched using meaning information as she checked the picture in the text (lines 6 and 7 in Table 64). She self-corrected as she cross-checks meaning information and visual information to read the page correctly.

Table 64

Molly Reads – Oh No!



Text	Line	Molly's Discourse and Action
Look at the mail. Oh no!	1 2	((Reading <i>Oh No!</i> , 1-1 mostly w/eyes, some loosely w/finger)): ...at the mail. Oh no.
Look at the water. Oh no!	3 4	Look at the ((checking picture)) water. ((omits reading "Oh no!" on next page))

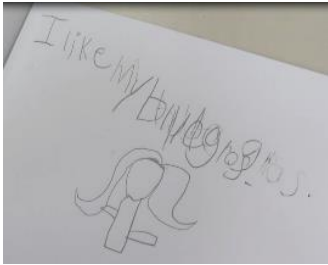
Look at the trash. Oh no!	5	Look at the tr- ((checking picture)) trash can? Oh no.
Look at the paper. Oh no!	6 7	Look at the ((checking picture)) n:: ((checks picture again)) paper.

As she wrote, Molly shared what she was going to write with the teacher (lines 4-10 in Table 65). Her finished story shows that she initially wrote *bule*, but erased and correctly wrote *blue* indicating that she monitored for visual information, perhaps a known word and self-corrected.

Table 65

Molly Writing About Her Blue Dress

Speaker	Text on Writing Page	Line	Discourse and Action
Teacher		1 2	((asks Molly about writing)): What are you working on, Molly?
Molly		3	Uh / something
Teacher		4	Yeah? What have you written so far?
Molly		5 6	I like, I'm putting the e ((adding in <i>e</i> as she tells me))

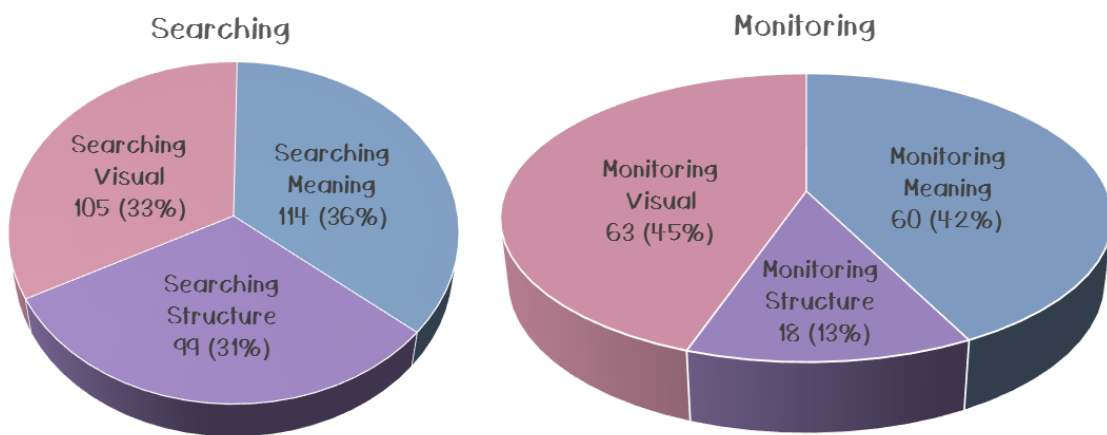
Teacher		7	Okay.
Molly		8	my
Teacher		9	Okay.
Molly		10	blue dress ((telling me what she's going to write))
Teacher		11 12	Okay, great. I'm gonna come back and check on you, okay?
Molly		13 14	((Pointing with pencil to words in story as she reads)): I like my blue dress.

In the above examples, there are clear instances of strategic action from participants and examples of participants, especially kindergarteners, learning how to be strategic as they searched, used, and worked on information within text and as they created text. Thus, strategic action across the literacy events is another display of reciprocity found within the data.

Patterns of Action

Participant actions were analyzed across the video-taped literacy events. Patterns of action that represent the participants' strategic processing during the reading and writing events were observed. Figures 48, 49, and 50 show the patterns of strategic processing analyzed in the actions initiated by the participants as they were reading and

writing to include searching, monitoring, and self-correcting using multiple sources of information. The patterns show that participants nearly equally searched for meaning, structure, and visual information when reading and writing texts, with meaning and visual slightly higher than structure. Participants also monitored using meaning and visual less information in nearly equal occurrences and much so using structure information.



Figures 48 and 49. Patterns of searching and monitoring actions.

However, it is important to remember that participants may have monitored using one source of information and then returned to searching using other sources of information in a rather back and forth process of action. That is, the patterns of action do not necessarily represent a linear process of action. Finally, participants seemed to self-correct using visual information almost twice as much as meaning information, and four times as much as structure information.

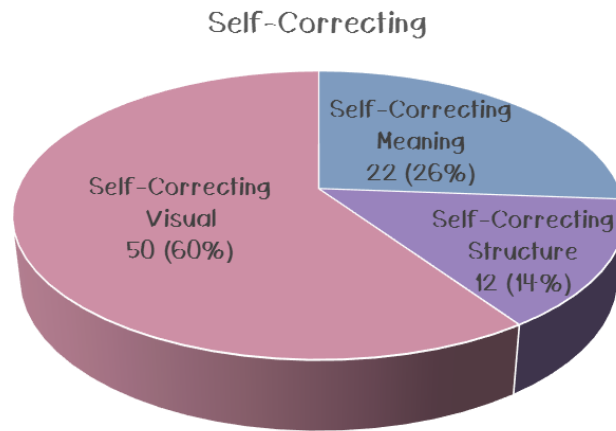


Figure 50. Patterns of self-correcting action.

A closer look into the patterns reveals an intersection of participant action, or rather combination of strategic processing, during the reading and writing events combined. Accordingly, patterns of combined action show that participants most frequently searched using meaning and visual information, followed by meaning and structure information. Participants seemed to monitor using meaning and visual information with similar frequency regardless of sources of information used for searching. Also, participants seemed to favor self-correcting using visual information regardless of sources of information used for searching and/or monitoring. Although, participants that monitored using meaning information seemed to self-correct using meaning information almost as often as using visual information. And, participants that monitored using meaning information seemed to self-correct using visual information much less than when they monitored using visual information.

While the patterns of participants' actions were coded, compiled, and analyzed across literacy events, they allow for greater insight in the meaning and description of

reciprocity within the data. However, it is important to note that only patterns limited to the current study can be observed and tentatively interpreted.

Summary

In summary, Chapter IV provided a detailed, descriptive look at participant actions that demonstrated reciprocity during a variety of literacy events. The current study sought to answer the following research question: How do kindergarten and first grade literacy intervention students demonstrate the reciprocal relationship between reading and writing as they take action in reading and writing texts? The research question was answered through a microanalysis, or moment-by-moment close observation, of participants' actions during video-taped reading and writing events.

Through the systematic analysis of complex activity, the participants' actions during the literacy events, the findings describe participants' demonstrations of reciprocity and suggest that importance lies not only in the actions that occur within each reading and writing event, but also what is happening between the events. The themes of participant action found in the between space appear to provide insight into precisely how students' literacy learning benefits from the reciprocal relationship between reading and writing. Furthermore, Chapter V provides a discussion and implications of these findings.

CHAPTER V

SUMMARY, DISCUSSION, AND IMPLICATIONS

The present study sought to explore reciprocity, the mutually occurring learning benefits of reading and writing, during intervention instruction. The final chapter of the dissertation restates the research question and reviews the methodology used for the study. The major sections of this chapter summarize the findings and discuss their implications. The chapter is organized as follows: (a) statement of the problem, (b) summary of the findings, (c) discussion of the findings, (d) implications of the findings, and (e) concluding summary.

Statement of the Problem

The purpose of this study was to describe how reciprocity in reading and writing supports early literacy learning during a comprehensive approach to intervention instruction. Specifically, this study aimed to show an in-depth description of reciprocity through the observation of young children at work in reading and writing during intervention instruction. The current study was guided by the following research question: How do kindergarten and first grade literacy intervention students demonstrate the reciprocal relationship between reading and writing as they take action in reading and writing texts?

Review of the Methodology

The present study used an interpretive qualitative perspective to describe and understand the reciprocal relationship between reading and writing in a comprehensive literacy intervention setting. Accordingly, the study utilized microanalysis of video-taped

literacy events to focus on the moment-by-moment actions, or interactions of integrated reading and writing behaviors of the participants in the naturalistic setting of daily intervention sessions. Through microanalysis of the participants' actions, the researcher was able to observe within and between the video-taped literacy events to interpret the participants' demonstrations of reciprocity.

The researcher worked as a literacy interventionist for an elementary school in a large, diverse school district in North Texas. The kindergarten and first grade classroom teachers and administrators of the school selected students to be placed into intervention groups based on results from a district-wide observational assessment given three times a year to all kindergarten, first, and second grade students. Participants for the study were recruited from the kindergarten and first grade intervention groups assigned to the researcher. A total of 11 students were selected to work with the researcher for intervention (6 first graders and 5 kindergartners); nine students (4 first graders and 5 kindergartners) became participants in the study.

Permission was obtained from the school district and IRB to conduct the study (see Appendices A and B). Permission was also obtained from the participants' parents for their child's participation in the study (see Appendix C). The study took place within the normal educational curriculum and protocols of the school district. The researcher designed the intervention instruction based on her understanding of reciprocity as well as her professional expertise as a classroom and Reading Recovery teacher. Participants received comprehensive, intensive reading instruction following normal curriculum. Comprehensive means that instruction emphasized comprehension of written texts,

including instruction in phonological awareness and word study, as well as strategies for vocabulary and fluent reading. Instruction also included writing, specifically writing about the texts they read and learning the skills and processes that go into creating a text. Intensive means that students were placed into small groups of 5-6 students and engaged in reading and writing of continuous text during daily sessions. The researcher taught and video-taped participants during their regularly scheduled intervention sessions. The intervention groups met with the teacher researcher for daily intervention sessions over a total of 11 weeks of instruction.

Aligned with lesson plans for sessions, the researcher developed a strategic “film-shooting schedule” to unobtrusively capture the independent reading and writing work of the participants. In order to see how participants’ demonstrated connections between reading and writing while taking action during reading and writing events, the researcher used the created schedule to film individual participants over two to three days of consecutive intervention sessions.

Data sources included the video-taped recordings of participants’ independent reading and writing work, such as the reading of new texts, writing stories, and reading written stories, as well as interactive writing and working on cut-up sentences. Other data sources included running records, lesson plans, anecdotal notes, and field notes. These data sources were carefully examined and analyzed using a moment-by-moment microanalysis in order to understand how participants’ actions demonstrated reciprocity during reading and writing events.

Initially, the researcher viewed and indexed video-taped recordings; indexing meant the researcher viewed each video-recording and field notes to write brief, initial thoughts about students' actions taken during reading and writing. Video-recordings were uploaded into Dedoose, an online data analysis application, for further analysis. Next, the researcher began to read and review indexing notes on the video-recording schedule in an effort to find clear instances when participants made connections between reading and writing, such as when a participant began using letters to write instead of just pictures. After finding a few instances of reading and writing connections by participants, the researcher developed an analysis chart to record and further analyze literacy events per participant. The analysis chart was developed using a priori codes used to observe and examine students' strategic behaviors based on the literature review. By observing the participants' actions while reading and writing, the researcher could hypothesize how connections of reciprocity were being made by participants.

Using the finalized analysis chart, the researcher looked at a selected participant and the literacy events that occurred over one to three days of intervention; she watched video-recordings and reviewed running records to analyze in and between literacy events. Specifically, the researcher watched each event and analyzed how and if the participant searched, monitored, and self-corrected using meaning, structure, and visual information during each individual event (thus, the "in" of each event), noting on the analysis chart and coding and memo-ing within Dedoose. Then, the researcher re-watched video-recordings and looked across the reading and writing events to see how connections of

reciprocity were made by participants (thus, the “between” of the events), writing a central, across events analysis memo into the center of the analysis chart.

After completing the first six analyses, the process continued with reiteration back the indexing chart in search of additional instances of participants’ making connections between reading and writing. This time, the researcher looked for instances of participants taking action in multiple literacy events over one to three sessions. After finding several instances, the researcher re-watched video recordings and reviewed running records for analysis using the analysis chart following the same process as detailed above. A total of 21 analysis charts were completed. The researcher then met with a peer-debriefer to watch video-recordings and review two of the completed analyses. After discussion, mutual agreement was reached between the researcher and peer-debriefer regarding the two analyses. Even still, the researcher decided to re-analyze each of the twenty-one analyses to ensure thorough analysis. Through careful observation and scrupulous analysis of participants’ actions while reading and writing, the researcher could better interpret how connections of reciprocity were being made by participants. Patterns of participant action that demonstrated reciprocity were noted and coded within Dedoose. Furthermore, patterns were sharpened and defined into four themes of student action.

Trustworthiness was established through extensive time in the research context as well as a credible, systematic method of microanalysis, including the development of the analysis chart and multiple rounds of recursive observation and analysis of data. In addition, the researcher maintained dependable and consistent documentation of the

research process with methodological and analytical journals. Finally, the researcher provided reasonable and thorough interpretations of the data, thus creating transferability of findings through explicit data examples and confirmability with the shared expertise of a peer debriefer.

Summary of the Findings

Observations and analysis of participants' actions during the literacy events established the findings in the study. Participants' actions during the reading and writing events of intervention sessions seemed to indicate they were making connections between reading and writing. Thus, the findings revealed descriptions of reciprocity between reading and writing in young learners. Principally, reciprocity was found in the readers' and the writers' actions while working with continuous text. Specifically, their actions to search for and use meaning, structure, and visual information in texts...and their actions to monitor, problem solve, re-search, and confirm within and across literacy events. Reciprocity was found in readers' and writers' ability to integrate strategic processing and use multiple sources of information to problem solve. For instance, the readers and writers demonstrated ability to synchronously search for more than one source of information to read or compose texts. Taken further, readers and writers were able to strategically search for information, monitor their searching and responses, and possibly self-correct as needed. Additionally, readers and writers gained an increasing knowledge of print through reading and writing experiences, and they connected language knowledge from reading experiences into their writing.

The young readers and writers in the current study demonstrated reciprocity in marked ways. Many of the readers and writers were flexible in using multiple sources of information while reading and writing continuous texts. Many times, the flexible use of more than one source of information involved quick, on the run searching of two or more sources of information. At times, the reader or writer immediately cross-checked sources of information –quickly checking one source of information against another as they problem solved. Thus, the readers and writers were beginning to become more strategic as they worked across texts in the literacy events. They often searched for information and worked on it as they evaluated the work, or monitored, which often led to self-correction –demonstrating strategic action while reading and writing.

Many times, the flexible use of more than one source of information involved quick, on the run searching of two or more sources of information on behalf of the reader or writer. The reader or writer would immediately cross-check sources of information; cross-checking means that a student checks, or compares, one source of information against another (Clay, 1993). On occasion, the reader or writer quickly recognized an error between what was initially searched, and then searched again. Luke’s analysis chart below shows coding that Luke demonstrated this on-the-run action while reading and writing (see Table 16 for a detailed description of his behaviors).

In addition, readers and writers began to use language structures and vocabulary in writing from the previously read texts and conversations around text. They would use similar language patterns and text organization from their reading. The students would also include vocabulary from texts in their writing, using their developing letter and print

knowledge to write newly learned vocabulary and unknown words. Connected to this, the readers and writers attended to print through their reading and writing experiences. They gained in their understanding of how print works, including directionality, spatial concepts, and orthographic representation of letters, features, and formation. They also worked to consolidate their knowledge of visual information, including phonemic knowledge through letter to sound relationships in reading and sound to letter relationships in writing. Additionally, the students demonstrated an increasing working knowledge of letter sequences and clusters within words, phrases, and sentences in both reading and writing.

Finally, the readers and writers participated in an intervention environment that provided daily opportunities for reading and writing continuous text. Very little to no instruction was on isolated skill practice, except for word work to increase knowledge of letter sequences and patterns in words. Indeed, the intervention was planned to allow for connections across reading and writing as those connections “do not [necessarily] occur spontaneously” (Clay, 2005, p. 27). Thus, the researcher also acting as the intervention teacher, provided reading and writing opportunities and directed the readers and writers to use what they knew in reading when they were writing and vice versa. Even so, the readers and writers appeared to be actively demonstrating reciprocity in various ways through their independent actions.

Discussion of the Findings

The current study involved a moment-by-moment microanalysis of participants’ actions during the literacy events of intervention sessions in order to describe how the

participants demonstrated reciprocity between reading and writing. The findings presented above will be further discussed in relation to existing literature on the topic of reciprocity and intervention instruction. Discussion topics will explore reciprocity within and between literacy events and current intervention practices.

Within and Between Literacy Events

The literacy learners in this study appeared to actively rely on meaning as a driving force through their experiences with text. From the start, the learners created meaning through their interactions with text across reading and writing. Conceivably, this observation can also be explained by the nature of the planned intervention sessions. Even so, the readers and writers sought to use meaning as their visual understanding of letters and sounds increased or sought to synchronously use a combination of two or three sources of information as they engaged in reading and writing. Consistent with a complex theory of reading (Clay, 1991) where meaning facilitates literacy learning, the learners in this study utilized meaning throughout their experiences with text.

Writing from the start. A need to provide opportunities for writing early in a child's formal school experience had been cited in the literature (Clay 1975, 1991, 2001; Dyson 1983). The researcher, acting as teacher, intentionally provided writing opportunities within the intervention sessions. The learners in this study demonstrated a wide range of abilities, yet all were below what was typically expected for the school. Most of the kindergarten students started the intervention with some letter knowledge (by name and/or sound), but with little demonstrated experience with writing or reading. Likewise, the first grade students demonstrated below expectations for reading, yet they

appeared to have satisfactory knowledge of letters and sounds.

Through writing, the learners in this study demonstrated an increasing knowledge of letters, sounds, and words as well as a growing ability to attend and work with print. This is evidenced in the learners' ability to aid in the compositions of shared texts through interactive writing, and their ability to create their own written texts as they wrote about their personal lives or the texts read during the sessions. Interestingly, the kindergarten students demonstrated increased independence in writing after only a few interactive writing sessions during intervention. These findings support results from a study by Roth and Guinee (2011) that measured independent writing growth in first grade students. Students that received interactive writing as a part of their literacy instruction showed greater growth on independent writing measures than a comparison group. Additionally, students in the interactive writing condition also showed greater gains on nine out of ten sub-measures of writing: ideas, organization, word choice, sentence fluency, spelling of high-frequency words, spelling of other words, capitalization, punctuation, and handwriting.

In interactive writing sessions, students received responsive instruction on multiple aspects of writing simultaneously; aspects that shifted over into their independent writing. During independent writing, the learners in the current study demonstrated an ability to compose a story or response with little to no problems—they all had something to say. They also actively, slowly articulated words to isolate individual sounds when writing unknown words. In essence, evidence shows that they were analyzing letter sequences and clusters within words in order to compose stories; at

times, they noticed errors in construction (monitored their work) and self-corrected when they could. These findings are consistent with the young writers in the early work of Clay (1975).

Comparably, the students in the current study often made approximations in their attempts to write stories. While they were eager to write their intended messages, they did not always write with conventional grammar or spelling. Approximations in writing, like those often developed in the analytical work of invented spelling, were encouraged and accepted. In agreement with Carol Chomsky (1971), providing opportunities for the students to write from the start allowed students to take an active role in the literacy events (and inevitably partake in invented spelling). Recent research supports the practice of invented spelling and claims a causal role to subsequent reading and spelling (Ouellette & Sénéchal, 2017). In their analysis of 171 kindergarten students (and continuing into first grade), Ouellette and Sénéchal tested the theory that “the analytical stance that young children adopt when they attempt to capture with letters the sounds in spoken words might be a key building block to reading and spelling” (p. 83). Kindergarten students were assessed on measures of oral vocabulary, alphabet knowledge, phonological awareness, word reading, and invented spelling. One year later, the same students were assessed on multiple measures of reading and spelling. Using path model analysis, the researchers found invented spelling to be a predictor of growth in early reading as well as beneficial to the integration of phonological and orthographic knowledge.

Writing to learn. Students in the current study expressed learning through their writing. During writing events, which often included responses to the texts read during previous intervention sessions, students demonstrated the use of newly acquired vocabulary and knowledge gleaned from texts in their responses. These student actions are supported by the findings of Fitzgerald and Shanahan (2001) that indicated the combined instruction of reading and writing facilitates students' learning of new ideas presented in text—an often neglected practice, especially within intervention instruction. Graham and Hebert (2011) found three specific ways that writing can improve students' achievement in reading: having students write about the texts they read, teach the writing processes and skills necessary to compose a text, and increased time spent writing. Findings from the meta-analysis emphasized writing as a powerful tool toward improved reading and learning.

Another way students in the current study expressed learning through writing was in the way they began to consolidate visual information knowledge through their understanding of directionality, spatial concepts, phonemic knowledge, and orthographic representation of letter, features, and formation. Bereiter and Scardamalia (1987) discussed ways in which students tell (recall information) and/or transform (analysis and synthesis of information) through writing. They argue for instruction that models and guides students to practice writing that transforms learning in order to extend students' thinking and learning. Understanding that classroom practices may account for what was observed, they noted young students would often tell through writing. However, evidence from the current study indicates that students were not only telling through writing, they

were also transforming through writing. The students demonstrated analysis in their actions to write and include unknown words, and they synthesized new learning with what was already known, such as letter and sound knowledge, concepts of print, and the inclusion of language structures in the texts they read.

In between. As previously discussed, the students' actions in the writing events were observed in the reading events. Their learning occurred across the two contexts; the students not only synthesized new learning within one context, they used what they knew and were learning in their writing experiences in their reading experiences and vice versa. Certainly, the students in the current study demonstrated reciprocity as observed and noted by other scholars (Anderson & Briggs, 2011; Clay, 1991; Deford, 1994; Graham, et al., 2017, Fitzgerald & Shanahan, 2000; Tierney & Shanahan, 1996). Two important recent analyses by Graham and colleagues (Graham & Hebert, 2011; Graham et al., 2017) explored reciprocity between reading and writing through meta-analysis of research; specifically, the analyses found that writing improves reading and reading improves writing.

Graham et al. (2017) explored three theories of reading-writing relations; two of which are relevant to the current discussion. First, the shared knowledge view states readers and writers use similar knowledge and cognitive systems to read and write, including knowledge that helps readers create meaning as they read and write texts, and print knowledge that is used to decode/encode words and understand and construct sentences. Second, the functional view of reading-writing relations regards reading and writing as separate, yet when taught and used together enhances learning (on a specific

task and are mutually supportive). Students' actions in the current study demonstrated their use of the same cognitive processes of searching, monitoring, and self-correcting across reading and writing. The students were strategic in their use of meaning, structure, and visual information across both contexts. Even more so, there is evidence that many students used multiple sources of information simultaneously to problem solve as they read and composed texts. Most importantly, the strategic actions employed by the students across the contexts allowed for increased learning in each context as demonstrated in the students' ability to read and write increasingly complex texts.

Intervention Practices

In 2004, reauthorization of Individuals with Disabilities Education Improvement Act (IDEA, 2004) provided funding as way to preventatively intervene with additional support for struggling students and to accurately identify those students in need of special education services. Understanding the Response to Intervention as a preventative initiative necessitates first the improvement of classroom instruction with a primary goal of providing all students with quality instruction (Allington, 2009; Howard, 2009; Johnston, 2010). In addition, researchers believe a preventative focus calls for finding better and varied ways to meet specific learning needs (Buffum, Mattos, & Weber, 2010; East, 2006). While many researchers advocate for a more standardized approach that focuses on single skills or tasks (Fuchs, Mock, Morgan, & Young, 2003), others argue for a more individualized approach that is responsive to students' strengths and needs, and allows for teacher decision making (Allington, 2009; Howard, 2009; Johnston, 2011; Vellutino, Scanlon, Small, & Fanuele, 2006). For this reason, many researchers agree that

knowledgeable, expert teachers are essential to quality intervention instruction (Allington, 2009, 2011; Johnston, 2011; IRA, 2009; van Kraayenoord, 2010; Vellutino, 2011).

The intervention sessions in the current study were designed with a preventative stance and individualized approach. In other words, the researcher as teacher (using her professional expertise in literacy instruction and assessment) designed instruction within intervention sessions to intensify student learning through on-going assessment (e.g., running records), targeted instruction, and opportunities for meaningful reading and writing experiences with consideration of students' interests. As such, planning the intervention sessions in this view not only provided engaging reading and writing experiences for the students, but also allowed the researcher to observe the students as they participated in reading and writing texts daily. The analysis of students' actions initiated during reading and writing offered insight into the cognitive processing employed by students and allowed for interpretation. Therefore, the researcher was able to examine reciprocity through the students' actions as they continuously interacted with texts. It is unlikely that similar, beneficial student actions would have been observed, much less practiced, had the students participated in isolated skill and task based instruction (as is prolific in interventions and intervention research).

The analysis of What Works Interventions reports provides support for the above claim: the 17 intervention reports that included writing related to reading/reading response and sentence/story construction were most often rated positively for reading

comprehension and overall reading achievement (WWC, Bilingual Cooperative Integrated Reading and Composition, 2007; WWC, Cooperative Integrated Reading and Composition, 2010; WWC, Cooperative Integrated Reading and Composition, 2012; WWC, Early Intervention in Reading, 2008; WWC, Instructional Conversations and Literature Logs, 2006; WWC, Leveled Literacy Intervention, 2017; WWC, Read 180, 2015; WWC, Reading Recovery, 2013; WWC, SpellRead, 2013; WWC, Student Team Reading and Writing, 2011). That was not the case for the more skill based interventions.

Likewise, Mathes et al. (2005) found that comprehensive, integrated approaches to reading intervention instruction (much like the one designed in the current study) that provide targeted instruction within opportunities for authentic reading and writing prove effective to literacy learning. Studies examining literacy learning in first grade students provide additional support for comprehensive, integrated approaches to intervention instruction (Pinnell et al., 1994, Schwartz, 2005; Taylor et al., 1991).

Equally important, the findings from the current study highlight the complex and integrated nature of literacy learning. The students in the current study demonstrated a variety of actions that confirmed their ability to think and act in complex ways, even if they were only five and six years old. Given the appropriate and authentic opportunities for engagement with text, the young students were able to show and grow in their literacy learning and utilize their reciprocal knowledge in the process.

Limitations

Several factors may limit the interpretation of the findings in the current study. Methodologically, the aim of a qualitative study is to provide a detailed, complete description. The micro-analysis approach allowed for a moment-by-moment description of the literacy events and for fine distinctions of participants' actions and process. In addition, findings are limited by the setting and participants of the study. The number of students selected as participants, the context of the school environment, and the intervention sessions all limit the generalizability of the findings. More so, the role of the researcher as both teacher and researcher poses additional limitations that influenced not only the instruction within the intervention sessions, the relationships with the participants, but also the interpretation of the findings and the extent to which they can be applied to a wider population.

Implications for Educational Practice

Literacy research has the potential to expand our understandings of literacy and inform our classroom practices. The present study sought to describe the complexity of the reciprocal relationship between reading and writing within comprehensive literacy intervention instruction. Findings revealed the many demonstrated student actions of reciprocity, in even the youngest, striving learners. Consequently, this study poses practical recommendations for literacy education professionals, particularly those working with young students.

Observation of Young Readers and Writers

As evidenced in the current study, reciprocity was viewed through the thorough observations of actions taken by the young students at work in actual reading and writing events. Many researchers advocate for the direct, intentional, and systematic observation of young learners in the complex process of authentic reading and writing (Clay, 1991; Goodman, 1978). Such observation and analysis leads to increased understandings of the cognitive processing done on behalf of the reader/writer and thus, can improve teaching. While the observed behaviors “are only signals of the inner control...that a child is developing, they are important signals which teachers should notice and think about” (Clay, 1991, p. 233). Noticing and understanding how and what a child attends to while reading and writing can positively influence teachers’ responses; responses that teach for and reinforce actions that advance learning.

Obviously, the researcher used video-recordings to capture the actions of the readers and writers in the current study. While video-recording is not necessarily practical for every day classroom environments, the use of video as a tool for observation and study is a worthy option that has become more readily accessible in recent years. Video-taping students in action while reading and writing would be especially valuable for a group of teachers wanting to improve both their observation skills and teaching practices.

Two more practical options for teachers include the use of running records and anecdotal notes (both were used in the current study, although the latter less so). Running records provide a way for teachers to manually record what students do and say as they

read texts; they allow for notation of verbal (e.g., words read and attempted) and nonverbal (e.g., looking at a picture, finger pointing) student behaviors relevant to the task of reading, not just a record of correct and incorrect responses. Essentially, running records offer a play-by-play of students' thinking as they read. Teachers can analyze the information recorded on a running record for student behaviors, responses, and approximations. Then, using information gleaned from the analysis, teachers can intentionally plan for instruction that will accelerate learning.

Likewise, anecdotal notes allow for quick, on the run notes of what a student says or does during literacy events. Anecdotal notes are a teacher's quick jots of student's problem-solving actions, behaviors, and responses when reading and writing (they can also be used in other content areas). Teachers can take anecdotal notes in many ways: notepads, sticky notes, labels, index cards, group sheets, and electronically, using Google Forms or notetaking applications, like Evernote and Notability. Regardless, at the very least each note should include student's name, date, and a clear, objective observation. Also like running records, analysis of anecdotal notes reveals students' strengths and needs as well as patterns of behavior that can inform instruction. When logically organized for each student, anecdotal notes are especially powerful to document students' progress and learning over time.

The Role of Continuous Text

Quality instruction requires a comprehensive approach that includes explicit comprehension strategy instruction, an appropriate balance of meaning-making and skill instruction, and daily opportunities for text reading, writing, and discussion (Duke &

Pearson, 2002). Also, a comprehensive approach includes differentiated and integrated (reading and writing) literacy instruction that meets the needs of all learners. Despite theoretical differences, most scholars agree that quality literacy learning is realized when students purposefully, actively, and meaningfully engaging with print. In other words, they need and must have opportunities to read and write, using continuous text, during the school day. This should be no different within intervention instruction; students struggling to learn to read and write should not be relegated to isolated instruction devoid of actual reading and writing, as is often the case in intervention research.

In the wise words of Marie Clay:

Learning how to direct attention and what information to search for in order to make a decision is learning best done on information-rich texts. Learning how to hold on to the message being processed while searching for information at another level (in words or letters) can be done effectively by young children on stories (2001, p. 262).

It is only through the reading and writing of continuous text that students can learn what to attend to and what actions are needed to attend in order to gain and create meaning. In truth, the students' actions observed in the current study would not have occurred without the provided opportunities with reading and writing continuous text. In order to harness the power of reciprocity and its benefits to literacy learning, teachers should prioritize authentic and integrated reading and writing experiences with continuous text from the start. Additionally, as expectations for learning increase, so should students' experiences with texts, meaning teachers should offer a variety of reading and writing opportunities and support within increasingly complex texts.

Rethinking Intervention Practices

Implementation of the RtI framework has varied in regard to interpretation the framework and its intended purpose, resource selection, and understanding the importance of teacher expertise in literacy (Routman, 2014). A federal evaluation of the RtI approach revealed less than favorable and unexpected results for literacy learning for students in first, second, and third grades (Balu et al., 2015). No doubt, variations in understanding the purpose of RtI and narrow, incomprehensive instructional practices played a role in the unfavorable results. In fact, some literacy leaders believe limited screening assessments and narrowly focused intervention instruction that is not necessarily responsive to students' strengths and needs, explains the majority of the instructional practices evaluated in the study, and thus the negative findings (Sparks, 2015). More recently, Parsons et al. (2018) reviewed studies over the last four decades that describe responsive teaching using numerous terms (e.g., adaptive teaching, decision making, adaptive expertise) noting "the increasing diversity of students seems to demand more responsiveness from teachers, yet more restrictive environments would discourage teacher adaptation" (p. 210). While only a few of the reviewed studies reported on the effects of responsive teaching on student outcomes, all found positive effects on student achievement in literacy, math, science, and social studies.

Findings of the current study strengthen the promise of the RtI framework when viewed as a preventative model to provide quality instruction for all students, especially the responsive, targeted instruction required to accelerate literacy learning for struggling students. Thinking less about fidelity to a program and more about fidelity to students is

an important first step (Routman, 2014). Over reliance on the parts, without adequate time spent on the whole of actual reading and writing and insufficient time to practice skills and strategies within the context of authentic reading and writing, leads to inefficient learning. Intervention instruction must be responsive to students' strengths and needs in order to accelerate progress and independence in learning, and that requires teacher expertise in literacy assessment and instruction.

Likewise, educators must carefully think about the value and limitations of assessments that are used to screen students and make educational decisions. Educators must consider whether they give an adequate picture of the student: what they know, what they can do, how they process text, and learning needs. In the current study, the researcher purposefully chose to give additional assessments to the participants in order to have more comprehensive information (that was not apparent in the chosen district benchmark assessments), especially regarding participants' writing behaviors.

Another equally important step is an emphasis on meaning; students, especially our most struggling learners, benefit from literacy instruction that focuses on the "end purpose of making sense of text" (Routman, 2014, p. 159). Related and highlighted in the current study is the concept of reciprocity between reading and writing. Instructional scheduling and practices that embrace the power of reciprocity in literacy learning will not only lead to improved learning outcomes for students, including those in intervention, but may reduce the need for intervention altogether.

Recommendations for Future Research

Findings of the present study reveal additional directions for future research.

Primarily, the review of the literature on intervention research presented in Chapter II points to gaps in the research that would be worthy of examination.

First, intervention research tends to be quantitative and about the bits and pieces or isolated skills of literacy instruction. As previously stated, there seems to be a need for research that involves more complex research methods, such as micro-ethnography or microanalysis (as used in the current study). Extending the duration of the study to a year or longer, or collecting data from participants across multiple grades could provide more longitudinal data that would tell a story of participants' literacy acquisition and the processing of texts over time.

Second, the current study could be expanded to include not just students in intervention settings, but to students in their early years of formal schooling. Closely observing all students within a classroom as they work to process texts could reveal a variety of ways that students acquire literacy, and more specifically, demonstrate their understandings of reciprocity between reading and writing. Observing, documenting, and analyzing data from multiple students of varying ability could provide insight into students' processing of texts as well as classroom instructional practices that support students' independence in processing.

Finally, research that examines students' paths to literacy, particularly related to reciprocity and the most struggling students, are sparse in the current available research. Future research would inform educators and leaders about the value of writing as it

contributes to reading and vice versa. Additionally, it would provide a multifaceted view of literacy development that looks beyond the numbers of screening tools, benchmark assessments, and standardized assessment data so prevalent in the current intervention research landscape.

Conclusion

The purpose of the present study was to describe how reciprocity in reading and writing supports early literacy learning during a comprehensive approach to intervention instruction. The study was guided by the following research question: How do kindergarten and first grade literacy intervention students demonstrate the reciprocal relationship between reading and writing as they take action in reading and writing texts? To answer to the guiding question, this study provided an in-depth description of reciprocity through the observation and microanalysis of young children at work in reading and writing texts. Specifically, the students demonstrated reciprocity by initiating synchronous action through the flexible and/or simultaneous use of one or more sources of information, connecting language and structures from texts into their writing, consolidating visual information, and building strategic action, including the ability to monitor and self-correct. The current study highlighted the complex and integrated nature of literacy through the careful observation of young learners. Perhaps, as Timothy O’Keefe (1996) wrote, sitting beside a student, carefully listening and watching, may be one of the best things we can do to get to know them as readers and writers.

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*Denotes literature used during intervention sessions

APPENDIX A

Letter of School District Approval

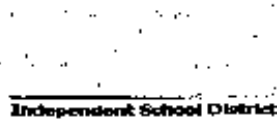
BOARD OF TRUSTEES

Chairman

Vice-Chairman

Vice-President

Secretary



Independent School District

BOARD OF TRUSTEES

Chairman

Vice-Chairman

Vice-President

Secretary

Deputy Superintendent – Educational Operations

Date: September 16, 2015

To: Institutional Review Board – Denton

Re: *Approval for Taking Action in Reading and Writing: A Study of Reciprocity in Intervention*

The above referenced study has been reviewed and approved at a ISD Leadership Team meeting on 9/4/2015. This approval is valid for one year and expires on 7/9/2016. The study was approved with the following parameters.

- Any data analysis, reporting requirements, administrative duties, documentation related to the dissertation must be done outside of the Intervention time with students.
- The number of students assigned to your intervention group will not be dictated by the parameters of your study. For example, if there are six students requiring intervention who need to be assigned to your intervention group, then there will need to be six students in the group, etc. Otherwise, the district would be placed in the position of hiring additional interventionists or making other groups larger than necessary to accommodate your study. That would not be acceptable.

Any modifications to this study must be submitted for review to Deputy Superintendent of Educational Operations. If you have any questions, please contact

Respectfully-

Deputy Superintendent – Educational Operations

cc: Clarone Hight

APPENDIX B

Internal Review Board Approval



Institutional Review Board

Office of Research and Sponsored Programs
P.O. Box 425619, Denton, TX
76204-5619 940-898-3378
email: IRB@twu.edu
<http://www.twu.edu/irb.html>

DATE: August 5, 2015

TO: Ms. Clarene Hight
Reading

FROM: Institutional Review Board – Denton

Re: Approval for Taking Action in Reading and Writing: A Study of Reciprocity in Intervention (Protocol #: 18376)

The above referenced study has been reviewed and approved at a fully convened meeting of the Denton Institutional Review Board (IRB) on 7/10/2015. This approval is valid for one year and expires on 7/9/2016. The IRB will send an email notification 45 days prior to the expiration date with instructions to extend or close the study. It is your responsibility to request an extension for the study if it is not yet complete, to close the protocol file when the study is complete, and to make certain that the study is not conducted beyond the expiration date.

If applicable, agency approval letters must be submitted to the IRB upon receipt prior to any data collection at that agency. A copy of the approved consent form with the IRB approval stamp is enclosed. Please use the consent form with the most recent approval date stamp when obtaining consent from your participants. A copy of the signed consent forms must be submitted with the request to close the study file at the completion of the study.

Any modifications to this study must be submitted for review to the IRB using the Modification Request Form. Additionally, the IRB must be notified immediately of any adverse events or unanticipated problems. All forms are located on the IRB website. If you have any questions, please contact the TWU IRB.

cc. Dr. Connie Briggs, Reading
Dr. Nancy Anderson, Reading
Graduate School

APPENDIX C

Letter of Informed Consent

TEXAS WOMAN'S UNIVERSITY
STUDY INFORMATION AND CONSENT TO PARTICIPATE IN RESEARCH

Title: Taking Action in Reading and Writing: A Study of Reciprocity in Intervention

Investigator: Clarene Hight chight@twu.edu 817/658-3136
Advisor: Nancy Anderson, PhD nanderson@twu.edu 940/898-2235

Dear Parent/Guardian:

My name is Clarene Hight. I am an intervention teacher at Bedford Heights and a doctoral student in the Reading department at Texas Woman's University. I am asking for your permission to include your child in my research. This consent form will give you the information you will need to understand why this study is being done and why your child is being invited to participate. It will also describe what your child will need to do to participate as well as any known risks or discomforts that your child may have while participating. I encourage you to ask questions at any time. If you decide to allow your child to participate, you will be asked to sign this form and it will be a record of your agreement to participate. You will be given a copy of this form to keep.

Explanation and Purpose of the Research

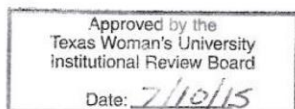
Your child is being asked to participate in a research study for my dissertation research at Texas Woman's University. The purpose of this research is to describe and understand how reading and writing work together to support early literacy learning. For this study, I would like to describe the connected relationship between reading and writing through the observation of reading and writing behaviors of children during intervention instruction with Kindergarten and First grade students.

Description of Procedures

Your child has qualified to receive intervention services, supplemental to classroom instruction, which will be taught by me, a Texas certified teacher. Administrators, Kindergarten, and First grade classroom teachers selected your child to receive intervention services based on district-wide benchmark assessment scores from September 2015. The study will take place concurrently with invention instruction. In order for your child to participate in the study, he/she will have to attend intervention instruction five times each week for 45-minutes sessions from late September 2015 through January 2016. Your child's teacher and I will work together to schedule intervention lessons during your child's language arts block.

Intervention instruction will be comprehensive, intensive reading instruction following normal curriculum. For this study, comprehensive means that instruction will emphasize comprehension of written texts, with attention to phonics and word study, explicit teaching of strategies for expanding vocabulary and for fluent and phrased reading.

Initials
Page 1 of 3



Students will also receive instruction that includes writing, specifically writing about the texts they read and learning the skills and processes that go into creating a text. Intensive means that students will be in small groups of 3-5 students and engaged in reading and writing of continuous text during daily sessions.

Study participants will be given a formative reading assessment that I will analyze and use to plan instruction for the students. In addition, I will video-record participants during intervention sessions; video recordings of reading and writing work by participants will be collected, uploaded to my password protected laptop into a password protected file, and used for analysis.

Potential Risks

Your child will be leaving their classroom to attend intervention instruction. A possible risk in this study is emotional discomfort (anxiety or embarrassment) with having to leave the classroom environment to attend intervention instruction, however participation in the study will pose no risks greater than those already involved in everyday classroom practices and assessment.

Another risk will be loss of instructional time in the classroom while your child attends intervention instruction. The classroom teachers and intervention teachers will work together to schedule intervention time during the language arts block so that your child will not miss instruction in core subjects, such as math and science.

Another risk in this study is coercion. Parents may feel obligated to consent for their child to participate in the study in order to receive intervention instruction. You may ask questions at any time and you may withdraw your child from participation in the study without jeopardizing your child's opportunity for intervention instruction.

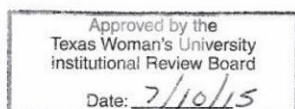
Another risk in this study is loss of confidentiality. Confidentiality will be protected to the extent that is allowed by law. Any identifying data will be kept in a locked cabinet and password protected laptop, viewable to only myself and my advisor. All identifying data will be deleted and/or shredded at the end of the study (no later than June 2016). The results of the study will be reported in educational magazines or journals but your child's name or any other identifying information will not be included.

Every effort will be made to minimize the above mentioned risks. You should let me know at once if there is a problem and I will help you. However, TWU does not provide medical services or financial assistance for injuries that might happen because your child is taking part in this research.

Participation and Benefits

Your child's involvement in this study is completely voluntary and you may withdraw your child from the study at any time. Your child will benefit from intervention instruction while participating in the study.

Initials
Page 2 of 3



Your child will also have opportunities to earn "Dog Tags" (school wide incentives) and "Bulldog Bucks" (gift "dollars" to use at Friday Fundays concession sales) for positive behavior, attitudes, work, and demonstration of outstanding character traits (i.e., respect, perseverance, compassion). If you would like to know the results of this study we will mail them to you.*

Questions Regarding the Study

You will be given a copy of this signed and dated consent form to keep. If you have any questions about the research study you should ask the researchers; our phone numbers are at the top of this form. If you have questions about your rights as a participant in this research or the way this study has been conducted, you may contact the Texas Woman's University Office of Research and Sponsored Programs at 940-898-3378 or via e-mail at IRB@twu.edu.

Documentation of Consent

I have read this form and decided that my child will participate in the study described above. Its general purposes, the particulars of involvement and possible risks have been explained to my satisfaction. I will discuss this research study with my child and explain the procedures that will take place. I understand I can withdraw my child from the study at any time.

Printed Name of Child

Printed Name of Parent/Guardian

Signature of Parent/Guardian

Date

Signature of Person Obtaining Consent

Date

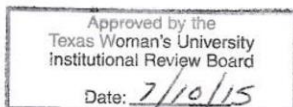
*If you would like to know the results of this study, please tell us where you would like them to be sent:

Email: _____

or

Address:

Page 3 of 3



APPENDIX D

Frequency Counts of Participant Action

Frequency Counts of Participant Action – Across Literacy Events

Strategic Process	Code	Reading & Writing Literacy Events
Searching	S-Meaning	114
	S-Structure	99
	S-Visual	105
Monitoring	M-Meaning	60
	M-Structure	18
	M-Visual	63
Self-Correcting	SC-Meaning	22
	SC-Structure	12
	SC-Visual	50

*Frequency Counts of Participant Action
–Strategic Processing Across Literacy Events*

Codes	S- Meaning	S- Structure	S- Visual	M- Meaning	M- Structure	M- Visual	SC- Meaning	SC- Structure	SC- Visual
S-Meaning	-	99	100	53	15	56	22	12	48
S-Structure	99	-	87	44	12	48	20	11	43
S-Visual	100	87	-	49	11	52	20	10	44
M-Meaning	53	44	49	-	12	36	18	9	27
M-Structure	15	12	11	12	-	8	8	8	9
M-Visual	56	48	52	36	8	-	11	4	42
SC-Meaning	22	20	20	18	8	11	-	8	16
SC- Structure	12	11	10	9	8	4	8	-	8
SC-Visual	48	43	44	27	9	42	16	8	-

APPENDIX E

Curriculum Vitae

CLARENE PELGER HIGHT

936 Clear View Drive Bedford, Texas 76021 (817)658-3136 clarenep@yahoo.com

RESEARCH INTERESTS

Early Literacy, Response to Intervention, Teacher Expertise, Student voice and choice

DISSERTATION RESEARCH:

Taking Action: Reciprocity in Reading and Writing within Early Intervention

Advisor: Nancy Anderson, PhD

My current research is a descriptive, microanalysis (moment by moment analysis) of reciprocity in reading and writing; specifically, a description of students' independent actions while reading and writing connected text, and how students demonstrate reciprocity in reading and writing during early intervention sessions.

EDUCATION

TEXAS WOMAN'S UNIVERSITY 2011-PRESENT

Denton, Texas

- PhD Program in Reading, Doctoral Candidate
Dissertation – *Taking Action: Reciprocity in reading and writing within early intervention*
- Masters of Education Degree: Educational Leadership with emphasis in Reading
1999-2002
Thesis – *Reading Supervisors as Instructional Leaders*

EDUCATION SERVICE CENTER REGION XI 1996-1997

Fort Worth, Texas

- Teacher Preparation Program

UNIVERSITY OF ARIZONA 1990-1995

Tucson, Arizona

- Bachelor of Arts Degree: Spanish with Minors in Chemistry and Humanities

CONTINUING EDUCATION:

TARRANT COUNTY COLLEGE 2005-2011

Hurst, Texas

- Advanced Spanish Conversation classes

EXPERIENCE

HEB INDEPENDENT SCHOOL DISTRICT 2011-PRESENT
Bedford, Texas

North Euless Elementary –Literacy Instructional Specialist

- Campus Assessment Team: Benchmark Assessment K-2 (ongoing)
- Provide training to teachers on progress monitoring assessment and LLI systems
- Organize literacy texts and LLI materials in leveled literacy library for intervention and classroom use
- Ongoing analysis and use of assessment data to plan instruction
- Ongoing develop and delivery of professional development for teachers

Bedford Heights Elementary –Interventionist

- Campus Assessment Team: Benchmark Assessment K-2
- Provide training to teachers on progress monitoring assessment and LLI systems
- Organize literacy texts and LLI materials in leveled literacy library for intervention and classroom use
- Analyze and use of assessment data to plan instruction
- Develop multiple lesson plans for literacy enrichment
- Provide intervention instruction to students in grades K-4

Oakwood Terrace Elementary –Interventionist

- Utilized assessment data to plan individualized and small group instruction
- Collaborated with teachers to plan for interventions based on assessment data
- Provided literacy and math intervention instruction to students in grades K-6

Substitute Teacher –K-12

UNIVERSITY OF NORTH TEXAS AT DALLAS SPRING 2009
Dallas, Texas

Adjunct Instructor

- Course: Content Area Reading in Secondary School
- Developed, implemented, and modified curriculum to provide relevant literacy content for various education majors

ARLINGTON INDEPENDENT SCHOOL DISTRICT 1995-2001
Arlington, Texas

Johns Elementary –Reading Recovery, ESL Classroom Teacher: Grade 1

- Served as member of Sunshine Cadre to care for and celebrate faculty and staff

Crouch Elementary –Reading Recovery, Bilingual, ESL, and Regular Literacy Teacher: Grades K-2

- Provided campus training to classroom teachers on K-2 literacy assessments
- Demonstrated lessons and teaching strategies to classroom teachers
- Served on Site-Based Management Committee to coordinate and communicate campus goals and allocate funding accordingly
- Served as lead on Language Arts Committee to align curriculum and instruction with state standards

Rankin Elementary –Bilingual Classroom Teacher: Grades 1 and 2

- Designed and modified curriculum to meet literacy and language needs for bilingual students
- Served on Site-Based Management Committee to develop campus goals for improved instruction and allocate funds for programs
- Served as member on Language Arts Cadre to design, implement, and evaluate literacy instruction

Thornton Elementary –Bilingual Classroom Teacher: Grade 4

- Served as member on Sunshine Committee to care for and celebrate faculty and staff

SPECIAL PROFESSIONAL LEARNING

- Language Proficiency Assessment Committee (LPAC)
- Boys Town Social Skills Curriculum
- Ruby Payne –A Framework for Understanding Poverty
- Literacy Learning in the Classroom

PUBLICATIONS

Hight, C., Edwards, L., Leininger, K., & The, C. (2014). Putting faces on the data: What great leaders do! *English in Texas*, 44(1), 83-84.

Hight, C. (2000). Preparing our teachers: A comparison of alternative and regular certification methods. *Journal of the Oklahoma Association of Teacher Educators*, 5, 29-40.

PRESENTATIONS

Kaye, E., Anderson, N., & Hight, C. (2018, July). *Boost independence and agency with effective teaching for self-monitoring*. Workshop presentation at the International Literacy Association annual conference, Austin, TX.

Hight, C. (2017, March). *Reciprocity revealed: Observing young readers and writers*. Presentation at the TWU Spicola Forum in Reading, Denton, TX.

Hight, C. (2016, December). *Taking action: Reciprocity in reading and writing in early intervention*. Roundtable presentation at the meeting of the Literacy Research Association, Nashville, TN.

Hight, C., & Leininger, K. (2016, February). *Interactive read aloud: How to do it and why it's worthwhile*. Presentation at the TWU Spicola Forum in Reading, Denton, TX.

Hight, C. (2015, June). *Response to intervention: An instructional perspective*. Presentation at the TWU Literacy Institute, Denton, TX.

Leininger, K., Hight, C., Edwards, L., & The, C. (2014, December). *Using assessment to teach with intention: Teachers' perspectives on early literacy assessment*. Roundtable presentation at the meeting of the Literacy Research Association, Marco Island, FL.

Leininger, K., Edwards, L., & Hight, C. (2013, September). *Hey! I can write like Mo Willems: Using mentor texts to teach young writers*. Presentation at the meeting of the Texas Association for the Improvement of Reading (TAIR), Denton, TX.

Hight, C. (2001, September). *Preparing our teachers: A comparison of alternative and regular certification methods*. Paper presented at annual meeting of The Society of Philosophy and History of Education, Dallas, Texas.

LANGUAGES

English - native language

Spanish - speak, read, and write with operational proficiency

PROFESSIONAL AFFILIATIONS

Alpha Upsilon Alpha

- Vice President of Eta Rho Chapter (2013-Present)

Phi Kappa Phi Honor Society

International Literacy Association

Literacy Research Association

American Educational Research Association

SERVICE TO THE PROFESSION

TEXAS WOMAN'S UNIVERSITY 2013-PRESENT

Denton, Texas

- Askew Reading Recovery and K-6 Literacy Institute: 2013-2017
- Spicola Forum in Reading Volunteer -2012, 2014, 2015, 2018

LITERACY RESEARCH ASSOCIATION 2016-PRESENT

Altamonte Springs, Florida

- Review proposals for the annual conference: 2017
- Member: History of Literacy ICG 2017-Present

COMMUNITY SERVICE

MEALS ON WHEELS 2007-PRESENT

Fort Worth, Texas

- Advisory Council Member
- Weekly delivery of meals to home-bound (elderly and/or disabled) clients
- New volunteer training

HURST EULESS BEDFORD ISD 2008-2012

- Student Health Advisory Committee (SHAC): Parent Member

LD BELL HIGH SCHOOL 2017-PRESENT

Bedford, Texas

BEDFORD JUNIOR HIGH 2014-PRESENT

Bedford, Texas

- PTA Volunteer:
Board Member (Newsletter) 2016-Present

BEDFORD HEIGHTS ELEMENTARY SCHOOL 2007-2016

Bedford, Texas

- PTA Volunteer:
Executive Board Member (5th VP of Room Parents) 2014-2016
Sixth Grade Chair 2013-2014
Grade Level Room Parent Coordinator 2008-2013
Board Member (Council Delegate) 2009-2010
Room Parent 2007-2009

COMPASS CHRISTIAN CHURCH 2008-PRESENT

Colleyville, Texas

- Adult Volunteer: Vacation Church School, Spring Break Missions, Services

LAUBACH LITERACY INTERNATIONAL (NOW PROLITERACY) 1994-1995

Tucson, Arizona

- English as a Second Language Tutor

PERSONAL

I enjoy spending time with my family and friends, traveling, reading, improving Spanish language skills, and exercising: Walking/Yoga/Pilates.

REFERENCES AVAILABLE UPON REQUEST